Welcome to the Cobham Tactical Communications and Surveillance product catalogue.

Cobham Tactical Communications and Surveillance has been at the forefront of innovation for over 50 years, developing leading edge surveillance and communication technologies for successful operations in demanding environments, from cities to the digital battlefield.

Cobham’s mission critical solutions secure, share and communicate real-time situational awareness on land, in the water and in the air.

With a commitment to innovation and technological excellence, Cobham has a strong heritage of R&D which allows it to deliver high quality solutions as well as to work in partnership with its customers on bespoke projects.

As a leading designer of wireless communication technologies, Cobham works with military, law enforcement, counter-terror units, governments, corporations and system integrators on key surveillance and communication challenges. It supplies products and solutions across many markets including military platform communications, law enforcement and public safety, counter-terrorism and intelligence, situational awareness and critical infrastructure protection. Cobham also offers broadcast solutions for electronic news gathering, portable field monitoring and video-assist applications working with broadcast customers worldwide.

Cobham’s award-winning technologies include Command and Control Software, Video Surveillance, IP Mesh Solutions, Wireless Broadcast Solutions, Cameras and Sensors, Tagging, Tracking, Locate and Intercept, Tactical Communications and Integrated Surveillance Solutions as well as 24/7 Client Services.

Cobham’s team of dedicated engineers is continually developing new solutions directed by demanding customer requirements. The company’s strength is in developing complex technologies into simple-to-operate, robust solutions. System components have been designed for ease of integration into robotic and airborne platforms, as well as more conventional personnel and ground vehicle based applications.
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#### Miniature Cameras – Medium Range
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#### Miniature Cameras – Long Range
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- CAMFCPTZ – Forward Centre Pan Tilt Zoom

#### Miniature Cameras – Toolkits
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#### Miniature Camera Controllers
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### Sensors

#### Nugget Sensor Range
- Nugget Wireless Sensor Network Node
- 3G Nugget Interface
- Nugget – Remote Ground Sensor Interface
- Nugget – External Switched Output Interface

#### Remote Ground Sensor (RGS) Range
- M8022 RGS System
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- M7432 Merlin GSM Relay
- M8007 Break Wire
- M8040 Passive Infra Red Sensor
- M11405 Compact Camera Interface
Cameras & Sensors

Cobham’s Cameras and Sensors capability includes a wide selection of short range, covert or long range electro-optic thermal imagery and Pan Tilt Zoom (PTZ) cameras. Complementing Cobham cameras is a range of wireless trigger sensor and unattended ground sensor (UGS) solutions.

High end technologically-advanced, environmentally hardened video products and physical security solutions for extreme environments, as well as rapidly deployable smaller solutions are available both as standalone products and as part of more integrated solutions. Cobham has camera and sensor solutions suitable for a wide variety of applications from covert near field surveillance, to overt cameras for a range of surveillance situations including: borders, ports and harbours, chemical plants, nuclear facilities, military, public transportation, and law enforcement, among others.
Miniature Cameras – Close Range

CAMPTZP – Pinhole Pan Tilt Zoom

Features:
- Pan tilt zoom operation around a 2mm pin hole
- +/-30° pan and tilt
- 4x zoom
- Virtually silent operation
- Ideal for dry wall/plaster board ingress

Benefits:
A unique pan tilt zoom camera, equipped with presets and ideal for use within covert hides and concealments. The field of view is suited for surveillance in large rooms or outside areas such as parking lots.

CAMuFCPPT – Micro Size Forward Centre Pan Tilt

Features:
- Pan, tilt and zoom operation around a 1mm pin hole
- +/-30° pan and tilt
- Excellent low light performance 0.002 Lux
- Virtually silent operation
- No zoom

Benefits:
This forward centre pinhole camera is ideal for in-room surveillance. This system allows the camera to rotate around a point in space centred on the pinhole lens' focal point. Its compact size greatly increases the options for concealment.

CCAMXTX – Cylinder Camera

Features:
- Effective pixels – EIA – 768 (H) x 494 (V), CCIR – 752 (H) x 582 (V), resolution – 550TV lines
- Operating current – 200mA w/regulated 12VC in, video output – 1.0Vp-p composite, 75 Ohms
- S/N ratio more than 48dB (AGC off)
- Minimum illumination 0.01 Lux at F2.0
- Automatic white balance and gain control

Benefits:
This range consists of four camera products incorporating good quality miniature PAL and NTSC cylinder cameras, each measuring 19mm (D) x 68mm (L), with a standard 3.6mm lens, in both Micro TX or Standard TX product options. The CCAMXTX camera is supplied with an interfacing cable suitable for direct connection to Cobham transmitters and operates in temperatures ranging from -10 to +50 °C. within 90% relative humidity.

Miniature Cameras – Medium Range

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
Miniature Cameras – Medium Range

CAMuSZPT – Switched Zoom Camera

Features:
- Four separate lenses for switched zoom
- Effective 10x zoom
- Continuous pan, 270° tilt
- 0.004 Lux low light performance
- Rugged but lightweight sealed Delrin construction for IP66 rating

Benefits:
This pan, tilt and zoom camera in a 55m diameter packaging uses prime lenses for a faster capability, as well as eliminating low torque drives and subsequent picture degradation from vibrations on vehicle applications. Virtually silent, it is ideal for concealments. With standard VISCA control, it’s compatible with both Cobham hand control and telemetry control.

Miniature Cameras – Long Range
CAMPTZ – SD Pan Tilt Zoom

Features:
- Full pan tilt zoom functionality
- 360° slip ring horizontal rotation and 250° vertical rotation
- 26x zoom – 3.5 to 91mm
- Low light capability – 0.5 Lux
- Can be connected to ClearCam or NETNode Mesh IP radio

Benefits:
This comprehensive camera capability offered by the CAMPTZ, coupled with its rugged weatherproof construction, enables its use in a range of surveillance scenarios. When linked to the ClearCam or NETNode IP Radio, the CAMPTZ can be used as an overt street camera solution or as a covert device.

CAMHDPTZ – HD Pan Tilt Zoom

Features:
- HD-SDI output
- Continuous pan and 270° tilt
- Preset control
- Rugged but lightweight sealed Delrin construction for IP67 rating
- Virtually silent

Benefits:
Future proofed with the option to upgrade the camera block, and also HD image processing. Ideal for overt safety applications or covert in street furniture and vehicles. With standard VISCA control, it’s compatible with both Cobham hand control and telemetry control.

CAMFCPTZ – Forward Centre Pan Tilt Zoom

Features:
- +/- 30° pan, 25° tilt
- Requires a 45mm (2 inch) aperture
- Highly specified camera with 28x zoom
- 0.025 Lux low light performance, 0.0025 slow shutter speed
- Rugged but lightweight sealed Delrin construction for IP66 rating

Benefits:
Ideal for vehicle concealments, the full range of motion is achieved with only a 45mm square aperture. This camera includes full preset control, patrol modes and ‘smart’ commands. With standard VISCA control, it’s compatible with both Cobham hand control and telemetry control.
CAMuP – Micro Pinhole Camera

Features:
- Resolution of 520 TVL
- Excellent low light performance at 0.008 Lux
- Aperture size – f2
- Field of view – 62º
- Size 21 x 12 x 12mm, plus lens

Benefits:
A rugged miniature camera accessory that can be connected directly to the SOLO DropCam deployable camera transmitter or used stand alone. The micro camera device incorporates a miniature system on a chip sensor in a weatherproof package.

CAMPKit – 15-70mm Pinhole Camera kit

Features:
- 15mm, 30mm, 45mm, and 70mm pre-focussed pinhole cameras
- All also available individually
- Ideal for quick deployment in room surveillance
- Excellent low light performance 0.002 Lux

Benefits:
This range of pinhole cameras is available singly or as a kit. Operators can simply and quickly install the one required, without having to focus. Camera quality is not compromised by the size and devices are supplied in a weatherproof package.
Miniature Camera Controllers

CAMHCPTZ – Handle Controller

Features:
- Pan tilt zoom and preset controls
- Can be connected direct to Cobham cameras
- Outputs Visca (other camera languages available)
- Free software controller available as download
- Internal telemetry transmitter upgrade gives ‘remote wireless control’ at ranges of up to 500m

Benefits:
This unique controller can control Cobham cameras directly, giving pan tilt and zoom operation as well as preset control. Combined with its durability and weatherproofing, this makes it the ideal tool for field operatives.

CAMTELRX – Telemetry Receiver for Camera Control

Features:
- Can be used to control pan tilt zoom cameras
- Acts as receiver half of solutions such as Nanovue or MicroVue II
- Temperature range of -10°C to +50°C
- Free software application available for controlling Cobham cameras
- Internal telemetry transmitter upgrade gives ‘remote wireless control’ at ranges of up to 500m

Benefits:
This telemetry receiver can be connected to, and used to control, the Cobham range of cameras. Typically connected to a Cobham Drop Camera, it provides an RF reverse channel for controlling cameras connected to the Drop Camera, but can also be used standalone.

Packaged Camera Surveillance Solutions

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
**SOLO4 – ClearCam**

**Features:**
- External DC input for long duration deployments
- External sensor trigger inputs to wake camera from sleep mode
- 36x optical zoom, low light colour camera
- 400° pan, -20° to +40° tilt
- Available in a range of frequencies

**Benefits:**
Ideal for surveillance, perimeter security, fire control and CBRN applications. This robust tactical system incorporates a periscope PTZ camera, digital video transmitters, telemetry receiver and battery technology into a weatherproof package. The ClearCam will typically operate at a range of up to 1km and is supplied with a variety of mounting options.

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**COFDM Drop Camera Transmitter**

**Features:**
- Robust chassis with COFDM digital video transmitter, battery, camera and microphone
- Mounting camera 3.6mm lens
- Replacement 9 and 16mm lens
- AES 128/256 encryption
- Integral battery pack with up to 4 hours of power

**Benefits:**
This second generation drop camera is ideal for rapid deployment tactical scenarios, with video coverage across ranges typically 300–500m, non-line of sight. Supplied with a high resolution low light camera to dock directly to the transmitter body or abstract using a 3m cable.

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**COFDM Drop Camera Transmitter 3G**

**Features:**
- Robust chassis with COFDM digital video transmitter, 3G modem, battery and camera
- Housed in rugged IP66 housing suitable for outdoor deployment
- Replacement 9 and 16mm lens
- AES 128/256 encryption
- Temperature range = -20° to +60°C

**Benefits:**
The Drop Camera Transmitter 3G offers unique dual modem capability, with a COFDM link for high quality video over short/medium ranges and a 3G link for observational quality video and camera control over ranges limited only by network coverage. Supplied with a high resolution low light camera to dock directly to the transmitter body or abstract using a 3m cable.

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**Drop Camera Infrared Camera Head Option**

**Features:**
- Infrared LED provides illumination to 5m and some gain to 10m
- Microphone incorporated in the camera head
- Field of view = 62°

**Benefits:**
This camera head option incorporates an ultra low light camera sensitive to infrared and also a colour camera, with an infrared LED. Low light conditions are detected automatically by a built-in photodiode, and the low light camera is selected and the infrared LED is automatically switched on.
Features:
- Robust weatherproof package
- Typically operates at a range of up to 1km in the 1W mode
- Supplied in a kit with a tripod for rapid deployment
- Optional AES128 or AES256 encryption
- Multiple camera mounting options

Benefits:
Cobham’s NETNode Tactical Camera System is a rapid deployment IP MESH camera system, which incorporates a mesh radio, IP encoder and battery into a robust chassis, designed to meet IP66. Cobham IP Mesh nodes are fully compatible with the entire range of Cobham cameras, including HD. User friendly and compact, the systems are ideal for rapid deployment situations.
**SEE Pan Tilt Zoom**

**Features:**
- Colour camera
- 36x optical, 12x digital
- Image stabilisation
- Auto focus
- Enhanced Visca or Pelco D
- Cast aluminium
- Nitrogen pressurised
- 140° Per second
- .05 Lux NIR mode

**Benefits:**
The SEE is a hardened pan tilt zoom camera containing a 36x optical zoom colour camera with auto focus, image stabilisation and 12x digital zoom. Often used in Patrol CCTV and MARK kits; the SEE camera is frequently utilised in third party systems where users create their own interface.

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**F50Z Thermal Pan Tilt Zoom**

**Features:**
- 50mm thermal imager with 36x zoom colour camera
- Uncooled 320 x 240 VOx Microbolometer
- 23° x 7° field of view
- 7.5 to 13.5µm
- RS232 or RS422
- Enhanced Visca or Pelco D
- 120° per second
- Cast aluminium
- Also available with a 640 x 480 thermal sensor

**Benefits:**
The F50Z is a hardened pan tilt zoom colour camera with a 320 x 240 Vanadium Oxide thermal imager good for man size detection out to 1500 ft. The side by side configuration of the two cameras provides the best scenario for true image fusion. The front bezel of the thermal imager functions as a manual focus ring allowing the camera to be tuned to the desired fixed field of view. An internal video switch allows the camera to work in a closed circuit system where only one coaxial transmission line is available. Through intelligent programming in the selected protocol, a user is able to toggle between the two video outputs of the F50Z.

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**SEE Thermal fV**

**Features:**
- Multiple lens options available
- 320 x 240 option
- 640 x 480 option
- NTSC or PAL options
- 35mm, 50mm and 60mm lenses standard

**Benefits:**
The SEE Thermal fV is a hardened fixed camera containing a 320 x 240 or 640 x 480 thermal imager. Multiple lens options are available with 35mm and 50mm being standard. 66mm lenses are available in the 640 x 480 model. Select NTSC or PAL at the time of order.

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**SEE fV Fixed Position w/zoom**

**Features:**
- Colour camera
- 36x optical, 12x digital zoom with image stabilisation
- Auto focus
- Nitrogen pressurised
- Articulating mount option
- .05 Lux NIR mode
- Cast aluminium

**Benefits:**
The SEE fV is a hardened fixed camera containing a 36x optical colour camera with auto focus, image stabilisation and 12x digital zoom. This camera is extremely useful in areas like hallways or staring from the front of a vehicle, boat, or train. The SEE fV is also available with either our QuickConnect or BigFoot connection systems.
Mini HP Pan Tilt Zoom

**Features:**
- 36x optical, 12x digital zoom colour camera
- Image stabilisation
- Auto focus
- Nitrogen pressurised
- 0.05 Lux NIR mode
- RS232 or RS422
- Visca, Pelco D/P
- Continuous stealth rotation
- 180° per second
- 0.007° resolution

**Benefits:**
The Mini HP is an upgraded version of Cobham’s hardened pan tilt zoom camera known as the m3G. The rugged Mini HP delivers long life in harsh environments such as continuous salt water spray or blowing sand.

The Mini HP still offers both the BigFoot and the QuickConnect providing true Mil-Spec connections. NTSC or PAL options.

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Dual HP

**Features:**
- Simultaneous colour and thermal video streams
- 50mm thermal lens – man size target detection to 580m
- 36x optical zoom on colour camera – man size target detection to 2.4km
- 14° horizontal field of view in thermal
- 180° per second

**Benefits:**
The Dual HP combines a CCTV colour camera with thermal technology for maximum scene awareness, day and night. With the ability to quickly integrate into the Patrol CCTV, it is hot-swappable with other QuickConnect and BigFoot cameras. The camera can communicate via Sony Visca or Pelco-D, RS232 or RS422.

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Dual HP vs Pan Tilt Zoom Thermal/Colour

**Features:**
- 36x colour camera
- Thermal camera
- Uncooled 320 x 240 VOx Microbolometer
- 23° x 7° field of view
- 7.5–13.5µm
- Internal video switch
- RS232 or RS422
- Enhanced Visca or Pelco D
- 170° per second

**Benefits:**
The Dual HP vs Pan Tilt Zoom Thermal/Colour camera has a video switch within the camera which can be activated remotely. This colour camera offers the user the option to view either colour or thermal images. The internal video switch is necessary when only one coaxial video cable is present.
### Carbide C16

**Features:**
- 640 x 480 uncooled thermal with continuous zoom choices up to 150mm
- Doubler available on 36x optical zoom day camera
- Silent operation
- Main body weighs 4.8kg, fully loaded weight of less than 10kg
- Temperature range of -40 to +70°C

**Benefits:**
The Carbide 16 is the most advanced mid-size surveillance platform available today.
It can be configured with many different cooled and uncooled thermal imagers, as well as a variety of laser pointers/designators. Several colour camera options are also available.
The C16 employs Cobham’s patented BigFoot base making this pan tilt hot-swappable with many other Cobham systems.

### Carbide C16-C

**Features:**
- Fixed view 100mm lens or 15 – 100mm continuous or 25 – 150mm continuous
- Uncooled 640 x 480 vanadium oxide FPA
- 17µm pitch
- Dual streaming video, with video switch being optional
- RS232 or RS422
- Enhanced Visca or Pelco D
- 120º per second

**Benefits:**
The Carbide C16-C is the largest pan tilt zoom in the C16 family.
The Carbide C16-C features an autofocus day camera with extreme range capability for its size (double that of Cobham’s 36x model).
When configured with the standard 36x colour camera block, other options like a laser range finder and laser pointers can be added to create the most sophisticated man portable sensor suite on the market today.

### Carbide C16-CM

**Features:**
- Continuous zoom
- 17 – 217mm, f/3.25
- Cooled 640 x 480, ITAR restricted
- MCT Microbolometer
- 25° x 2° field of view
- 3.4 – 5.1µm spectral response
- Dual streaming video
- RS232 or RS422
- Enhanced Visca or Pelco D
- 120º per second

**Benefits:**
The Carbide C16-CM is available with the various options described within the C16 and C16-C versions however the C16-CM is designed for Maritime use.
With a tiger drylac paint and wiper option, is the most sophisticated pan tilt zoom on the market for short and mid-range solutions.
When combined with our MAESTRO stabilisation modules the C16-CM offers superior performance at a reasonable price in all maritime environments.

### C16 Aurora

**Features:**
- Removable lamp moves to Aurora Battery Stick
- Military proven high intensity white light
- Optional NIR filter
- 360º continuous pan rotation
- 190º tilt rotation
- 120º per second max speed
- 12–30 VDC operation

**Benefits:**
The C16 Aurora camera system enhances mobility, survivability and lethality providing increased surveillance collection capability, while increasing illumination range and aiming capabilities with increased standoff.
A unique disconnect feature allows the user to remove the lamp and connect it to the Aurora Battery Stick for hand held use.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
**Cameras & Sensors**

**Carbide C50-26XT**

- Features:
  - 36x optical zoom colour camera
  - Various thermal options available
  - 360 degree rotation
  - 40º per second

- Benefits:
  Carbide 50 Colour/Thermal Positioner Pan Tilt Zoom with Thermal (C50–26XT) is a high-resolution pan and tilt for driving medium to long-range optics. Standard colour camera option is 36x optical zoom. A 2x doubler also available. Both cooled and uncooled thermal imagers can be added with lenses up to 500mm in size.

**Carbide C50-TEC**

- Features:
  - Thermoelectric cooler
  - Slip ring for 360 degree continuous rotation
  - Ready to accept colour and thermal cameras
  - Operates at 80ºC
  - 40º per second

- Benefits:
  The C50 is a high-resolution pan and tilt for driving medium to long-range optics. The C50–TEC is very similar to the C50; however a Thermoelectric Cooler has been added to the rear of the pan tilt body which applies the Peltier effect for refrigeration and closed loop cooling without gases or compressors. This technology increases the C50’s ability to perform in extreme weather conditions. Additionally, the C50–TEC incorporates a slip ring for 360 degree continuous rotation.

**Carbide C75**

- Features:
  - 365º pan angle range
  - 90º tilt angle range
  - Maximum tilt and pan speeds of 25º/s
  - Cast aluminium housing
  - Operating temperature = -40ºC to +75ºC

- Benefits:
  A slightly larger version of the C50, the C75 can carry a 34kg payload. This means optional laser range finders, laser designators and bore sighting devices can be added. Its pedestal has three Mil-Spec ports to allow sensors to connect to command and control. A unique quick release allows sensors to be added or removed quickly with no tools required.

**Electro-Optical Cameras – Carbide**

**Raven**

- Features:
  - Flexible folding solar panel
  - Optional integrated battery system
  - Frequency adjustable COFDM mesh radio
  - Non-line of sight transmission possible
  - Low-latency MPEG4 video
  - Weatherproof radio enclosure
  - Colour/NIR/thermal imaging modes available with multiple Cobham camera types

- Benefits:
  The Raven (Remote Articulated Vision Enhancement Node) is a lightweight tactical surveillance system utilising a high-precision, low-power tactical pan tilt system for electro–optics positioning. A sealed NEMA-4X rated video transmission box provides full-resolution MPEG4 video and transmission over a frequency-adjustable, COFDM mesh radio. Options include a variety of lens configurations - both cooled and uncooled thermal sensors, and tactical laser modules for illumination or targeting.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
Electro-Optical Cameras – Carbide

**Carbide C150**

**Features:**
- Carries a total payload of 68kg
- Bore-sight adjustment mechanisms are optional for highly accurate alignment of all sensors
- Temperature range = -40ºC to +75ºC
- 0.0045º resolution
- Ideal for both maritime and land-based operations

**Benefits:**
This Numeric Positioner is a high-resolution pan tilt for driving super long-range optics. It can be used for unique configurations of sensors, such as laser range finders, xenon spotlights, defensive acoustic arrays, laser designators and long range CCD and thermal camera systems.

The unique PAN-Thru shaft allows a radar to mount on top of the C150 and move independent from the pan tilt.
Carbide HP Marine

Features:
- Dual streaming video (internal video switch optional)
- Multiple thermal lens offerings
- RS232 or RS422
- 120° per second
- Uncooled 640 x 480 Vanadium Oxide FPA

Benefits:
A top-of-the-range, high-performance system with varying thermal lenses, daylight/lowlight HD TV camera and multi sensor options available. It is ideally suited for Piracy Stand-off Protection, Port Security, Navy and Coastguard applications.

Dual HP Marine

Features:
- Simultaneous colour and thermal video streams
- 14° horizontal field of view
- 180° per second
- RS232 or RS422
- Long life in harsh environments such as continuous salt water spray

Benefits:
This Marine version of the DUAL HP provides a low-cost, nitrogen pressurised, multi-sensor camera system.

Mini HP Marine

Features:
- 36x optical day camera
- Auto focus
- 180° per second
- Also available with thermal options

Benefits:
Affordable, reliable, pan tilt system in a very small package, weighing less than 2.3kg. The Mini HP is nitrogen pressurised and can be mounted virtually anywhere.

SEE Marine CCTV

Features:
- Hardened pan/tilt/zoom colour camera
- Auto focus
- 36x optical zoom
- 120° per second
- RS232 or RS422

Benefits:
The SEE Marine CCTV Camera System will provide reliable operational use in support of maritime security needs and is nitrogen pressurised. The ideal solution for detecting targets on the water during day use or switching over to near IR mode for low light conditions at dusk, helpful when navigating a port or harbour or identifying a buoy marker at range.
MARK – Mobile Acquisition Reconnaissance Kits

Features:
- SEE, Mini HP or Dual HP
- 762mm x 508mm x 280mm case part (430010)
- Tripod – aluminium part (400020)
- Look Controller 6.5” TFT display
- Interconnect cable Quickconnect or BigFoot
- Power supply (800137)
- Thule clamp (500030)
- Gooseneck kit (980003)

Benefits:
Cobham’s Mobile Acquisition and Reconnaissance Kit is a variation of the Patrol CCTV systems. The MARK comes ready to deploy in any situation. First responders, law enforcement, and others will find this kit is easily set up and ready for use in less than 5 minutes with no need for tools.

A hard sided case conveniently carries all the components of the Patrol CCTV with an added auto-sensing power supply and a light duty tripod to hold the chosen camera. Customers can choose from the SEE, Mini HP or Dual HP for the system. Some users choose to purchase multiple cameras per kit. Cobham cameras are swappable which gives the ability to mix and match.

Patrol CCTV

Features:
- SEE, Mini HP or Dual HP camera option
- Look Controller 6.5” TFT display
- Interconnect cable Quickconnect or BigFoot
- 1.83m cable (700025) cigarette adapter
- Thule clamp (500030)
- Gooseneck kit (980003)

Benefits:
Cobham’s Patrol CCTV design enables the QuickConnect family of cameras to be integrated as a rapid deployable mobile camera system. The Look controls all camera functions and provides external jacks to record video and audio. Thermal imaging cameras and NIR illuminators are easily employed. This compact mobile surveillance system can be mounted on a Thule roof rack and has been tested in rain and wind at up to 100 mph. Commonly used for IED removal, first responders, law enforcement, and firefighters. It is able to interface with encoders, DVRs, and other security management tools.

C16 Mark Acquisition Reconnaissance Kit (MARK)

Features:
- Look Controller
- Carbide 16 with 640 x 480 thermal, 100mm 26x optical colour camera (other options available)
- Articulated windshield mount
- Magnetic camera mount
- BigFoot mounting base
- 12V cigarette adapter cable
- 4.57m control cable

Benefits:
The C16 Mobile Acquisition Reconnaissance Kit (MARK) is a complete surveillance camera system designed to be portable, easily transported, and rapidly deployed. The standard system includes the C16 with a 26x optical colour camera and a 640x480 thermal imager with 100mm lens (fixed or continuous zoom). Also included is the Look Controller, multiple cables, suction articulating windshield mount, magnetic camera mount, and BigFoot Mounting base. Other accessories are available. The C16 MARK can be moved between vehicles, land based outposts, and marine environments as a standalone or networked surveillance package.
MAESTRO Stabilisation Module

Features:
- 3 axis inertial measurement unit
- Up to 6.17 mrad image stabilisation
- 93.5% input disturbance rejection
- Compatible with all Cobham HP camera systems
- Utilizes Pelco D input
- Control aluminium enclosure
- BigFoot shoe for camera
- 2 Circular mil connectors
- Mounts to L-bracket 800051
- Or Spider bracket 500213

Benefits:
The MAESTRO Stabilisation Module is a rugged and compact aluminium enclosure, housing proprietary Cobham stabilisation components. The BigFoot “shoe” is mounted directly atop the lid of the enclosure allowing any 2G HP, 3G HP or C16 camera system to mount on top. A circular mil P1 connector is mounted on the side wall for power and data. The P2 connector connects to the BigFoot of the chosen camera system. The MAESTRO is an in-line module that can be installed before or after the sale and can be controlled by our LOOK Controller or any device issuing Pelco D commands.

LOOK Controller

Benefits:
- 6.5” TFT display
- 960 x 234 format
- 9–36 VDC input
- 3 axis joystick twist to zoom
- Proportional pan/tilt
- 2.5mm power input
- 2 RCA outputs for audio/video
- 15 pin hi def input

Benefits:
The LOOK Controller is designed to work with any Cobham camera through the unique 15 pin cable system provided by Cobham. With a 6.5” TFT Dual i50 display, 3 axis joystick, and programmable buttons, the LOOK Dual Display is an all-in-one command centre with internal video switch. Looping RCA outputs enable video to be sent to external monitors, DVRs, and speakers. The twist-to-zoom feature on the joystick allows the operator to perform other tasks while manoeuvring the camera. When used with a dual head camera such as the Dual i50, the push of a button toggles the image between the colour and thermal cameras. Compatible with Cobham Visca cameras.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
**Nugget Sensor Range**

### Nugget Wireless Sensor Network Node

**Features:**
- Multihop mesh capability
- Re-configurable transceiver frequency within the band
- Sensors – internal PIR, internal tamper/seismic, ambient light, vibration and light sensor
- GPS location receiver
- External sensor interface to add further sensors as required
- Removable battery pack with up to 30 days' continuous use life

**Benefits:**
A fully portable surveillance sensor system, this is capable of detecting the presence of an intruder via sensors and sending an alarm to a central receiving node. Ideal for covert surveillance, nodes can be configured before deployment and then individual units can be configured wirelessly to reflect changes required.

### 3G Nugget Interface

**Features:**
- Ability to monitor a deployed Nugget sensor network anywhere in the world that has a 2G/3G link
- 3G/2G interface to the Cobham range of Nugget sensors
- Can be deployed alongside Nugget sensors on long duration missions
- Interfaces to any Nugget in the MESH using a dedicated cable
- Data fully encoded

**Benefits:**
The Nugget sensor range operates in a long range MESH, allowing users to protect an area by deploying Nuggets in a wide perimeter. Each Nugget contains a Passive Infrared (PIR), trip wire, vibration and light sensor and can be upgraded with other sensor interfaces. The system typically provides up to 1km wireless range between Nuggets. The 3G Nugget Interface allows even more remote monitoring of activity on a deployed Nugget MESH using public 3G/2G networks.

### Nugget – Remote Ground Sensor Interface

**Features:**
- Simple connection to Nugget via single cable
- Enables use of existing Remote Ground Sensors within the Nugget mesh system
- Compact and rugged
- Weatherproof housing compliant to IP67
- Automatic detection of sensor type
- All configuration carried out with Mission Commander GUI software

**Benefits:**
Cobham’s Remote Ground Sensor (RGS) Interface is compatible with the Wireless Sensor Network Node (Nugget) and connected to it by a single cable. There are no external switches, indicators or controls. Power is applied when connected to the Nugget. It adds the capability to connect one of a number of existing RGS Sensors to the Nugget, such as Long Range Passive Infrared, Seismic/Geophone, Magnetic and Break Wire, all available from Cobham.

### Nugget – External Switched Output Interface

**Features:**
- 4 I/O channels configurable to either an input or an output
- Compact and rugged, with weatherproof housing compliant to IP67
- Automatic switching of equipment on trigger input
- Remote switching of equipment
- All configuration carried out with Mission Commander GUI software
- No external switches, indicators or controls

**Benefits:**
Cobham’s External Switched Output Interface is compatible with the Wireless Sensor Network Node and connected to it by a single cable. It can connect a number of additional COTS sensors and/or equipment (such as cameras) that require remote switching, to reduce power consumption, and increase battery life. I/O can be configured to be an input or output. As input, open/closed contact to ground is detected as an alarm. As an output, open–drain FETs provide switched path to ground capable of switching up to 2A at 36V.

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Remote Ground Sensor (RGS) Range

M7209 RGS Transmitter

Features:
- Low power device, typically deployed for up to 25 days
- Configured by RS232
- Lightweight – just 0.25kg
- Rugged, coping with temperatures between -10ºC to +55ºC

Benefits:
This sensor processor and transmitter can transmit alarms up to 3km to a relay unit or handheld receiver. It is part of the Cobham Remote Ground Sensor (RGS) system which is widely used by military and elite police forces worldwide.

M7232 Magnetic Sensor

Features:
- Detects movement of metal objects within range (e.g. doors, field gates)
- Interfaces with alarm transmitter and other ‘make to alarm’ systems
- Adjustable sensitivity
- Rugged compact unit with integral battery
- Resistant to power line interface

Benefits:
Part of the Cobham Remote Ground Sensor System, the M7232 is designed to monitor the magnetic field within its range, detect disturbances and send alarms. It can be used to detect opening doors, container movement, vehicles, field gates or even soldiers with large handheld weapons and body armour.

M8022 RGS System

Features:
- Portable area/perimeter surveillance system
- Covert, rugged and designed for quick deployment
- Supports a wide range of sensors
- Trigger output for video systems and alarm event logging
- Very low-power devices deployed for weeks/months on a single 9V battery

Benefits:
Widely used by military and elite police forces worldwide in critical areas where long-term observation by personnel is not practical, this solution consists of: a Passive Infrared Sensor, Seismic Geophone Sensor, Magnetic Sensor, Make/Break or Trip Wire Sensor, RGS Sensor Processor and Transmitter, Handheld Receiver, Field Programmer Unit, 5W RGS Relay and GSM Buried Relay.

M7311 Handheld Receiver

Features:
- Up to 64 transmitters monitored with one receiver
- Compatible with ground sensor equipment
- Alarm event logging
- Exceptionally low error rate
- Can be linked to GSM or satellite communications network

Benefits:
This handheld unit provides discreet visual and aural indication of alarm and confidence signals. Monitoring multiple sensors, it provides a comprehensive, sophisticated perimeter surveillance system. A serial interface allows communications with devices such as PCs or printers and, when linked to other Cobham solutions, operating ranges in excess of 3km can be achieved.

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M7618 Field Programmer

Features:
- Field configuration for Cobham Remote Ground Sensors
- Allows RGS unit settings to be downloaded/confirmed
- Simple to use menu-driven interface
- Auto power-on and power-off to conserve battery power
- Compact, rugged, waterproof design

Benefits:
Designed as a generic programming device, the M7618 provides the ability to configure equipment in the field in a rapid, clear and reliable manner. The programmer reads current settings on a device and allows them to be verified and modified to fit changes in requirements, then logs and stores changes.
**M7433 5W RGS Relay**

**Features:**
- Extends the operational range and coverage of the Cobham Remote Ground Sensor system
- Rugged IP 67 rated housing for buried deployments
- Trigger outputs to other assets such as video capture
- Internal movement tamper trigger
- System configuration and monitor software included

**Benefits:**
Designed for use as an unmanned repeater or relay, this solution has an integral wireless alarm receiver and 5W transmitter, and includes coding to allow relay units to be deployed in a ‘daisy chain’ format for longer range. Optional specialised antennas can be used for receive and transmit functions.

**M7432 Merlin GSM Relay**

**Features:**
- Integral Remote Ground Sensor (RGS) alarm receiver and dual band GSM modem
- Sends RGS alarms via SMS and/or GSM data call
- Remote configuration
- Logging of alarm events and trigger outputs for other assets (e.g. video recording)
- Internal movement tamper alarm

**Benefits:**
The M7432 Merlin GSM Relay is part of the Cobham Remote Ground Sensor System. It will automatically send a text message or data via a GSM network on receipt of an alarm from an unattended RGS sensor. Up to three nominated GSM handsets will be sent the transmitter identity, time, date and alarm type information.

**M8008 Geophone**

**Features:**
- Typical range of 10 to 20m
- No signal emitted, helping reduce likelihood of detection
- Very low current – powered from M7209 processor
- Interfaces with Cobham Remote Ground Sensor transmitter

**Benefits:**
The Geophone is designed for the detection and classification of vibration in the ground generated by personnel or vehicles, using seismic signature analysis. It is stuck into the ground and operates by reception of very low level seismic activity.

**M8007 Break Wire**

**Features:**
- High reliability ‘single shot’
- Bifilar wire on spool
- No signal emitted, helping reduce likelihood of detection
- No power required
- Interfaces with Cobham Remote Ground Sensor transmitter

**Benefits:**
A very fine ‘trip wire’, which provides a high reliability detection of anything which causes the wire to break. This is useful for protection of doorways and other openings, detecting and reporting the movement of people and objects in critical areas.

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M8040 Passive Infra Red Sensor

Features:
- Choice of passive sensor units
- Low probability of detection
- Very low current
- Interface with Cobham Remote Ground Sensor transmitter/processor

Benefits:
These passive detection devices monitor, detect and report the movement of people and objects in critical areas.
The sensor range includes Passive Infrared, which detects heat from people or vehicles; Geophone, which detects vibration in the ground; and Break Wire, which trips an alarm if anything causes the wire to break.

M11405 Compact Camera Interface

Features:
- Integrated trigger and telemetry receiver with video transmitter
- Extended deployed battery life
- The transmit power is 100mW and a range of 500 metres in the urban environment is normally achieved
- Rugged and sealed
- AES encryption on images

Benefits:
This COFDM interface provides remote video capability for long-term unattended deployments. With exceptional spectral efficiency, its multi-carrier modulation scheme has the ability to cope with severe channel interference, making it ideal for urban surveillance operations. Once triggered it can provide wireless pan, tilt and zoom control of a composite video camera. A 1W amplifier block can be attached.
Command and Control Software

Tracking Management Solutions
UniTrac

Network Control Software
Mission Commander – Tactical
Mission Commander – Strategic
Command and Control Software

Cobham command and control software provides integrated surveillance and telemetry management software solutions designed to meet a variety of customer needs.

The map visualisations and software packages provided by Cobham enable rapid network configuration, monitoring of network usage and provide a single unified tracking system. Cobham can even host the solutions in its Baltimore location providing customers with peace of mind by supplying the IT infrastructure required to enable data centre performance.

Cobham’s specialist command and control software manages video surveillance and IP Mesh networks ensuring optimum performance. Its integrated device agnostic tracking management software, UniTrac, works with both Radio Direction Finding (RDF) and GPS devices. Designed for the needs of a varied user community, UniTrac integrates multiple surveillance assets and data from multiple sources into a ‘single pane of glass’ for the purpose of command and control and situational awareness.
UniTrac

UniTrac is a unified tracking management system that allows seamless integration using satellite and terrestrial communications and an extensive variety of tracking devices.

It allows two-way communication between multiple satellite, cellular and radio frequency providers and has over forty different types of tracking communications links, allowing customers the ability to utilise multiple tracking devices, all integrated under a single UniTrac architecture.

UniTrac mines tracking and sensor data, delivering a visual and strategic picture onto any stationary or mobile computer, with automated, simultaneous and immediate notifications of alerts via email, pager, and voice dialler. UniTrac allows any number of links to feed multiple displays simultaneously. Return communications such as GPS locations, alerts, and boundary violations that reach UniTrac are instantly distributed to the computers, mobile phones, or other hand held devices that the user designates.
Mission Commander - Tactical

Features:
- Intelligent management of COFDM video and IP transmission systems
- Tactical deployment
- Works with both online and offline maps
- Advanced sensor event handling
- Integrates with public and private networks
- Automated video management
- Frequency and channel mapping
- Integrates with third-party network tools such as IP cameras and web apps

Benefits:
Mission Commander – Tactical is an advanced software suite that runs on a desktop or tablet computer. It allows manual and automated configuration, management and integration of Cobham video and IP transmission equipment and networked intelligent sensors. It will display and manage the geographical deployment of equipment, for either short missions or a citywide surveillance infrastructure. The software can configure, monitor and automatically manage IP MESH, Nuggets, transmitters, receivers.

Mission Commander - Strategic

Features:
- Full multi-server replication and fail-over
- Supports multiple client workstations
- Works with both online and offline maps
- Advanced sensor event handling
- Integrates with public & private networks
- Frequency and channel mapping
- Integrates with third-party network tools such as IP cameras and web apps

Benefits:
Mission Commander – Strategic is an advanced client/server software suite that allows manual and automated configuration, integration of Cobham video and IP transmission equipment and networked intelligent sensors. One or more servers will run many deployments with automatic replication and fail-over and many client workstations can connect to any of the deployments with full user authentication and access management control. It will display and manage the geographical deployment of equipment, for either short missions or a citywide surveillance infrastructure.

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IP Mesh Solutions

Cobham’s fluid, self-forming, self-healing IP Mesh solutions offer true networked integration of video, audio and GPS with seamless transfer of digital data.

Offering genuine non-line of sight coverage (COFDM), the system is truly mobile and therefore supplies a network with extended range - one which will deliver in environments too tough for other radio solutions to cope with. The robust, self-healing IP Mesh architecture makes the product ideal for use in mobile surveillance applications, command and control, or advanced robotics.

As public networks are subject to outages (either unexpected, or planned), Cobham IP Mesh’s non-reliance upon commercially available networks means that it delivers unprecedented levels of network availability and consistently high quality. The highly flexible IP mesh topology means that data can be exchanged between moving nodes in a point to point or point to multipoint fashion. Range can be extended by using nodes as repeaters.
NETNode IP Mesh Phase 3 - Plain

Features:
- Up to 16 IP Mesh radios can be combined into a mobile network.
- Occupies from just 2.5MHz of bandwidth (3.0, 3.5, 5.0 and 6.0MHz also available)
- Provides up to 9.0Mb/s of IP data (depending on mode, number of nodes and range between nodes)
- Frequencies from 340MHz to 6GHz are available in discrete bands
- Output power of 1W or 2W available
- Mission Commander PC application to configure and monitor mesh

Benefits:
NETNode IP Mesh Radios can be combined into a fluid, self-forming, self-healing mesh network, ideal for use in mobile surveillance applications, command and control or advanced robotics. Control is achieved using an inbuilt web browser or comprehensive Mission Commander PC application.

NETNode IP Mesh Phase 3 - Robust

Features:
- Up to 16 IP Mesh radios can be combined into a mobile network.
- Occupies from just 2.5MHz of bandwidth (3.0, 3.5, 5.0 and 6.0MHz also available)
- Provides up to 9.0Mb/s of IP data (depending on mode, number of nodes and range between nodes)
- Frequencies from 340MHz to 6GHz are available in discrete bands
- Output power of 1W or 2W available
- Mission Commander PC application to configure and monitor mesh

Benefits:
NETNode IP Mesh Radios can be combined into a fluid, self-forming, self-healing mesh network. Control is achieved using an inbuilt web browser or comprehensive Mission Commander PC application. This robust solution is ideal for use in mobile surveillance applications, command and control or advanced robotics.

NETNode IP Mesh – Mini

Features:
- Up to 16 IP Mesh radios can be combined into a mobile network.
- Occupies from just 2.5MHz of bandwidth (3.0, 3.5, 5.0 and 6.0MHz also available)
- Provides up to 9.0Mb/s of IP data (depending on mode, number of nodes and range between nodes)
- Frequencies from 340MHz to 6GHz are available in discrete bands
- Output power of 1W or 2W available
- Mission Commander PC application to configure and monitor mesh

Benefits:
NETNode IP Mesh Radios can be combined in a fluid, self-forming, self-healing mesh containing up to twelve radios. The Mini Mesh can provide over 6.0Mb/s of IP data (depending on mode, number of nodes and range between nodes). With output power of 100mW, it also suits bodyworn applications, offering real-time IP connectivity.

Deployable NETNode – Rugged

Features:
- Rugged case with built in wheels and handle
- Camera can be mounted up to 2.25m high, using the case as a base for the telescopic pole
- Temperature range = –20ºC to +50ºC
- 360º continuous pan, 120º per second
- Tamper detection

Benefits:
This self-contained, battery-operated NETNode mesh networking wireless camera comes in a rugged carry case. The hardened compact remote-controlled PTZ day/night camera offers completely silent operation and is designed to meet the demands of harsh environments. The inclusive NETNode can be connected to other IP radios to create a private network.

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NETNodeIS – Intrinsically Safe

Features:
- Up to 16 IP Mesh radios can be combined into a mobile network
- Occupies from just 2.5MHz of bandwidth (3.0, 3.5, and 5.0 MHz also available)
- Provides up to 7.0Mb/s of IP data (depending on mode, number of nodes and range between nodes)
- ATEX Ex ia M1, IEC60079-11:2006 ai I
- Excellent RF penetration and performance in presence of multipath

Benefits:
Intrinsically safe NETNodeIS IP radios are ATEX M1 certified and can be relied on to bring critical data even in the presence of an explosive atmosphere. The self–forming, self–healing mesh architecture makes the NETNodeIS product ideal for use as a robust data backhaul solution. It allows the rapid reconfiguration of a communications network in the evolving underground mine development where accidents or mining operations could require the physical rerouting of data.

Deployable NETNode – VIP

Features:
- Can be connected to other IP radios to create a private network
- Camera can be mounted up to 2.25m high, using the case as a base for the telescopic pole
- Temperature range = –10ºC to +50ºC
- 350º pan, 16 adjustable speeds
- Motion alarm

Benefits:
This self–contained, battery–operated NETNode mesh networking wireless camera comes in a rugged carry case. This IP camera offers 18x optical zoom and high sensitivity with day/night function. While a browser Graphical User Interface (GUI) gives easy control of pan tilt zoom, with drag and zoom features.

Duo Phase 2 IP and Video Radio

Features:
- Occupies from just 2.5MHz of bandwidth
- Provides up to 4.8Mb/s of IP and video data in the point to point duo link
- Frequencies from 340MHz to 6GHz are available in discrete bands
- Available in plain and robust enclosures

Benefits:
A range of point-to-point bi-directional single frequency COFDM radios, ideal for control of remote unmanned vehicles, surveillance from remote cameras requiring pan tilt zoom and mobile applications such as between command vehicles. DUO radios offer exceptional performance in mobile and urban environments and are available in a variety of frequency bands to suit all applications.

NETNode IP Mesh Phase 2 – Plain

Features:
- Up to 16 IP Mesh radios can be combined into a mobile network
- Occupies from just 2.5MHz of bandwidth (3.0, 3.5, and 5.0MHz also available)
- Provides up to 7.0Mb/s of IP data (depending on mode, number of nodes and range between nodes)
- Frequencies from 200MHz to 8.6GHz are available in discrete bands
- Mission Commander PC application to configure and monitor mesh

Benefits:
NETNode IP Mesh Radios can be combined into a fluid, self–forming, self–healing mobile mesh network that can be any shape and offers non–line of sight coverage. Ideal for use in mobile surveillance applications, command and control or advanced robotics, the NETNode can be connected to third party cameras or dedicated Cobham PTZ camera solutions.
NETNode IP Mesh Phase 2
– Robust

Features:
• Up to 16 IP Mesh radios can be combined into mobile network
• Occupies from just 2.5MHz of bandwidth (3.0, 3.5, and 5.0MHz also available)
• Provides up to 7.0Mb/s of IP data (depending on mode, number of nodes and range between nodes)
• Frequencies from 200MHz to 8.6GHz are available in discrete bands
• Housed in rugged IP66 housing suitable for outdoor deployment
• Mission Commander PC application to configure and monitor mesh

Benefits:
NETNode IP Mesh Radios can be combined into a fluid, self-forming, self-healing mobile mesh network that can be any shape and offers non-line of sight coverage. Ideal for use in mobile surveillance applications, command and control or advanced robotics, the NETNode can be connected to third party cameras or dedicated Cobham pan tilt zoom camera solutions.

Infrastructure Node

Features:
• Up to 16 IP Mesh radios can be combined into mobile network
• Occupies from just 2.5MHz of bandwidth (3.0, 3.5, 5.0 and 6.0MHz also available)
• Provides up to 8.5Mb/s of IP data (Phase 3 Mesh only)
• Not frequency specific
• Allows up to 30 metres between the Node and the Receiving antennas
• Mission Commander PC application to configure and monitor mesh

Benefits:
The Quad Infrastructure Node is ideally suited to city wide applications, or difficult deployments as accommodates four individual diversity receive antennas and a dedicated single transmit antenna. The benefit of this system is that Quad diversity improves receive sensitivity by up to 3dB over dual diversity using Maximum Ratio Combining of all four channels. Further receive sensitivity can be achieved if the system is deployed with four sector antennas, to give a full 360 degrees of coverage.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
NETLink Store and Forward Solutions

Features:
- 10/100 Ethernet port
- Streaming onto public or private networks
- AES128/256 encryption for end-to-end security
- Can be used with ADSL, WiFi and 3G routers
- Range of time logging and trigger functions

Benefits:
NETLink allows Cobham equipment to be connected to IP networks and, when connected to any standard Cobham receiver, translates the signal into a streaming video service, with choice of frame rates. Upgrades include internal or remote DVR options to create a sophisticated ‘store and forward’ product, and a video input option to connect directly to a camera.

NETLink Storm

Features:
- Input from analogue camera or Cobham COFDM Receiver
- Supports transmission over ADSL, dual 3G networks, WiFi and COFDM
- Two built-in hard drives to store and forward full evidence quality audio and video
- Compact, robust Peli case with internal screen for camera positioning
- AES128/AES256 encryption for security

Benefits:
Aimed specifically at the covert intelligence gathering market, the NETLink Storm is a next-generation, robust solution for transmitting video and audio across both private and public networks. The all-in-one solution allows Cobham equipment and analogue cameras to be connected to IP networks via live streaming.
**IP Hardware Decoder**

- Ethernet control via web browser or Mission Commander
- RS232 interface to set up Ethernet parameters
- Internal AES128 or 256 decryption
- Automatically selected MPEG2, MPEG4 or mixed mode (where applicable)
- Two bidirectional RS232-over-IP links when used with CRX receiver
- Ability to follow a transmitter across different receivers when used with Mission Commander

**Benefits:**
IP Hardware Decoder is a professional digital video decoder designed to receive multicast audio/video streams from Ethernet networks and output decoded video in composite and S-Video formats, as well as stereo audio. Designed to be used with Netstream and other Cobham streaming video products, such as the CRX Central Receiver.

**Features:**
- Remote power switching for NETNode Phase 3 unit
- Re-configurable transceiver frequency within the band
- Internal tamper/seismic sensor
- External sensor interface capable of adding a further sensor as required
- Compact weatherproof housing compliant to IP67
- Quick to deploy
- Connects to the NETNode unit via two short cables

**Benefits:**
Cobham’s Mesh Activation Unit (MAU) enables Cobham’s IP Mesh Phase 3 system and cameras linked to it to be deployed with batteries for longer periods, only being powered when video is required.

---

**IP Encoder**

- Very low delay mode (<65ms)**
- Dual SD or single HD video input
- Downsampling of SD and HD video input (resolution and/or frame rate)
- Broadcast quality High Profile H.264 video encoder
- Low power consumption
- Digital and analogue input options
- Up to 4 simultaneous unicast/multicast streams
- Built-in recording onto Micro SD card
- Stereo audio input

**Benefits:**
Video IP Encoder is a High Definition digital video encoder, ideal for live video streaming applications. Designed to allow the secure transmission of video data across IP Networks. In addition it is easily connected to existing network infrastructure.

The increased compression and efficiency of the MPEG4 H.264 encoder in Cobham’s SD and HD solution offers users additional bit rate savings with the added benefit of small size, low latency and low power consumption. The option of encoding two SD videos with no compromise in quality allows for a wide range of applications.

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**Mesh Activation Unit**

- Ethernet control via web browser or Mission Commander
- RS232 interface to set up Ethernet parameters
- Internal AES128 or 256 decryption
- Automatically selected MPEG2, MPEG4 or mixed mode (where applicable)
- Two bidirectional RS232-over-IP links when used with CRX receiver
- Ability to follow a transmitter across different receivers when used with Mission Commander

**Benefits:**
IP Hardware Decoder is a professional digital video decoder designed to receive multicast audio/video streams from Ethernet networks and output decoded video in composite and S-Video formats, as well as stereo audio. Designed to be used with Netstream and other Cobham streaming video products, such as the CRX Central Receiver.
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Cobham's Tactical Communications capability enables safe, secure, fast and reliable inter, intra and dismounted voice and data communications and includes a wide range of defence products, ranging from world class vehicle intercom systems to next generation tactical soldier and platform C4I systems.

As global leaders in the design, development, and manufacture of Vehicle Intercom Systems (VIS) and with over 50 years' experience, Cobham has designed and delivered vehicle intercom solutions to 20 nations and was chosen for the US VIS-X Intercom Program based upon a 'best value' solution.

Over 125,000 Cobham Vehicle Intercom Systems (VIS) have been deployed worldwide.
TacG2 Vehicle Intercom System (VIS)

Features:
- Backwards compatibility with AN/VIC-3
- Increased functionality through module insertion
- Configurable to meet the requirements of different users and vehicle types
- Superior reliability
- Ease-of-use a key design feature
- IP connectivity, VoIP calling, selective calling, and displays

Benefits:
The next generation of reliable, effective communications in any combat environment. Fast, safe, secure and reliable communications are an essential element of mission success in today’s battlefield. The TacG2 system enables vehicle mounted troops to do this even in the most demanding of missions. The system is made up of a number of standard units, which can be ‘mixed-and–matched’ to satisfy the specific functional and technical configuration requirements.

Tactical Gateway Station

Features:
- Intercom in 1 box – 2 crew & 3 Combat Network Radios (CNR)
- Programming of all system parameters
- Two Advanced Crew Stations embedded within unit
- Three radio ports with RS232 data for radio remote control
- IP gateway
- Ethernet connection

Benefits:
The Tactical Gateway System (TGS) can be used as a single box intercom solution for applications that require only two crew positions and up to three radios. This unit is required for all vehicle configurations and provides direct connection to the vehicle prime power. Additional units are added into the system by simply adding units to the station cabling which takes the form of a ‘ring’ routed around the vehicle.

Advanced and Enhanced Crew Stations

Features:
- Ethernet/RS232 connection for data transfer and SIP phone
- Custom Expansion Unit
- Displays (Advanced Crew Station only)
- Selective calling
- Live/Vox/Push-To-Talk (PTT) selection
- Noise-tracking Vox

Benefits:
TacG2 Advanced and Enhanced Crew Stations are available in both single, and dual user variants. These units give the option to place additional users to the TacG2 system, either as a retrospective upgrade or for specific larger vehicles.

Infantry Crew Station

Features:
- Provides one headset port (supporting both binaural and monaural headset types)
- 10/100Mbps Ethernet Port (for connection to the Expander Dismounted Interface unit)

Benefits:
The Infantry Crew Station (ICS) is an externally-mounted unit which provides a dismounted user with access to the Intercom and on-board radios (under the control of the internal crew).
Expander Dismounted Interface

**Features:**
- Incorporates a single LED
- Pushbutton switch
- A tone generator can be distributed using the Expander Dismounted Interface (EDI), throughout the intercom when an external operator requests connection

**Benefits:**
The Expander Dismounted Interface (EDI) is a small ‘Expander Box’ which may be fitted to the top face of any crew station unit. The EDI provides the system interface to, and control over the externally-mounted Infantry Crew Station (ICS). The EDI incorporates a single LED, a pushbutton switch, and provides a tone generator for distribution throughout the intercom when an external operator requests connection.

M200E Router

**Features:**
- Point-to-point private calls to other users in the network
- Conference calls between users in the network
- Users able to share a common intercom between the networked vehicles
- Radio assets can be shared between the networked vehicles
- Users can share alarms or auxiliary audio inputs between the networked vehicles

**Benefits:**
Each M200E Router incorporates a Session Initiation Protocol (SIP) server, providing Voice over IP (VoIP) telephony between any valid local SIP extension. The telephony network may then be scaled-up by simply interconnecting M200E units. The M200E incorporates five 10/100Mb/s Ethernet Ports to interconnect up to five vehicles in a multi-vehicle network without any additional infrastructure. Alternatively, they can be used to connect vehicle-mounted equipment to both the TacG2 and an external Wide Area Network (WAN).
ROVIS (AN/VIC-3) Vehicle Intercom System (VIS)

Features:
- Provides high quality external communications over Combat Net Radio (CNR)
- Full control of internal and external communications via the FFCS
- Up to six radios and users per system
- Ring cable connection for alternative routing of signal data and power
- Built to full military specifications
- Key features de-centralised for improved reliability

Benefits:
Designed to the highest of military standards, ROVIS (AN/VIC-3) is the workhorse of the Cobham family of intercoms. ROVIS is the standard fit to all US Army medium and heavy armoured vehicles. With simple installation and setup procedures, Cobham’s most popular intercom, the ROVIS (AN/VIC-3), offers crew members full control of all aspects of their communications environment.

Master Control Station

Features:
- Separate protected power for both system modules and Active Noise Reduction (ANR) headsets
- Alarm inputs
- Two wire field telephone connection
- Loudspeaker connection with volume control
- Three programmable modes for different operational scenarios
- Ability to allow or deny access levels to external Combat Net Radios

Benefits:
The Master Control Station (MCS) provides central power and system control. Incorporates Built-In-Test (BIT) and programmable control over user access to external radios.

Full Function Crew Station

Features:
- Designed for simplicity of use under all environmental conditions
- Provides the user with selection of working and monitor radios
- Push–To–Talk (PTT) operation
- Live microphone
- Noise following dynamic Vox
- Emergency override

Benefits:
The Full Function Crew Station (FFCS) provides a single user with full control over working and monitor radios, volume control and intercom access.
LV2 Vehicle Intercom Systems (VIS)

**Features:**
- Individual selection over working radio selection
- Central control over intercom access (Vox, Live Mic/PTT)
- Second intercom channel
- Full control of internal and external communications via the Full Function Crew Station – light (FFCS/L)
- Variable configuration between radios and users with two radios as standard on the Master Control Station – Light (MCS/L)
- Full Wireless Intercom capability for crew and dismounted troops

**Benefits:**
With a small footprint and ease of use as a key feature, the LV2 Vehicle Intercom System is the ideal choice for light and small platforms. Built to full military specifications and with a high level of battle damage resilience, LV2 provides high quality external communications over Combat Net Radio and is fitted to US Army HMMWVs, light vehicles and Soviet designed vehicles (T72 and BMP).

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Master Control Station – Light

**Features:**
- Separate protected power for both modules and ANR headsets
- Two external radio ports
- Ring Highway connections
- Centralised control over intercom access and radio silence
- The Full Function Crew Station (FFCS) from the ROVIS (AN/VIC-3) is fully compatible with the Master Control Station – Light and allows individuals to configure their own setting when connected into an LV2 system

**Benefits:**
The Master Control Station – Light (MCS/L) provides protected and conditioned power to all modules within the system from a single 24V supply.

---

Full Function Crew Station – Light

**Features:**
- Designed for simplicity of use under all environmental conditions
- Selection of working radio
- Monitor all other radios
- Volume control
- Selection of second intercom channel

**Benefits:**
The Full Function Crew Station – Light (FFCS/L) provides similar functionality to the FFCS with a dual user capability.
Eagle Radio

Features:
- Full duplex, 2.4GHz Squad Radio
- MANET operation with flexible network capability
- Range – 800m (point to point) to 3km (rebroadcast)
- Simultaneous voice and data communications
- Automatic rebroadcast and retransmission, group splitting and reforming
- Security through AES 128 encryption, frequency hopping and low output power (100mW)

Benefits:
Eagle radio is a low cost, licence free, high functionality radio capable of a range of solutions. Intuitive and easy to use, its simple push and turn selection button is used in conjunction with simple voice prompted menus to allow the user to make rapid changes to the radio configuration. Eagle has been designed for use as a standalone section/squad radio, or as an integrated solution through Vehicle Intercom Systems (VIS) or other C4i systems.

Eagle Radio – Mounted

Features:
- Powered by the vehicle intercom
- Connects to a spare headset port on any crew station position
- Access to intercom may be either by using the Eagle’s Vox or by using the primary Push-To-Talk (PTT)
- The second Eagle PTT can be used to transmit over any one vehicle mounted Combat Net Radio (CNR) (as selected on the crew station). Feature can be disabled if required
- Eagle users can monitor additional vehicle CNRs as selected on the crew station to which it is connected. Feature can be disabled if required
- Two service port connections available to allow simultaneous intercoms and data connections

Benefits:
The Eagle Radio – Mounted acts as a gateway between the Eagle Network and the vehicle intercom system. The Eagle Radio – Mounted provides dismounted Eagle users with access to both the vehicle intercom and vehicle CNRs. This utilises the same easy to use audio menu as the Eagle radios.

Eagle Radio – Battery Charger

Features:
- Provides a multi-colour LED charge indicator
- Capable of sequentially charging up to eight batteries, one at a time, completely unattended

Benefits:
The Eagle Battery Charger is a state-of-the-art, high performance battery charger designed to be mounted to a vehicle. This allows batteries to be charged while the vehicle is moving or stopped. Depending on the adapters used, it is capable of sequentially charging up to eight batteries, one at a time, completely unattended. The charger can also be dismounted for shop usage.

Eagle Radio – Rechargeable Battery Pack

Features:
- Lithium Ion rechargeable battery
- Achieves 90% of the battery’s capacity even after 500 cycles
- Provides a minimum of 12 hours operation in typical operating conditions
- Includes “State of Charge” gauge with 5 LED segments displaying available energy at the actual battery temperature, in increments of 20%

Benefits:
The rechargeable battery gives a functional and cost effective way of extending the Eagle Close Combat Radios (CCR) single use duration, giving major cost and operational benefits to the users. The battery is built in a durable plastic housing and is accessed electrically via the three surface contacts split between the two faces of the battery.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
Soldier Communications

IDSS – Integrated Digital Soldier System

Features:
- Meets military standards for environmental and EMC performance
- Recording and playback for post mission analysis
- Georeferenced free hand drawing and white board sketching
- Integrates with a wide range of sensors including laser binoculars, ground sensors IR and TI vision systems
- Interoperable with high level Command and Control systems and Cobham’s Marine Interdiction Operations System (MIOS)

Benefits:
IDSS provides combat troops with a lightweight compact solution to deliver tactical SA, navigation and a common operating picture, with full digital mapping. The heart of IDSS is the high specification Windows XP SDT. This low power system can work with low data rate legacy CNR or IP based data radios.

Soldier Data Terminal

Features:
- XP Operating system
- Designed for IP67 protection
- Internal battery for extended system use
- Military spec. solid state memory
- Designed for gloved operation
- Inputs/outputs – USB, RS-232, Ethernet

Benefits:
The SDT is a lightweight, easy-to-use, military spec. XP computer specifically created for dismounted operations, that is NVG compatible. The daylight readable 3.7 inch touch screen display and low power design ensures the SDT is equipped to deal with the challenges of modern warfare.

User Data Terminal

Features:
- Processor: 1.6GHz Intel Atom Processor
- 1GB of RAM (upgradable to 2GB)
- 4GB (upgradable to 16GB) compact flash memory. (OS and applications)
- Up to 64 GB removable NV flash memory (map data)
- Typical power consumption 10W
- Multiple rugged MMI, e.g. Touchscreen, hard keys and cursor control

Benefits:
The User Data Terminal (UDT) is a processor, interface and display unit used to host software applications with the harsh military operating environment. It features a SVGA (800 x 600) trans reflective daylight readable display.
BattleHawk Software

Features:
- Specifically designed for soldier use
- Windows XP embedded as the open architecture operating system offering flexible upgrade routes
- Provides interfaces to control and monitor remote sensor networks including CBRN sensors, cameras and remote control of RGVs and UAVs

Benefits:
The BattleHawk software incorporates a range of functionality allowing it to be configured to meet the needs of a range of operators in the land tactical operations domain. The functions are accessed via the Human Computer Interface (HCI) which has three major configurations: Command, Tactical Vehicle, and Dismounted Soldier.
### RDF Tracking
- Kestrel – Overview
- Kestrel – RDF Tracker
- Kestrel – Standard Vehicle Tag
- Kestrel – GPS Vehicle Tag
- Kestrel – Personnel Tag
- Kestrel – Covert Body Worn Receiver
- VIP Tracking

### GPS Tracking
- GrizzlyM+
- GL200
- 9602 Iridium
- SHOUT Nano
- Uni Trac BOBCAT

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5 Tagging, Tracking, Locating and Intercept
Tagging, Tracking, Locate and Intercept

Cobham’s covert tracking equipment is suitable for tracking people, vehicles and assets of all sizes, in any environment.

Cobham tagging, tracking, locate and intercept hardware capability features a range of satellite, GPS based and Radio Direction Finding, which does not rely on commercial infrastructure, tracking systems.

Cobham also manufactures a range of cellular surveillance equipment providing covert capability for use against cellular targets.
Kestrel – Overview

Features:
- Tracks the smallest tag at the longest range
- Receiver solutions for fixed site, airborne and vehicle deployments
- Full range of tags for covert deployment on vehicles, packages and personnel
- High sensitivity
- Comprehensive digital mapping support

Benefits:
An advanced tagging and tracking solution, the Kestrel system offers superior performance in multipath environments and gives more stable and accurate vectors.

Kestrel – RDF Tracker

Features:
- Tactical solutions for vehicles and fixed site
- Installed strategic solution
- Airborne options
- Networked via Mesh data radio
- Totally covert fit available

Benefits:
Scaleable and networked solution provides capabilities for long range covert tracking in the most difficult locations and deployments.
Mobile unit has touch screen display for ease of use.

Kestrel – Standard Vehicle Tag

Features:
- Fully integrated into a single unit
- Unique ID transmitted
- Low power, narrow band pulsed transmission, minimising detection risk
- Make/break alarm trigger
- Internal vibration sensor for motion status

Benefits:
Self contained and easily fitted using strong magnetic mounts, it can also be more permanently attached to a vehicle or target if required.

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Kestrel – GPS Vehicle Tag

Features:
- GPS position on demand, over KESTREL link
- Integrated antennas and power supply enabling rapid deployment
- Operational external Power Supply Unit (PSU) input for long duration operations
- Unique ID transmitted
- Low power, narrowband pulsed transmission, minimising detection risk
- Internal tamper vibration sensor

Benefits:
Providing all the functionality of the Standard Tag, but with added GPS capability – allowing position to be requested remotely, and a map point to be displayed. Particularly useful when a target “parks up” to confirm location more rapidly than by direction finding.

Kestrel – Personnel Tag

Features:
- Low power, narrowband pulsed transmission, minimising detection risk
- Unique ID transmitted
- Remotely commandable to meet different requirements
- Unpackaged format options for maximum flexibility
- Internal vibration sensor
- Make/break alarm trigger

Benefits:
Miniature and low profile – ideal for deployments into packets and parcels in ransom situations, it can also be fitted under clothing or within personal items, for protection. Ideal applications include undercover as well as VIP protection.

Kestrel – Covert Body Worn Receiver

Features:
- Antenna, inductive earpiece and voice synthesised feedback of controls
- Four-button control keypad to select range mode and tone volume
- Lightweight ABS housing for ease of covert deployment
- Receiver stores up to ten Kestrel tag channels
- Two AA batteries typically provide over 8 hours of operation

Benefits:
The Covert Body Worn Receiver provides a pedestrian operator with the ability to covertly locate a tag. Precise location information enables tags to be tracked and recovered from inside buildings, shopping malls and hotels. Its small size and discreet nature reduce probability of mission compromise.

VIP Tracking

Features:
- Covert body worn tracking devices and receivers for close VIP protection
- Utilises the ‘smallest’ tag technology available for easy concealment
- Variety of settings on tags to suit deployment requirements
- Alarm signals contain unique definable ID and suffix
- Tags contain integral sensors to indicate motion status

Benefits:
The covert VIP/Package Tracking Application Kit allows discreet close protection of personnel, and provides a way of remotely alerting in duress situations and re-locating in kidnap events. The kit is ideal for rapid deployments and contains a handheld transceiver, a covert body worn receiver, two PPTx and two Mini Flat Tags.
**GrizzlyM+**

**Features:**
- Programmable start and stop motion sense with adjustable sensitivity
- Variable position reporting frequency based on motion
- Sleep mode with motion wakeup
- Outstanding low power capabilities
- Included antennas – Globalstar patch and GPS patch
- Detachable antennas

**Benefits:**
Using latest generation micro-sized modem and GPS technology, the GrizzlyM+ is the smallest available Globalstar tracker. An included power cable enables easy connection to standard power sources such as vehicle or vessel supplied power. This solution features the UniTrac tracking and data management system, the most advanced and most capable available today.

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**GL200**

**Features:**
- Water resistant
- Embedded full-featured @Track protocol
- Built in uBlox GPS chipset with −162dBm tracking sensitivity, −148dBm autonomous sensitivity for fast Time to First Fix (TTFF) and high accuracy
- Built in GSM/GPS antennas
- MMCX type RF connector for external GPS antenna
- Low power consumption, and long standby time with internal battery
- Built in 3D motion sensor for conserving power and motion detection

**Benefits:**
GL200 is a powerful GPS tracker designed for vehicle, pet and asset tracking. With superior receiver sensitivity, fast Time to First Fix and Quad band GSM frequencies 850/900/1800/1900MHz, its location can be continuously monitored or periodically reported to a backend server or other device. The GL200 is a third party product which can be purchased as part of a bespoke tracking solution from Cobham.

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**9602 Iridium**

**Features:**
- Single board transceiver
- Small form factor
- No SIM card
- Designed to be incorporated into an OEM solution
- Restriction of Hazardous Substance (RoHS) compliant

**Benefits:**
The Iridium 9602 is ideal for M2M solutions, including tracking of maritime vessels, equipment monitoring, and automatic vehicle location.
The 9602 Iridium SBD transceiver, designed to be integrated into a wireless data application with other host system hardware and software, provides a complete solution for a specific application or vertical market. The 9602 Iridium is a third party product which can be purchased as part of a bespoke tracking solution from Cobham.

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**SHOUT Nano**

**Features:**
- Supports SBD data
- AES 256-bit encryption
- 50–Channel GPS receiver
- Motion sensor
- Audio alert
- Battery operated (2.2Ah)
- USB Interface (used to charge battery)

**Benefits:**
SHOUT Nano is a handheld, global, two-way satellite communication device and emergency beacon. It is designed with ultra-low power consumption electronics, and equipped with an LCD display and an on-screen keyboard allowing transmission of free text and canned messages. Data is sent in either standard or 256-bit AES encrypted format. The SHOUT Nano is a third party product which can be purchased as part of a bespoke tracking solution from Cobham.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
UniTrac BOBCAT

Features:
- Motion sensing – Programmable start and stop motion sense with adjustable sensitivity.
- Variable position reporting frequency based on motion.
- Sleep mode with motion wakeup for outstanding low power capabilities.
- AES 256-bit encryption.
- Size: 79.0mm x 38.0mm x 10.8mm

Benefits:
The UniTrac BOBCAT is a cellular-GSM based tracker using latest generation micro sized modem and GPS technology to create a micro-sized full featured GPS device that provides high performance at a low cost. Intended for semi-covert and non-covert tracking applications, the BOBCAT can be used for a variety of fleet management and asset tracking applications where cellular GSM coverage is provided. Internal GPS and GSM cellular antennas allow for easy installation. The BOBCAT is teamed with our UniTrac and AutoFind solutions, providing situational awareness in real time, with over the air command and control configuration.
Video Surveillance

Cobham’s overt and covert COFDM video surveillance systems enable the monitoring and recording of critical video data through non-line of sight (NLOS) and line of sight (LOS) transmission systems.

The quality offered by the solutions means that very high evidential standards can be reached in situations such as:

- Infrastructure protection
- Identification and monitoring of terrorist threats
- Monitoring of serious crime
- Public order policing
- Intelligence gathering

Cobham systems are not reliant on public or commercially available networks for either wireless video transmission or onward distribution of video data making them more secure and flexible for law enforcement and surveillance organisations.
**SOLO5 – Receiver**

**Features:**
- MPEG2 and MPEG4 ASP video decoding
- Optional H264 Video Decoding Licence
- IP video streaming (RTSP and UDP)
- Battery pack provides more than 5 hours continuous use
- Maximum ratio combining antenna diversity
- Internal recording to 32GB SD card
- Selectable AES128/256 encryption (optional)

**Benefits:**
A compact COFDM digital diversity receiver in a robust, compact and lightweight housing; this can be used both remotely and in fixed location applications. Supports DVB-T and optional narrowband modes down to 625kHz bandwidth.

An on-board MicroSD card makes local recording possible, while an Ethernet interface enables playback and downloading of recorded video.

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**Messenger VETA Receiver Decoder**

**Features:**
- Supports DVB-T and optional narrowband modes down to 1.25MHz BW
- HD/SD AVC H.264 and SD MPEG2 decoding
- COFDM demodulation
- Range of bandwidths
- Dual diversity inputs and internal RF Block Down-converters (BDCs)

**Benefits:**
This Messenger VETA Receiver Decoder (MVRD) two channel maximal–ratio diversity receiver works with Cobham’s encoders and transmitters to provide the highest video quality with ultra–low latency and fast recovery essential for wireless coverage of real-time events such as sports and surveillance applications. The solution provides optimum reception in difficult fading and multipath environments.

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**Palladium Digital Receiver**

**Features:**
- Selectable bandwidths
- MPEG2 or MPEG4 compression
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- 16 channels
- Optional video streaming over IP
- Built-in ABS and AES 128 bit encryption (AES 256 optional)
- MPEG2 and MPEG4 ASP video decoding

**Benefits:**
This dual–diversity receiver integrates an RF receiver, MPEG2 or 4 decoding, COFDM demodulation and down–converters into one small, aluminium housing. It is an ideal stand alone system for the reception of digital video and has 16 preset channel configurations to select.

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**SOLO4 – Receiver**

**Features:**
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- Comprehensive on screen display diagnostics for link analysis, including spectrum analyser
- Maximum ratio combining antenna diversity for fade and multipath elimination
- Internal AES128/256 bit encryption (optional)
- Very low delay video operation for real time applications

**Benefits:**
This feature-rich diversity input digital video receiver is compatible with multiple COFDM transmission formats from 8MHz DVB–T to 2.5, 1.25MHz and 6.25kHz narrowband modes. The SOLO4 Receiver is suitable for all mission types and is equipped with video, two voice and data channels and is designed for easy integration into command vehicle, briefcase or central receive applications.

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VETA Receiver

Features:
- COFDM demodulation (400 (optional) or 2K Carriers)
- Bandwidths from 1.25MHz (optional) to 8.00MHz
- Input frequency: 0.174 to 7.20GHz (in-bands)
- Low end-to-end system latency (~40 mS)
- 128 or 256 scrambling

Benefits:
The Very Efficient Transmission Apparatus (VETA) provides high-quality and low-latency wireless audio/video transmission for the most demanding applications. Internal MPEG2 or MPEG4 encoders and decoders offer real-time video that's crucial for surveillance and law enforcement. Versatile housing enables optional mounting in a suitcase, on a desktop or in an instrumentation rack.

Messenger Smart Receiver

Features:
- Robust link performance with COFDM provides superior coverage
- Enhanced Doppler performance for tracking moving vehicles
- 49MHz to 6.00GHz (in-bands) with optional internal or external down-converters
- Multi-input diversity maximal-ratio combining
- Optional local control panel

Benefits:
This VHF/UHF DVB-T Messenger Smart Receiver provides significantly increased reception range, boosting the Signal to Noise Ratio by 78% for two inputs and 250% for 4 inputs. Ideal for Electronic Newsgathering (ENG) and sports applications, UAV/UGV, helicopter links and mobile AV applications. The Receiver can be teamed with a LAN IP streaming interface to distribute wireless content via the internet.

Messenger 2 Decoder

Features:
- Supports up to 60 megabits per second H.264 stream processing
- Frame rates to 60 frames per second
- Built—in HD to SD Down—conversion
- Compact design with local control and monitoring
- HD—SDI, DVI, Component & Composite video outputs

Benefits:
The Messenger 2 Decoder (M2D) is a companion product to the Cobham AVC Encoders and Transmitters providing the highest video quality with ultra—low latency and fast recovery essential for wireless coverage of real—time events such as sports and surveillance applications. The solution can be controlled either through its front—panel control interface or through its LAN interface.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
Robust Receivers

SOLO4 – Miniature Robust Receiver

Features:
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- Optional H264 Video Decoding Licence
- Maximum ratio combining antenna diversity
- Internal recording to SD card
- Compact weather-proof housing to IP67
- Controllable via Field Programmer or Ethernet
- Low current drain, typically 8W

Benefits:
This fully portable COFDM digital diversity receiver uses the latest technology shared with the NanoVue unit. It is ideal for use as a confidence or monitoring receiver for tactical use, or for long term covert surveillance, perimeter security and fire control where permanent installations require weatherproof housing.

SOLO Central Receiver – Robust

Features:
- Four independent COFDM Receivers and Video Decoders in one box.
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth, MPEG2 and MPEG4 ASP video decoding IP control and streaming video
- Quad COFDM diversity
- Very low delay video operation for real time applications
- Comprehensive on-screen display (OSD) diagnostics

Benefits:
This highly flexible solution combines four Cobham SOLO Receivers in a robust enclosure, providing up to four video streams in harsh environments. Military and law enforcement organisations can quickly deploy covert surveillance, recovering video free from distortions typically associated with fading and multipath. IP67 rated, this solution conforms to DEF STAN 59-411 for EMC and MIL-STD-810G for environmental.

SOLO4 – Robust Receiver

Features:
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth, MPEG2 and MPEG4 ASP video decoding
- Comprehensive on-screen display (OSD) diagnostic, including spectrum analyser
- Maximum ratio combining antenna diversity for fade and multipath elimination
- Internal AES128/256 bit decryption (optional)
- Very low delay video operation for real time applications

Benefits:
This Robust SOLO4 Receiver is a feature-rich, diversity input digital video receiver, which is compatible with multiple COFDM transmission formats. Suitable for all mission types, the receiver’s narrow bandwidth modulation offers unprecedented spectral efficiency, while also increasing the system sensitivity and range.

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**PRORX – Receiver Decoder**

**Features:**
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- Optional H264 Video Decoding Licence
- One or optionally two fully independent COFDM receivers and video decoders
- 2, 4, 6 or 8 way COFDM diversity
- Maximum ratio combining antenna diversity for fade and multipath elimination
- IP control and streaming video
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- Four simultaneous video reception and viewing
- Built-in options for rebroadcast or IP network distribution (optional)
- Rack mount hardware solutions, with weatherproof outdoor solutions available
- Remote control via IP interfaces
- Up to four way maximum ratio combining antenna diversity for fade and multipath elimination

**Benefits:**
This feature-rich, multi-way diversity COFDM receiver incorporates a fully featured SD MPEG2 decoder, with composite and SDI video outputs as well as a Genlock video input. The PRORX can be controlled through its Organic Light Emitting Diode (OLED) front panel display, as well as on its RS232 or IP Ethernet browser control interfaces.

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**SOLO Central Receiver**

**Features:**
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth
- Four independent COFDM receivers and video decoders in one box
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- Four simultaneous video reception and viewing
- Built-in options for rebroadcast or IP network distribution (optional)
- Rack mount hardware solutions, with weatherproof outdoor solutions available
- Remote control via IP interfaces
- Quad COFDM diversity
- Very low delay video operation for real time applications

**Benefits:**
The SOLO Central Receiver system is a highly flexible solution for use in permanent or temporary applications, helping law enforcement and emergency services to improve efficiency and safety in surveillance operations. Specifically designed for urban infrastructures, it allows 24x7 unattended operation and decodes transmissions from up to four transmitters simultaneously.

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**SOLO Central Receiver – Robust**

**Features:**
- Four independent COFDM receivers and video decoders in one box
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- IP control and streaming video
- Quad COFDM diversity
- Very low delay video operation for real time applications
- Comprehensive on-screen display diagnostics

**Benefits:**
This highly flexible solution combines four Cobham SOLO Receivers in a robust enclosure, providing up to four video streams in harsh environments. Military and law enforcement organisations can quickly deploy overt and covert surveillance, recovering video free from distortions typically associated with fading and multipath. IP67 rated, this solution conforms to DEF STAN 59-411 for EMC and MIL-STD-810G for environmental.

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**Message 2 Decoder HD/SD AVC/H264**

**Features:**
- Supports up to 60 megabits per second H.264 stream processing
- Frame rates to 60 frames per second
- Built-in HD to SD Down-Conversion
- Compact design with local control and monitoring
- HD-SDI, DVI, Component & Composite video outputs

**Benefits:**
The Messenger 2 Decoder is a companion product to the Cobham AVC Encoders and Transmitters providing the highest video quality with ultra-low latency and fast recovery essential for wireless coverage of real-time events such as sports and surveillance applications. The solution can be controlled either through its front-panel control interface or through its LAN interface.
Messenger Portable Decoder

Features:
- Broadcast quality 4:2:2 MPEG2 decoder
- Low delay
- Compact design
- Operating temperature = 0ºC to 50ºC
- Runs on 12V DC

Benefits:
This compact professional MPEG2 digital audio/video decoder is designed to work alongside the MSR Diversity Receiver, mounted beneath it. When used in conjunction with the MDT-B transmitter, system latencies down to 2–3 frames are provided.

This combination of broadcast quality audio/video and ultra-low latency make this system perfect for sports and Electronic Newsgathering (ENG) applications.

Messenger Smart Receiver

Features:
- Robust link performance with COFDM provides superior coverage
- Enhanced Doppler performance for tracking moving vehicles
- 49MHz to 6.00GHz (in-bands) with optional internal or external down-converters
- Multi-input diversity maximal-ratio combining
- Optional local control panel

Benefits:
This VHF/UHF DVB-T Messenger Smart Receiver provides significantly increased reception range, boosting the Signal to Noise Ratio by 78% for two inputs and 250% for 4 inputs. Ideal for Electronic Newsgathering (ENG) and sports applications, UAV/UGV, helicopter links and mobile AV applications, the Receiver can be teamed with a LAN IP streaming interface to distribute wireless content via the internet.

Messenger VETA Receiver Decoder

Features:
- Supports DVB-T and optional narrowband modes down to 1.25MHz BW
- HD/SD AVC H.264 and SD MPEG2 decoding
- COFDM demodulation
- Range of bandwidths
- Dual diversity inputs and internal RF Block Down-converters (BDCs)

Benefits:
This Messenger VETA Receiver Decoder (MRVD) two channel maximal-ratio diversity receiver works with Cobham’s encoders and transmitters to provide the highest video quality with ultra-low latency and fast recovery essential for wireless coverage of real-time events such as sports and surveillance applications. The solution provides optimum reception in difficult fading and multipath environments.

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SOLO4 – NanoVue

Features:
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- Optional H264 Video Decoding Licence
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth
- High resolution 4.3” display
- Single button operation
- Interchangeable battery pack
- Robust shock- and water-proof housing
- Supplied with antennas

Benefits:
This fully portable digital diversity receiver incorporates a high resolution video screen with receiver, antennas and clip-on batteries. Ideal for tactical use as a monitoring receiver or for mobile surveillance, it provides decision makers with real time video feedback.

SOLO4 – NanoVue

Robust

Features:
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- Optional H264 Video Decoding Licence
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth
- High resolution 4.3” display
- Single button operation
- Interchangeable battery pack
- Robust shock- and water-proof housing
- Supplied with antennas

Benefits:
A fully portable digital diversity receiver, the NanoVue incorporates a high resolution, daylight-viewable touch screen with receiver, antennas and clip-on batteries. Ideal for tactical use as a monitoring receiver or for mobile surveillance, it provides decision makers with real time video feedback.

SOLO4 – MicroVue 2

Features:
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- Optional H264 Video Decoding Licence
- 8.4” colour monitor in lid
- 5.5” touch screen base in base for device configuration
- Optional 160GB hard disk recorder with playback on lid monitor
- Maximum ratio combining antenna diversity for fade and multipath elimination
- Internal AES128 or 256 encryption (optional)

Benefits:
The MicroVue 2 briefcase receiver/recorder package for tactical video surveillance operations can also be used as a remote video receiver for UAV and UGV applications. It combines a Cobham SOLO Receiver with two diversity down-converters and two antennas into one rapidly-deployable briefcase kit.

SOLO4 – MicroVue Commander Receiver

Features:
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- 8.4” colour monitor in lid
- Built in telemetry radio and PTZ control panel for remote camera control
- 110V and 240V AC, DC and internal battery operation
- 5.5” touch screen in base for device configuration
- Optional FFV based hard disk recorder with playback routed to lid monitor

Benefits:
This briefcase receiver/recorder package for tactical video surveillance operations is designed to be used in conjunction with the ClearCam deployable camera or standard Visca and Pelco cameras. The built-in control panel includes all the usual pan tilt zoom functions. Security of transmission is ensured by the use of Standard ABS encryption, with the option of AES128 or 256-bit encryption.
**Digital DynaView Receiver**

**Features:**
- Full frame rate, standard resolution, digital video
- Excellent sensitivity, better than \(-98\)dBm for C-band (2.5MHz BW)
- 16 pre-set channel configurations
- Operation in bands from 300 to 5000MHz
- Optional integrated video over IP with Ethernet connection

**Benefits:**
This dual-diversity receiver is the ideal standalone system for the reception of digital video in many applications, integrating all the electronics required for RF reception, COFDM demodulation and downconverters into one aluminium housing with flip-up monitor. Standard and High Definition models are available.

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**SOLO4 – MultiVue Commander Receiver**

**Features:**
- Supports DVB-T and optional narrowband modes down to 625kHz bandwidth
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) video decoding
- Four simultaneous video reception and viewing
- Colour monitor in lid with quad or individual viewing
- User touch screen control interface
- Optional IP streaming and microwave relay
- Commander upgrade available, enabling remote camera control
- Maximum ratio combining antenna diversity for fade and multipath elimination

**Benefits:**
This rapidly-deployable briefcase receiver package is ideal for team-based tactical video surveillance operations. It will decode and display four separate digital video channels and allows its operator to observe activities in four different locations or four views of one location. The MultiVue ensures excellent video reception quality and is often used by first responder and emergency teams.

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**Messenger VETA Monitor Receiver**

**Features:**
- COFDM demodulation (400 (optional) or 2K Carriers)
- Bandwidths from 1.25MHz (optional) to 8.00MHz
- Input frequency: 0.174 to 8.50GHz (in bands)
- Ethernet port connectivity for streaming and control/monitoring
- Supports ISO 13818 transport stream demuxing

**Benefits:**
A handheld HD/SD AVC/MPEG2 monitor receiver, this provides the highest video quality with ultra low latency and fast recovery essential for real time events. Its Diversity Combiner can provide up to 2.5dB in link performance, increasing the receiver’s sensitivity to \(-97.5\) dBm at 8MHz bandwidth.

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**VETA Monitor Receiver**

**Features:**
- 8” integrated sunlight readable LCD monitor
- Input frequency: 0.174 to 8.50GHz (in bands)
- COFDM demodulation (400 or 2K carriers)
- Bandwidths from 1.25MHz to 8.00MHz
- Uses professional batteries
- Internal block down-converters
- Compact and lightweight

**Benefits:**
Cobham’s VETA Monitor Receiver is a state-of-the-art COFDM receiver for mobile/portable applications. This compact battery (IDX or Anton Bauer) or DC operated receiver contains two internal Block Down–converters for Diversity reception, a VETA compliant receiver and an 8-inch flat screen, sunlight readable monitor with headphone jack. Analogue A/V output jacks are provided for viewing on another monitor.

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For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
SOLO6 – Dual Band Transmitter

Features:
- Supports DVB-T and narrowband bandwidths (625kHz to 8.00MHz)
- Available in a variety of frequency bands from 300MHz to 6.00GHz
- Able to transmit images up to 1km, non-line of sight, depending on mode and frequency
- Supports MPEG2 and MPEG4 image compression
- Built-in 32 bit ABS encryption (AES128/256 optional)
- 8 MHz DVB-T modulation for excellent image quality at shorter ranges

Benefits:
The SOLO6 is small, lightweight and weatherproof, offering several ways to stream two video feeds. A feature-rich COFDM digital video transmitter, it is ideal for establishing rugged wireless video links, indoors and outdoors. Excellent range, performance and spectral efficiency are offered when operating in the unique 2.5 MHz/1.25 MHz narrow bandwidth modes.

Video Microwave Digital Transmitter

Features:
- Supports DVB-T and narrowband bandwidths (625kHz to 8.00MHz)
- Three COFDM digital video link bandwidths
- Low latency video compressor supports NTSC and PAL formats
- AES 128 encryption (AES 256 optional)
- Ideal for small UAVs and UGVs
- Variety of dual band antennas available

Benefits:
The Video Microwave Digital Transmitter provides a 100mW narrowband COFDM video transmitter and a two-way wireless data link in one compact enclosure using a single antenna. This offers a low latency high performance non-line of sight digital video link and a command and control serial data link.

SOLO4 – Micro Transmitter

Features:
- Supports DVB-T and narrowband bandwidths (625kHz to 8.00MHz)
- MPEG2 encoding (MPEG4 is also available) for excellent image quality retention
- Several user-selectable modes trading off image quality against range
- Includes RF up-conversion and PA circuitry on a complete single board transmitter
- Optional 128/256 encryption
- Optional 500mW/1W amps
- Transmits up to 750m, non-line of sight

Benefits:
This COFDM digital video transmitter is designed specifically for covert video installations and body worn applications. Also available without cables, connection via a miniature Hirose. Its small size, lightweight case and low power consumption make it ideal for video hides or applications requiring long term battery power deployments, small unmanned aerial vehicles and body worn or bodywire use.

SOLO5 – Transmitter

Features:
- Supports DVB-T and narrowband bandwidths (625kHz to 8.00MHz)
- Available in a variety of frequency bands from 300MHz to 6.00GHz
- Able to transmit images from 200m to 16km, depending on line-of-sight conditions, frequency, bandwidth and the environment
- Highly power efficient, drawing only 4W at 12V
- Built-in 32 bit ABS encryption, with AES128/256 also available
- User-selectable MPEG2 and MPEG4 image compression

Benefits:
This lightweight, feature-rich COFDM digital video transmitter can operate in a variety of bandwidths, allowing users to trade off image quality against range. Excellent performance and spectral efficiency are offered by the SOLO5, which is ideal for establishing rugged wireless video links in all environments. It can be body worn or mounted on any kind of vehicle.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
**Messenger 2 Encoder Module**

**Features:**
- Supports 6/7/8MHz DVB-T and special 2x DVB-T Mode
- Extremely compact dual-program encoder module
- Ultra-low end to end system latency (down to ~44mS)
- AVC HD/SD encoder (up to 1080p – 60 FPS)
- Supports dual audio/video/data programs P2
  - Multi-camera support
  - Dual HD or HD/SD combo
  - 3D support
- Dual 3Gbps HD-SDI/SDI and analogue SD video input interfaces option

**Benefits:**
The Messenger 2 Encoder Module (M2EM) is Cobham’s transmitter for critical applications to feed any external communication system. The external communication system can be a SATCOM link, CDL or TC DL, or any wireless system or a hard lined communication system. The M2EM is a unique encoder providing audio and video compression with the option for processing of time-correlated KLV-1 and KLV-2 META data capability P5. The encoder’s output can be sent via a 100 BaseT LAN interface, RS-422 or custom two wire chaining device.

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**Messenger 2 Enhanced High Power Transmitter**

**Features:**
- AVC HD/SD encoder (up to 1080p, 60fps)
- Low system latency (down to ~44mS)
- Supports dual audio/video/data programs
  - Multi-camera support
  - Dual HD or HD/SD combo
  - 3D support
- COFDM modulation (DVB-T 2 or *4K carriers)
- Output frequency: 1.00 to 7.00GHz (in bands)
- Up to 15W linearised output power
- Robust link performance with COFDM
- Small, rugged enclosure

**Benefits:**
The Messenger 2 Enhanced High Power Transmitter (M2EHTP) is a second generation AVC HD/SD transmitter that combines all the features and capabilities of Cobham’s Messenger 2 AVC HD/SD Transmitter with the additional features listed in the Features above. Key features include Dual HD/SD Audio/Video/Data processing with end to end system-level latencies of down to ~44 mS when used with Cobham receiver/decoders.

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**Messenger 2 Transmitter**

**Features:**
- Frequency bands up to 7.20GHz available
- AVC/H.264 decoding providing 40% lower data rates, and twice the transmission range of traditional MPEG2 systems
- <44mS latency when used with MSR/M2D or MVRD
- HD–SDI and composite video inputs
- ASI output (encoder mode)
- Compact “brick” style packaging for space-critical installations
- MCE camera enclosure available for professional cameraback applications

**Benefits:**
Cobham’s Messenger 2 Transmitter (M2T) is an award winning COFDM transmitter, designed for applications where low latency, size, and weight are of utmost importance. The Transmitter accepts Standard Definition (SD) or High Definition (HD) 4:2:2 digital video or analogue SD video and analogue stereo audio inputs or optional Embedded Audio. The video is compressed according to the Advanced Video Compression (AVC)/H.264 specifications.

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**SOLO H.264 SD/HD COFDM Transmitter**

**Features:**
- Low delay H.264 SD & HD encoding
- HD–SDI/SDI with embedded audio input
- Composite video and HDMI input. ASI input and output
- DVB–T 6/7/8MHz and optional narrowband modulation
- Ultra lightweight 400g with low power consumption

**Benefits:**
The SOLO H.264 Transmitter is a rugged, Standard or High Definition digital video transmitter, ideal for motorsport, airborne, sports and news links applications. It can operate in various transmission bandwidths allowing a trade off between image quality and range. Broadcast quality pictures can be transmitted in only 2.5MHz bandwidth through ultra efficient H.264 encoding.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
**Palladium II Digital Video Transmitter**

**Features:**
- Supports three bandwidth modes — wideband, narrowband and ultra–narrowband
- Supports DVB–T and narrowband bandwidths (625kHz to 8.00MHz)
- MPEG2 or MPEG4 compression
- Full standard resolution digital video
- Range of power outputs available
- Two high fidelity audio channels

**Benefits:**
Providing exceptional video quality in high multipath environments, this transmitter is ideal for use inside buildings, urban areas and other applications where multipath would cause video tearing or breakup in analogue signals. The solution is designed to transmit video, two audio channels and a data channel and is ideal for concealments, robotic and UAV applications.

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**Handheld Video Transmitter II**

**Features:**
- Supports DVB–T and narrowband bandwidths (625kHz to 8.00MHz)
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) Encoding
- Unique camera head/laser point combination
- COFDM transmission for non-line of sight digital video transmission
- 16 programmable channels
- High resolution with low light capability
- Interchangeable lenses
- Weighs only 1.9kg

**Benefits:**
The Handheld Video Transmitter II is ideal for first responder and tactical video reconnaissance missions. Its LED tactical lantern provides a very flexible carry and illumination combination, making it essential for fire/rescue, government, military and law enforcement teams. A COFDM digital video transmitter, battery, camera and microphone are united in a robust chassis.

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**COFDM Drop Camera Transmitter 3G**

**Features:**
- Supports DVB–T and narrowband bandwidths (625kHz to 8.00MHz)
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) Encoding
- Robust chassis with COFDM digital video transmitter, 3G modem, battery and camera
- Housed in rugged IP66 housing suitable for outdoor deployment
- Replacement 9 and 16mm lens
- AES 128/256 encryption
- Temperature range = –20ºC to +60ºC

**Benefits:**
The DropCam3G Transmitter offers unique dual modem capability, with a COFDM link for high quality video over short/medium ranges and a 3G link for observational quality video and camera control over ranges limited only by network coverage. Supplied with a high resolution low light camera to dock directly to the transmitter body or abstract using a 3m cable.

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**VETA Compact High Power Transmitter**

**Features:**
- Supports DVB–T and narrowband bandwidths (625kHz to 8.00MHz)
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) Encoding AVC HD/SD encoder (up to 1080p, 60fps)
- Low system latency (down to ~44mS)
- Supports dual audio/video/data programs
  - Multi-camera support
  - Dual HD or HD/SD combo
  - 3D support
- COFDM modulation (DVB-T 2 or *4K carriers)
- Output frequency: 1 to 7GHz (in bands)
- Up to 15W linearised output power
- Robust link performance with COFDM
- Small, rugged enclosure

**Benefits:**
The VETA Compact High Power Transmitter is a second generation AVC HD/SD transmitter that combines all the features and capabilities of Cobham’s Messenger 2 AVC HD/SD Transmitter with the additional features listed in the Features above. Key features include Dual HD/SD Audio/Video/Data processing with end to end system–level latencies of down to ~44 mS when used with Cobham receiver/decoders.
**VETA Miniature Transmitter**

**Features:**
- Bandwidths from 1.25 MHz to 8.00MHz
- Supports DVB-T and narrowband bandwidths (625kHz to 8.00MHz)
- Built-in MPEG2/4 encoder
- Ideal for high security surveillance, helicopter links, UAV/UGV applications and mobile and portable AV applications
- ABS security, with optional AES 128/256 encryption
- COFDM modulation (400 or 2K carriers)

**Benefits:**
This rugged VETA transmitter has been designed to be as compact as possible, weighing just 130g. Its low DC power consumption makes it ideal for hand-held or covert applications operated from a battery. The solution accepts a composite or S-Video input, analogue stereo audio inputs and a RS232 user data input.

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**COFDM Drop Camera Transmitter**

**Features:**
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) Encoding
- Supports DVB-T and narrowband bandwidths (625kHz to 8.00MHz)
- Robust chassis with COFDM digital video transmitter, battery, camera and microphone
- Mounting camera 3.6mm lens
- Replacement 9 and 16mm lens
- AES 128/256 encryption
- Integral battery pack with up to 4 hours of power

**Benefits:**
This second generation drop camera is ideal for rapid deployment tactical scenarios, with video coverage across ranges typically 300–500m, non-line of sight. Supplied with a high resolution low light camera to dock directly to the transmitter body or abstract using a 3m cable.

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**SOLO ASI COFDM Transmitter**

**Features:**
- DVB-T 6/7/8MHz and optional narrowband modulation
- ASI input
- Low power consumption 10W
- Ultra lightweight 400g
- Upgrade path to SD and HD video encoding

**Benefits:**
This rugged modulator–transmitter is ideal for repeater/re-bro applications. The ASI transmitter operates in a variety of bandwidths, enabling image quality to be traded off against range, to suit all types of applications. Able to transmit images in a non-line of sight environment up to 1km, the transmitter can achieve even further range with an optional clip-on booster PA.

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SOLO4 – Miniature Robust Transmitter

Features:
- Supports DVB-T and narrowband bandwidths (625kHz to 8MHz)
- MPEG2 and MPEG4 Analogue Signal Processing (ASP) Encoding
- Available in microwave and UHF frequencies
- Variety of frequency bands from 300MHz to 6.00GHz
- Can transmit images up to 750m in non-line of sight environment
- Further range possible with optional internal 1W booster PA
- Supplied in a sealed IP 67 rated aluminium enclosure

Benefits:
This feature-rich COFDM digital video transmitter allows users to trade off image quality against range. Ideal for establishing prolonged rugged wireless video links in harsh environments, the transmitter has built-in 32 bit ABS encryption – AES128/256 is also available, subject to export controls. Excellent range, performance and spectral efficiency in unique narrow bandwidth modes.
Telemetry

SOLO4 – Audio and Telemetry Transmitter

Features:
- Bandwidths from 25kHz to 125kHz
- Wider bandwidths available on request
- AES128/256 bit encryption, subject to export controls
- Can be connected to Cobham IP solutions to create rugged wireless IP Bridge applications
- Temperature range = -20ºC to +70ºC

Benefits:
This COFDM transmitter is designed specifically for the transmission of audio and telemetry data. Using a unique narrow band COFDM modulation, it will transmit up to 5km in a non-line of sight environment.
Configurable into different user selectable bandwidths, the transmitter can be used in body worn applications or prolonged outdoor deployments.

SOLO4 – Audio and Telemetry Receiver

Features:
- Range of frequency bands
- User capacity can be shared between audio and user RS232 telemetry data
- Diversity reception
- Unique narrow band COFDM modulation
- AES128/256 encryption

Benefits:
This COFDM receiver, this is designed specifically for the reception of audio and telemetry data up to 5km in a non-line of sight environment. Configurable into different user selectable bandwidths, the receiver is lightweight and weatherproof, so can be used in body worn applications or prolonged outdoor deployments.

SOLO – LDR Receiver

Features:
- Range of selectable bandwidths
- Temperature range = -20ºC to +60ºC
- Optional AES128/256 bit encryption
- Low Data Rate (LDR) system transmits images (NLOS) up to 2km
- Robust, water-sealed enclosure

Benefits:
The SOLO - Low Data Rate (LDR) Receiver is a digital video receiver, picking up informational quality video sent by the LDR transmitter at reduced frame rates. The high level of compression allows images to be sent over great distances — up to 20km in a line of sight environment, depending on mode and frequency.

SOLO – LDR Transmitter

Features:
- Housed in a robust, water sealed enclosure
- Can be used more easily at UHF frequencies
- Consumes only 3W
- Optional AES128/256 bit encryption
- Optional clip-on booster PA for further range

Benefits:
The SOLO – Low Data Rate Transmitter is a long-range digital video transmitter. It sends informational quality video at reduced frame rates, compressed to very low data rates, enabling images to be sent over very long distances — up to 2km in a non-line of sight environment and 20km line of sight, depending on mode and frequency.
Medium Receiver

Features:
- Up to 16 user-defined channels or 1MHz steps across the band
- Frequency bands up to 5.00GHz
- Fully synthesised FM receiver
- 2 sub-carriers for audio and RS232
- 2 analogue video outputs and 1 composite
- 2 balanced audio outputs (mic or line)
- 4 button front panel interface
- Backlit LCD display
- Encryption
- Video gain adjustment

Benefits:
The Medium Receiver (MR) is an advanced technology receiver capable of operation at 1.70 to 6.00GHz standard.
The MR series demodulates one video and two audio signals from a composite analogue RF source. The receiver is controlled by a microprocessor with an easy to use menu.

Xtra Small Receiver

Features:
- 16 user-defined channels
- Frequency bans up to 5.00GHz
- Fully synthesised FM receiver
- 2 sub-carriers for audio or RS232
- 2 analogue video outputs and 1 composite
- 2 balanced audio outputs (mic or line)
- Rotary switch for channel selection
- LED meter for signal strength
- Encryption
- Video gain adjustment

Benefits:
The Xtra Small Receiver (XR) is an advanced technology microwave receiver capable of operation at 1.70 to 6.00GHz.
The XR demodulates one video and two audio signals from a composite analogue RF source. The receiver is fully synthesised and operates at 16 pre-programmed channels.
Nano Transmitter

**Features:**
- Frequency bands up to 5.00GHz
- SME encryptor
- Fully synthesised FM transmitter
- 16 user-defined channels
- 1 sub-carrier for audio or RS232
- 1 analogue video input
- Rotary switches for channel selection, video gain, and audio gain
- Stacks with companion products for compact installation:
  - DIM RS232 sub-carrier interface
  - 1 or 2 watt booster PA

**Benefits:**
The Nano Transmitter from Cobham is a field-proven miniature FM video transmitter.

Small Transmitter

**Features:**
- Frequency bands up to 5.00GHz
- Up to 16 user-defined channels or 1MHz steps across the band
- Fully synthesised FM transmitter
- 3W or 10W RF power output (model dependent)
- 2 sub-carriers for audio or RS232
- 1 analogue video input + 1 composite
- 2 balanced audio inputs (user selectable mic or line with gain adjustment)
- 4 button front panel interface
- Backlit LCD display
- Encryption

**Benefits:**
The Small Transmitter from Cobham is a full-featured FM transmitter with local display and control panel.
Messenger 2 Transmitter Enhanced

**Features:**
- Ideal for entertainment, sports and Electronic Newsgathering (ENG) applications, as well as military operations
- AVC HD/SD encoder (up to 1080p 60FPS)
- COFDM modulation (DVB-T 2K or 4K carriers)
- Dual L/S band capability
- Time correlated Key Length Value (KLV) meta data handling

**Benefits:**
This second generation AVC HD/SD transmitter features ultra-low system latency, greatly enhancing real-time operating when used in time critical situations like piloting UAVs, UGVs or in threat response. Dual video processing enables 3D content collection which provides depth perception and greater control for UGV applications requiring fine spatial operations, like explosive device de-arming.

VETA Compact High Power Transmitter

**Features:**
- Bandwidths 6/7/8MHz standard, 1.25MHz and 2.50MHz optional
- Built-in MPEG2/4 encoder
- Low system latency (down to 44mS)
- Up to 15W linearised output power
- Small, rugged enclosure
- No external heat sink required
- Output frequency: 1.70 to 5.00GHz (in-bands)

**Benefits:**
The VETA Compact High Power Transmitter provides several key features that enable high-quality and low-latency wireless Audio/Video (A/V) transmission for the most demanding short or long distance point to point or point to multipoint transmission applications. The VETA product line supports optional 1.25MHz or 2.50MHz RF bandwidth with 400 carriers that allow a large quantity of simultaneous A/V links to operate in the same frequency band. Additionally, the standard DVB-T 2K carriers with bandwidths of 6, 7, or 8MHz may be user selected. These higher bandwidths provide greater throughput that allow the system to transfer the highest quality video.

Messenger 2 Enhanced Compact High Power Transmitter

**Features:**
- AVC HD/SD encoder (Up to 1080p – 30FPS)
- Multi-camera support
- Output frequency: 1.00 to 7.00GHz (in-bands)
- Up to 15W linearised output power
- Small, rugged enclosure
- User control via LAN WEB GUI or serial interface

**Benefits:**
The Messenger 2 Enhanced Compact High Power Transmitter accepts Standard Definition (SD-SDI) or High Definition (HD-SDI) 4:2:2 digital video (or analogue SD composite video) also includes analogue stereo audio inputs (Mic or Line level) and Embedded Audio. The video is compressed according to the Advanced Video Compression (AVC)/H.264 specifications. The low-latency AVC Encoder supports the Baseline Profiles with resolutions from 480 to 1080 with extensions to support either interlaced or progressive formats. The audio is compressed using MPEG Layer II compression. User data with rates up to 115200 kBaud are supported.

VETA High Power Transmitter

**Features:**
- Bandwidths 6/7/8MHz standard, 1.25MHz and 2.50MHz optional
- Small, rugged enclosure
- Output frequency: 1.70 to 5.00GHz (in-bands)
- Low system latency (down to 44mS)
- Built-in MPEG2/4 encoder
- User data optional
- 12V DC or 28V DC optional
- Companion VETA receivers with diversity reception

**Benefits:**
The VETA High Power Transmitter provides several key features that enable high-quality and low-latency wireless Audio/Video (A/V) transmission for the most demanding short or long distance point to point or point to multipoint transmission applications. The VETA product line supports optional 1.25MHz or 2.50MHz RF bandwidth with 400 carriers that allow a large quantity of simultaneous A/V links to operate in the same frequency band. Additionally, the standard DVB-T 2K carriers with bandwidths of 6, 7, or 8MHz may be user selected. These higher bandwidths provide greater throughput that allow the system to transfer the highest quality video.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
High Power Transmitter

**Features:**
- Frequency bands up to 7.20GHz available
- 7–15W of RF power output (band dependent)
- Compact ‘brick’ style packaging for space-critical installations
- 12V DC, and 28V DC power options available

**Benefits:**
The High Power Transmitter is a high power COFDM transmitter designed with long range applications in mind. Each High Power Transmitter consists of a COFDM transmitter, PA, and optional 28V power supply, all sealed within a weatherproof enclosure. Many of Cobham’s COFDM transmitters can be used in this package, making the High Power Transmitter a flexible solution for a variety of applications.

---

Messenger 2 Compact High Power Transmitter

**Features:**
- Robust link performance with COFDM
- Used in helicopter links, UAV/UGV and high security surveillance applications
- Built-in ACV/H.264 Encoder
- SD/HD SDI formats up to 1080p
- Optional 128/256-bit scrambling option (AES)

**Benefits:**
This transmitter has ultra low delay coding technology, crucial for applications such as sports coverage, surveillance and law enforcement, where personnel are reacting to real-time events. The solution offers double the throughput of the standard Messenger 2 Transmitter and increases operating range significantly transmitting multiple video streams through one transmitter.

---

PRORX – Receiver Decoder

**Features:**
- 2, 4, 6 or 8 way COFDM diversity
- Maximum ratio combining antenna diversity for fade and multipath elimination
- IP control and streaming video
- Comprehensive on-screen display diagnostics for link analysis, including spectrum analyser
- Very low delay video operation for real time applications

**Benefits:**
This feature-rich, multi-way diversity COFDM receiver incorporates a fully featured SD MPEG2 decoder, with composite and SDI video outputs as well as a Genlock video input. The PRORX can be controlled through its organic light-emitting diode (OLED) front panel display, as well as on its RS232 or IP Ethernet browser control interfaces.

---

Messenger Smart Receiver

**Features:**
- Robust link performance with COFDM provides superior coverage
- Enhanced Doppler performance for tracking moving vehicles
- 0.49MHz to 6.00GHz (in-bands) with optional internal or external down-converters
- Multi-input diversity maximal-ratio combining
- Optional local control panel

**Benefits:**
This VHF/UHF DVB-T Messenger Smart Receiver provides significantly increased reception range, boosting the Signal to Noise Ratio by 78% for two inputs and 250% for 4 inputs. Ideal for Electronic News Gathering (ENG) and sports applications, UAV/UGV, helicopter links and mobile AV applications, the Receiver can be teamed with a LAN IP streaming interface to distribute wireless content via the internet.

---

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
# Messenger 2 Decoder
**HD/SD AVC/H264**

- **Features:**
  - Supports up to 60 megabits per second H.264 stream processing
  - Frame rates to 60 frames per second
  - Built-in HD to SD Down-Conversion
  - Compact design with local control and monitoring
  - HD-SDI, DVI, Component & Composite video outputs

- **Benefits:**
  The Messenger 2 Decoder is a companion product to the AVC Encoders and Transmitters, providing the highest video quality with ultra-low latency and fast recovery essential for wireless coverage of real-time events such as sports and surveillance applications. The solution can be controlled either through its front-panel control interface or through its LAN interface.

---

# Messenger VETA Receiver Decoder

- **Features:**
  - Supports DVB-T and optional narrowband modes down to 1.25MHz BW
  - HD/SD AVC H.264 and SD MPEG2 decoding
  - COFDM demodulation
  - Range of bandwidths
  - Dual diversity inputs and internal RF Block Down-converters (BDCs)

- **Benefits:**
  This Messenger VETA Receiver Decoder (MVRD) two channel maximal–ratio diversity receiver works with Cobham’s encoders and transmitters to provide the highest video quality with ultra-low latency and fast recovery essential for wireless coverage of real-time events such as sports and surveillance applications. The solution provides optimum reception in difficult fading and multipath environments.

---

# Messenger Portable Decoder

- **Features:**
  - Broadcast quality 4:2:2 MPEG2 Decoder
  - Low delay
  - Compact design
  - Designed to mate with MSR
  - Runs on 12V DC

- **Benefits:**
  The Messenger Portable Decoder (MPD) is a compact professional 4:2:2 MPEG2 digital audio/video decoder that is designed to be a companion to the Messenger Smart Receiver (MSR). A mounting plate is provided that allows the MSR to be mounted on top of the MPD. Two fans on the MPD provide cooling for both the MPD and the MSR. The ASI output of the MSR is fed into the MPD, which receives the MPEG2 TS stream, decodes it and outputs signals via the analogue/video ports, SDI/AES ports. These units can be controlled via either the RS–232C or USB control ports.

An optional 19-inch rack-mounted shelf is available that can mount up to two MPD/MSR in just 134mm of rack space. Additionally, an optional in-line AC/DC power supply is available.

---

# Accessories

- **Messenger VETA Receiver Decoder**
  - Supports DVB-T and optional narrowband modes down to 1.25MHz BW
  - HD/SD AVC H.264 and SD MPEG2 decoding
  - COFDM demodulation
  - Range of bandwidths
  - Dual diversity inputs and internal RF Block Down-converters (BDCs)

- **Benefits:**
  This Messenger VETA Receiver Decoder (MVRD) two channel maximal–ratio diversity receiver works with Cobham’s encoders and transmitters to provide the highest video quality with ultra-low latency and fast recovery essential for wireless coverage of real-time events such as sports and surveillance applications. The solution provides optimum reception in difficult fading and multipath environments.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
FCON – Field Controller

Features:
- In line standalone controller
- Or USB to RS232 converter
- Remote client for CryptoWizard

Benefits:
A discrete and comprehensive portable device, the Field Controller avoids the need to take a PC into the field. It acts as a secure carriage mechanism for field management of encryption data. The Field Controller can also act as a remote agent for the Cobham CryptoWizard application when pre-loaded with encryption keys.

Down-converters

Features:
- Supplied in selectable high/low gain or fixed high and low gain variants
- Excellent low noise performance
- Designed for permanent outdoor deployment
- Variety of mounting kits available

Benefits:
The Cobham standard barrel down-converter is designed for permanent outdoor installations on the base of the receive antenna. The down-converter will successfully drive 10m of cable with down-converted UHF signal with no loss of performance.

Bias-T Coaxial Power Inserter

Features:
- 1000 to 3000MHz frequency range
- Up to 20 amps of DC current
- Low insertion loss
- Low bandpass ripple
- Rugged construction

Benefits:
The Bias-T from Cobham is used to insert/extract DC supply current onto a coax cable for remotely powering devices such as PAs, down-converters, or LNAs. The Bias-T consists of a feed inductor to apply DC to the coax line and a blocking capacitor to keep DC off the RF-only side of the device.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
**SOLO – 1W Booster Amplifier**

**Features:**
- Frequency bands – 300 to 450MHz, 1.00 to 2.50GHz, 3.00 to 3.50GHz and 3.40 to 3.70GHz
- Dimensions – 95mm (L), 70mm (W), 32mm (H)
- Power in – 100mW, power out – 1W
- Specifications may vary depending on frequency
- Accessories supplied – RS232 Cable Lemo-DSUB9 3m, Bodyworn 1W Amp Power/Control Cable and Bodyworn 1W Amp RF Link Cable

**Benefits:**
Compatible with the SOLO video transmitters range, with products extending across four frequency bands, the SOLO – 1W Amplifier weighs 350g and operates in temperatures ranging from −20° to +70°C.

---

**SOLO – 1W Vehicle Amplifier**

**Features:**
- Frequency bands – 300 to 700MHz, 3.10 to 3.40GHz, 4.40 to 5.00GHz and 5.70 to 5.90GHz
- Dimensions – 263mm (L), 100mm (W), 64mm (H)
- Power in – 100mW, power out – 1W
- Specifications may vary depending on frequency
- Accessories supplied – RS232 Cable Lemo-DSUB9 3m, Vehicle Amp Power/Control Cable and 1W/5W Amp 750mm long RF cable

**Benefits:**
Compatible with the SOLO video transmitters range, with products extending across four frequency bands, the SOLO – 1W Vehicle Amplifier weighs 1kg and operates in temperatures ranging from −10° to +50°C.

---

**SOLAMP 500mW Booster**

**Features:**
- Available for frequency ranges – 300 to 450MHz, 1.00 to 1.50GHz, 1.50 to 2.00GHz, 2.00 to 2.50GHz, 3.00 to 3.50GHz and 4.40–5.00GHz
- Convenient small size
- Companion product for the SOLMTX

**Benefits:**
A 500mW power amplifier designed specifically to partner the Cobham SOLMTX transmitter. The ideal power amplifier for applications where space is at a premium and when additional range may be required.

---

**Very Efficient Power Amplifier (VEPA-2W)**

**Features:**
- Frequency bands: 1.40 to 1.60GHz, 1.70 to 1.85GHz, 1.70 to 2.40GHz, 1.99 to 2.50GHz, 2.20 to 2.70GHz, 4.40-5.00GHz
- Variable Efficiency with local switch or remote logic signal
- High Efficiency Mode – 2W out for 12W DC in (Linear)
- High Linearity Mode – V 2 W with 25dB MER
- 9-32V DC Supply Voltage
- Compact and lightweight
- Reversed polarity protected

**Benefits:**
Cobham’s Very Efficient Power Amplifier (VEPA) series is specifically designed for COFDM and other demanding modulation schemes. However, they can also be used for non-linear modulation schemes like FM. An innovative protection circuit switches off the input signal when it exceeds the value corresponding to about 4W COFDM output power and it also turns off the input signal when it detects excessive mismatch conditions.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
Accessories – Amplifiers

Very Efficient Power Amplifier (VEPA-10W)

Features:
- Frequency bands: 1.70 to 1.85GHz, 2.00 to 2.40GHz, 1.99 to 2.50GHz, 2.20 to 2.70GHz
- Very efficient
- High linearity
- Adjustable gain
- Local – rotary switch
- Remote control
- 9-32V DC supply voltage
- Compact and lightweight

Benefits:
Cobham’s Very Efficient Power Amplifier (VEPA) series is specifically designed for COFDM and other demanding modulation schemes. However, they can also be used for non-linear modulation schemes like FM.

This 31W P1dB power amplifier provides up to 10 watts of COFDM power or 20 watts of FM power in a small economical package. This linear Class A power amplifier provides a maximum of 41dB of gain.

SOLAMP – Robust 5W Amplifier

Features:
- Frequency bands: 300 to 450MHz, 1.00 to 2.50GHz, 3.00 to 3.50GHz and 3.40 to 3.70GHz
- Ultra linear or saturated operation
- RF ports are open and short protected
- Operating gain – 17dB typical
- Short circuit/over-voltage protection and reverse polarity protection
- 12–30V DC power supply range

Benefits:
Bringing performance and reliability to microwave transmission of digitally modulated signals (COFDM, QPSK and BPSK), this amplifier minimises distortion, providing superior signal quality for complex multi-carrier modulation while minimising the DC power consumption. Optional small, fanned heat sink, automatic level control of RF output, water resistant enclosure, type N or TNC RF connectors (DB-9 for DC), and custom feed lines.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
### 12dBi Compact Sector Antenna

**Specification:**
- **Electrical**
  - Frequencies: From 2000-2700MHz to 8100-8600MHz (other frequencies available)
  - Feed Power Handling: 50W
  - Gain (typical): 12dBi
  - Azimuth: 3dB
  - Beamwidth: 112°
  - Elevation: 3dB
  - Beamwidth: 17°
  - Polarisation: Vertical
- **Physical**
  - Width/Diameter: 79.4mm
  - Height: Dependent on product frequency range
  - Weight: 1.3Kg

### 16.5dBi High Gain Sector Antenna

**Specification:**
- **Electrical**
  - Frequencies: From 2000-2400MHz to 8100-8600MHz (other frequencies available)
  - Feed Power Handling: 50W
  - Gain (typical): 16.5dBi
  - Azimuth: 3dB
  - Beamwidth: 64°
  - Elevation: 3dB
  - Beamwidth: 8°
  - Polarisation: Vertical
- **Physical**
  - Width/Diameter: 200mm
  - Height: Dependent on product frequency range
  - Weight: 4.0Kg

### 2dBi Flexible Omni Antenna

**Specification:**
- **Electrical**
  - Frequencies: From 2000-2400MHz to 8100-8600MHz (other frequencies available)
  - Feed Power Handling: 50W
  - Gain (typical): 16.5dBi
  - Azimuth: 3dB
  - Beamwidth: 64°
  - Elevation: 3dB
  - Beamwidth: 8°
  - Polarisation: Vertical
- **Physical**
  - Width/Diameter: 79.4mm
  - Height: Dependent on product frequency range
  - Weight: 1.3Kg

### 2dBi Omni SMA Antenna

**Specification:**
- **Electrical**
  - Frequencies: 2000-2500MHz
  - Feed Power Handling: 10W
  - Gain (typical): 2dBi
  - Azimuth: 3dB
  - Elevation: 65°
  - Beamwidth: 65°
  - Polarisation: Vertical
- **Physical**
  - Width/Diameter: 14mm
  - Height: 86.6mm
  - Weight: 20g (approx)

---

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
**4.5dBi Omni Antenna**

**Specification:**

**Electrical**
- Frequencies: From 2000-2400MHz to 8100-8600MHz (other frequencies available)
- Feed Power Handling: 10W
- Gain (typical): 4.5dBi
- Elevation: 3dB
- Beamwidth: 40°
- Polarisation: Vertical

**Physical**
- Width/Diameter: 25mm
- Height: Frequency-dependent
- Weight: 30g (approx)

---

**4dBi Flexible Omni Antenna**

**Specification:**

**Electrical**
- Frequencies: From 2000-2400MHz to 8100-8600MHz (other frequencies available)
- Feed Power Handling: 10W
- Gain (typical): 4dBi
- Elevation: 3dB
- Beamwidth: 35°
- Polarisation: Vertical

**Physical**
- Width/Diameter: 16mm
- Height: 340mm (2.0-2.4GHz model)
- Weight: 180g (approx)

---

**Blade Antenna – Body Worn**

**Specification:**

**Electrical**
- Frequencies: 1.26-1.40GHz, 1.60-1.70GHz, 1.15-1.26GHz
- Feed Power Handling: 10W
- Gain (typical): 1.3dBi
- Azimuth: 3dB
- Beamwidth: 120°
- Elevation: 3dB
- Beamwidth: 100°
- Polarisation: Vertical

**Physical**
- Width/Diameter: 37.5mm
- Height: 81.5mm
- Weight: 30g

---

**Helicopter Antenna Actuator**

**Features:**
A typical skid mount COFDM helicopter system is comprised of the following components:
- HPT COFDM transmitter
- 6dBi Omni antenna
- Actuator mechanism
- Skidshoe
- Actuator control box
- Remote Control Unit (RCU)
- Interconnecting cables

**Benefits:**
The Helicopter Antenna Actuator System (HAAM) provides superior airborne transmission by extending the antenna below the airship, away from the body of the Helicopter. With a flip of a switch, the antenna is brought-up and safely stowed for landing. Designed for safety and convenience, this system can be installed in a few minutes and is designed to safely break away if you forget to retract the antenna.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
Transmitter and Receiver Kits

Palladium II Digital Video Transmission and Receiver Kit

Features:
- 16 or 8 channel, user programmable
- VMD/Pd2 digital video transmitter, 100mW, 250mW or 1W
- Dipole omni antennas
- 2 surveillance microphones
- High quality low light B/W camera
- High quality colour camera

Benefits:
Cobham’s Palladium II Digital Video Transmission and Receiver Kit combine high performance with ease of use for the best video ‘grab and go’ transmission kit available.

It is unique on the market, incorporating many components designed and manufactured by Cobham. These components include VMD or Palladium series of user programmable COFDM digital video transmitters, linear antennas and RCT/RCR-2 remote switches.

SOLO – Transmission and Receiver Kit

Features:
- SOLO4 100MW Transmitter
- SOLO4 Receiver
- SOLO 1 Watt Amplifier
- 2 x S or L Band down-converters
- 3 x omni antennas
- 2 x directional antennas (packaged separately)
- 2 x AC supply adaptors
- 1 x DC supply cables
- Universal interface cables to support a variety of cameras and monitors
- 2 x 3m cables from down-converters to receiver

Benefits:
The kit is supplied with all the components needed for an easy deployment in any type of operation.

The kit includes the SOLO4 Transmitter, SOLO4 Receiver and all the associated accessories, housed in a rugged compact case for easy storage and deployment.

Cobham offer a range of antennas and accessories, contact us to discuss your requirements.
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**Antitrust**
Wireless Broadcast Solutions

Cobham draws on the company’s cutting edge technologies to develop mission-critical products for the broadcast market which provide real technical and operational benefits to newsgathering, live production and other high profile applications empowering users to broadcast without boundaries.

A world-class supplier of wireless links globally and a leader in the MPEG4 wireless technology revolution, Cobham offers high-quality, DVB-T low-delay broadcast transmitter/receiver systems and IP Solutions designed specifically for electronic news gathering, outside broadcast, satellite newsgathering, motor and extreme sports coverage, portable field monitoring and videoassist applications.
SOLO ENG H.264 COFDM Transmitter

**Features:**
- 40% lower bit-rates than conventional MPEG2 systems
- Transmits images in a non-line of sight environment up to 1km
- True broadcast quality pictures in only 2.5MHz bandwidth, maximising usage of limited RF spectrum
- Analogue audio inputs feature switchable mic/line level with variable gain and P12 powering
- Range of RF frequency bands available, from 340MHz to 8.20GHz (low-cost upgrade available)
- Available in 100mW and 500mW versions

**Benefits:**
Specifically designed for Electronic Newsgathering (ENG) applications, this is a rugged, SD/HD COFDM digital video transmitter, docking neatly onto all types of ENG cameras. For maximum flexibility, the unit has a variety of video input options including composite, SDI, HD-SDI and HDMI. An integrated control panel covers all major functions, with 16 user-defined presets.

SOLO H.264 SD/HD COFDM Transmitter

**Features:**
- Low delay H.264 SD & HD encoding
- HD-SDI/SDI with embedded audio input
- Composite video and HDMI input, ASI input and output
- DVB-T 6/7/8MHz and optional narrowband modulation
- Ultra lightweight 400g with low power consumption

**Benefits:**
The SOLO H.264 Transmitter is a rugged, Standard or High Definition digital video transmitter, ideal for motorsport, airborne, sports and news links applications. It can operate in various transmission bandwidths allowing a trade off between image quality and range. Broadcast quality pictures can be transmitted in only 2.5MHz bandwidth through ultra efficient H.264 encoding.

PRORXB – Broadcast Receiver Decoder

**Features:**
- 2, 4, 6 or 8 way COFDM diversity – maximum ratio combining RF outputs for distortion-free video
- H.264 SD & HD decoding, plus fully MPEG2 compliant SD decoding
- HD-SDI/SDI with embedded audio and HDMI output
- ASI input and output
- Genlock input and composite video output (with optional HD down-conversion)

**Benefits:**
A feature-rich, multi-way diversity COFDM receiver designed to work with the next generation of H.264 wireless camera systems. Created for the broadcast market, it incorporates on-screen display diagnostics, IP control and optional IP streaming video. All DVB-T 6/7/8MHz modes are supported, plus optional Cobham Narrowband.

Messenger 2 Transmitter Enhanced

**Features:**
- Ideal for entertainment, sports and ENG applications, as well as military operations
- AVC HD/SD encoder (up to 1080p 60FPS)
- COFDM modulation (DVB-T 2 K or 4 K carriers)
- Dual L/S band capability
- Time correlated KLV meta data handling

**Benefits:**
This second generation AVC HD/SD transmitter features ultra–low system latency, greatly enhancing real-time operating when used in time critical broadcasting situations. Dual video processing enables 3D content collection which provides depth perception and greater control for applications requiring fine spatial operations.
### Messenger 2 Decoder
HD/SD AVC/H264

**Features:**
- Supports up to 60 megabits per second H.264 stream processing
- Frame rates to 60 frames per second
- Built-in HD to SD down-conversion
- Compact design with local control and monitoring
- HD-SDI, DVI, Component & Composite video outputs

**Benefits:**
The Messenger 2 Decoder (M2D) is a companion product to the AVC Encoders and Transmitters, providing the highest video quality with ultra-low latency and fast recovery essential for wireless coverage of real-time events such as sports and surveillance applications. The solution can be controlled either through its front-panel control interface or through its LAN interface.

### Messenger 2 Transmitter
– Camera Mount

**Features:**
- Built in AVC/H.264 encoder
- SD and HD formats up to 1080p
- Local control plus data return link
- Up to 2 audio channels
- Rugged and compact portable design
- Companion COFDM Receiver with maximal-ratio pre-detect diversity reception

**Benefits:**
Cobham’s Messenger 2 Transmitter – Camera Mount is an award-winning COFDM transmitter designed for professional cameraback applications. The camera mount is a rack-mount kit that converts the in-line Messenger 2 Transmitter into a rack-mounted COFDM transmitter. Both the kit’s front and top panels are hinged for easy installation and removal of the transmitter. This allows the transmitter to be used both as an on-camera transmitter as well as a rack-mounted transmitter.
**SOLBTX – Broadcast Transmitter**

**Features:**
- SDI video input (optional)
- High quality video encoder
- ASI input and output
- 100mW output power

**Benefits:**
This rugged digital video transmitter is small and low powered enough to facilitate easy connection in any broadcast application. It incorporates an MPEG encoder with a compliant DVB-T modulator and 100mW RF up-converter into a single low power consumption package. Ideal for use in stadiums, studios and at sports events. Optional embedded AES128/256 encryption for security.

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**SOLO – Broadcast Micro Transmitter**

**Features:**
- SDI video input (optional)
- High quality video encoder
- Low delay
- 100mW output power

**Benefits:**
This fully-featured COFDM digital video transmitter is ideal for high mobility sporting applications due to its compact size and low power consumption – with all modes of DVB-T modulation supported. MPEG encoding delivers excellent image quality retention, with an integral COFDM modulation. Establishes rugged wireless video links in all environments, with a typical range of 750m.

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**SOLBRX – Broadcast Receiver Decoder**

**Features:**
- Fully featured 8/7/6MHz demodulation
- ASI and SDI interfaces
- Comprehensive on-screen display (OSD) diagnostics for link analysis, including spectrum analyser
- Internal AES128/256 bit encryption (option)
- Very low delay video operation for real time applications

**Benefits:**
An economical diversity output digital video receiver, the SOLBRX Broadcast Receiver Decoder supports interoperability with other manufacturers’ DVB-T systems and can receive the Cobham transmitter family. It operates a maximum ratio combining antenna diversity for fade and multipath elimination. Ideal for use in stadiums and studios, or as a film assist receiver.

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**SOLO2 – Broadcast Hand Held Receiver**

**Features:**
- Fully featured 8/7/6MHz demodulation
- Interoperable with other manufacturers
- Maximum ratio combining antenna diversity
- High resolution display
- Easy use menu display for channel changing

**Benefits:**
This fully portable receiver incorporates a high resolution, daylight viewable screen, with a diversity digital receiver, antennas and clip-on batteries, into a robust, lightweight housing. Ideal for use as a confidence or monitoring receiver at outside broadcast and sports events, or as a director viewing tool. Comes with two long life batteries for rapid interchange, and a battery charger.
SOLO4 – NanoVue

Features:
- High resolution 4.3” display
- Easy to use touch screen
- Internal recording to SD card
- 4 hours battery life (via external pack)
- Compact weatherproof housing

Benefits:
A fully portable digital diversity receiver, the NanoVue incorporates a high resolution, daylight-viewable touch screen with receiver, antenna and clip-on batteries. Ideal for use as a confidence or monitoring receiver at outside broadcast and sports events, or as a director viewing tool. Comes with two long life batteries for rapid interchange, and a battery charger.
Wireless Broadcast Solutions

Broadcast IP Encoder

Features:
- Very low delay mode (<65ms)
- Dual SD or single HD video input
- Downsampling of SD and HD video input (resolution and/or frame rate)
- Broadcast quality High Profile H.264 video encoder
- Low power consumption
- Digital and analogue input options
- Up to 4 simultaneous unicast/multicast streams
- Built-in recording onto Micro SD card
- Stereo audio input

Benefits:
Video IP Encoder is a High Definition digital video encoder, ideal for live video-streaming applications. Designed to allow the secure transmission of video data across IP Networks. In addition it is easily connected to existing network infrastructure. The increased compression and efficiency of the MPEG4 H.264 encoder in Cobham’s SD and HD solution offers users additional bit rate savings with the added benefit of small size, low latency and low power consumption. The option of encoding two SD videos with no compromise in quality allows for a wide range of applications.

NETNode IP Mesh – Mini

Features:
- Up to 16 IP Mesh radios can be combined into a mobile network
- Occupies from just 2.50MHz of bandwidth (3.00, 3.50, 5.00 and 6.00MHz also available)
- Provides up to 9.0Mb/s of IP data (depending on mode, number of nodes and range between nodes)
- Frequencies from 340MHz to 6.00GHz are available in discrete bands
- Mission Commander PC application to configure and monitor mesh

Benefits:
NETNode IP radios can be combined in a fluid self-forming, self healing mesh containing up to sixteen radios. The Mini mesh can provide over 6.0Mb/s of IP data (depending on mode, number of nodes and range between nodes). With output power of 100mW, it also suits bodyworn applications, offering real-time IP connectivity.

MediaMesh

Features:
- Wireless mesh camera node connects to the base unit via a rugged, bi–directional COFDM link
- Carries all live facilities including presenter’s IFB over Bluetooth
- Wireless connectivity enables easy movement as the story demands
- Peli case manages connectivity to outside world and around the outside broadcast location
- Simple to operate, touchscreen interface enables set up by non–technical staff
- Connects to outside world/internet via satellite (using dish): 3G/4G, WiFi or Ethernet
- Dish connects to base unit via single cable for both power and signal
- Easy set–up, with base unit calculating position and direction, while beep tone indicates when satellite lock is achieved

Benefits:
Cobham MediaMesh features a unique bi-directional single frequency mesh network, which connects peripheral devices to the base unit – and means that capabilities and coverage areas can be extended by adding extra nodes. Optimum picture quality is assured with Cobham’s H.264 encoding software, and users can select from a variety of output paths according to whether they want to use the least expensive, the fastest or the highest data–rate routes, including:
- A satellite dish, giving access to inexpensive and high bit–rate capacity on domestic Ka–Band satellites;
- The public cellphone network, via two modem slots provided to access 3G/4G;
- WiFi hotspots, such as an internet cafe or hotel, for free capacity;
- A spare Ethernet socket on an office IT system or a purpose–built Ethernet ring.

For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
NETNode IP Mesh Phase 3
– Plain

Features:
- Up to 16 IP Mesh radios can be combined into a mobile network.
- Excellent RF penetration and performance in presence of multipath.
- Provides over 5.0 (6.0)Mb/s of IP data (depending on mode, number of nodes and range between nodes).
- Occupies just 2.50MHz of bandwidth (3.00, 3.50, 5.00 and 6.00MHz also available).
- Optional AES128 or AES256 encryption.

Benefits:
Cobham NETNode IP Mesh Phase 3 Plain radios can be combined into a fluid, self-forming, self-healing mesh network, for the transmission of video, audio and data across your own private network. Ideal for use in outside broadcast and news applications. Control is achieved using an inbuilt web browser or comprehensive Mission Commander PC application.

NETNode IP Mesh Phase 3
– Robust

Features:
- Up to 16 IP Mesh radios can be combined into a mobile network.
- Occupies from just 2.50MHz of bandwidth (3.00, 3.50, 5.00 and 6.00MHz also available).
- Provides up to 9.0Mb/s of IP data (depending on mode, number of nodes and range between nodes).
- Frequencies from 340MHz to 6.00GHz are available in discrete bands.
- Housed in rugged IP66 housing suitable for outdoor deployment.
- Mission Commander PC application to configure and monitor mesh.

Benefits:
NETNode IP Mesh radios can be combined into a fluid, self-forming, self-healing mesh network. The NETNode IP Mesh Phase 3 Robust is a smaller, lighter more power-efficient model with higher bandwidth capability. This enhances its use in mobile and rapid deployments.
Satellite Newsgathering

Benefits:
The Satellite Newsgathering Transmitter (SNGTX) is a high performance satellite modulator. The SNGTX is housed in a vented ½ 19” box. The base model of the SNGTX supports SD MPEG2 encoding 4:2:0 and 4:2:2. The base model can be upgraded with the addition of MPEG4 H.264 HD, BISS and DVB-S2 to create a fully specified professional satellite modulator. The SNGTX can provide DVB-S/S2 and DVB-SNG satellite modulation on a professional L-Band output. The SNGTX is fully compliant with all the associated DVB-S/S2 and DVB-SNG satellite modulation on a professional L-Band output. The SNGTX is fully compliant with all the associated DVB-S/S2 and DVB-SNG specifications and offers a full range of modulation modes and FEC options (note S2 is a software upgrade).

Broadcast Camera Control System

Features:
- Control of all major camera functions via standard camera manufacturers’ OCP
- Control of up to 4 cameras via single UHF channel
- External green and red tally outputs (open collector)
- Separate indoor (IDU) and outdoor (ODU) units for flexible TX antenna location via standard twisted-pair audio cable
- Wide frequency range 403–474MHz via IDU front panel (other bands available on request)
- Phantom Power upgrade for easy rigging

Benefits:
Next generation features in a rugged, easy to use ‘plug and play’ system architecture. Designed in close consultation with experienced operators, many of the undesirable features present on ‘first generation’ systems have been overcome. The system interfaces with camera manufacturers’ standard control panels (OCPs), giving the operator complete familiarity with standard cabled systems and eliminating the need to rig separate OCPs when RF cameras are required.
SOLO – 1W Vehicle Amplifier

Features:
- Frequency bands: 300 to 700MHz, 3.10 to 3.40GHz, 4.40 to 5.00GHz, and 5.70 to 5.90GHz
- Dimensions: 263mm (L), 100mm (W), 64mm (H)
- Power in: 100mW, power out: 1W
- Specifications may vary depending on frequency
- Accessories supplied: RS232 Cable Lemo-DSUB9 3m, Vehicle Amp Power/Control Cable and 1W/5W Amp 750mm long RF cable

Benefits:
- Compatible with the SOLO video transmitters range, with products extending across four frequency bands, the SOLO – 1W Vehicle Amplifier weighs 1kg and operates in temperatures ranging from -10º to +50ºC.

FCON – Field Controller

Features:
- In line standalone controller
- Or USB to RS232 converter
- Remote client for CryptoWizard

Benefits:
- A discrete and comprehensive portable device, the Field Controller removes the need to take a PC into the field. It acts as a secure carriage mechanism for field management of encryption data. The Field Controller can also act as a remote agent for the Cobham CryptoWizard application when pre-loaded with encryption keys.

SOLAMP 500mW Booster

Features:
- Available for frequency ranges: 300 to 450MHz, 1.00 to 1.50GHz, 1.50 to 2.00GHz, 2.00 to 2.50GHz, 3.00 to 3.50GHz, and 4.40-5.00GHz
- Compact and lightweight
- Reversed polarity protected

Benefits:
- A 500mW power amplifier designed specifically to partner the Cobham SOLMTX transmitter. The ideal power amplifier for applications where space is at a premium and when additional range may be required.

Very Efficient Power Amplifier (VEPA-2W)

Features:
- Frequency bands: 1.40 to 1.60GHz, 1.70 to 1.85GHz, 1.70 to 2.40GHz, 1.99 to 2.50GHz, 2.20 to 2.70GHz, 4.40-5.00GHz
- Variable Efficiency with local switch or remote logic signal
- High Efficiency Mode – V 2W out for 12W DC in (Linear)
- High Linearity Mode – V 2W with 25dB MER
- 9–32V DC Supply Voltage
- Compact and lightweight

Benefits:
- Cobham’s Very Efficient Power Amplifier (VEPA) series is specifically designed for COFDM and other demanding modulation schemes. However, they can also be used for non-linear modulation schemes like FM. An innovative protection circuit switches off the input signal when it exceeds the value corresponding to about 4W COFDM output power and it also turns off the input signal when it detects excessive mismatch conditions.
### Very Efficient Power Amplifier (VEPA-10W)

**Features:**
- Frequency bands: 1.70 to 1.85GHz, 2.20 to 2.40GHz, 1.99 to 2.50GHz, 2.20 to 2.70GHz
- Very efficient
- High linearity
- Adjustable gain
- Local – rotary switch
- Remote control
- 9–32V DC supply voltage
- Compact and lightweight

**Benefits:**
Cobham’s Very Efficient Power Amplifier (VEPA) series is specifically designed for COFDM and other demanding modulation schemes. However, they can also be used for non-linear modulation schemes like FM. This 31 W P1dB power amplifier provides up to 10 watts of COFDM power or 20 watts of FM power in a small economical package. This linear Class A power amplifier provides a maximum of 41dB of gain.

### SOLAMP – Robust 5W Amplifier

**Features:**
- Frequency bands: 300 to 450MHz, 1.00 to 2.50GHz, 3.00 to 3.50GHz and 3.40 to 3.70GHz
- Ultra linear or saturated operation
- RF ports are open and short protected
- Operating gain – 17dB typical
- Short circuit/over-voltage protection and reverse polarity protection
- 12–30V DC power supply range

**Benefits:**
Bringing performance and reliability to microwave transmission of digitally modulated signals (COFDM, QPSK and BPSK), this amplifier minimises distortion, providing superior signal quality for complex multi-carrier modulation while minimising the DC power consumption. Optional small, fanned heat sink, automatic level control of RF output, water resistant enclosure, type N or TNC RF connectors (DB-9 for DC), and custom feed lines.

### SOLO – 1W Booster Amplifier

**Features:**
- Frequency bands – 300 to 450MHz, 1.00 to 2.50GHz, 3.00 to 3.50GHz and 3.40 to 3.70GHz
- Dimensions – 95mm (L), 70mm (W), 32mm (H)
- Power in – 100mW, power out – 1W
- Specifications may vary depending on frequency
- Accessories supplied – RS232 Cable Lemo-DSUB9 3m, Bodyworn 1W Amp Power/Control Cable and Bodyworn 1W Amp RF Link Cable

**Benefits:**
Compatible with the SOLO video transmitters range, with products extending across four frequency bands, the SOLO – 1W Amplifier weighs 350g and operates in temperatures ranging from –20º to +70ºC.
## Antennas and Down-converters

### 12dBi Compact Sector Antenna

- **Specification:**
  - **Electrical**
    - **Frequencies:** From 2000-2700MHz to 8100-8600MHz (other frequencies available)
    - **Feed Power Handling:** 50W
    - **Gain (typical):** 12dBi
    - **Azimuth:** 3dB
    - **Beamwidth:** 112°
    - **Elevation:** 3dB
    - **Beamwidth:** 17°
    - **Polarisation:** Vertical
  - **Physical**
    - **Width/Diameter:** 79.4mm
    - **Height:** Dependent on product frequency range
    - **Weight:** 1.3Kg

### 16.5dBi High Gain Sector Antenna

- **Specification:**
  - **Electrical**
    - **Frequencies:** From 2000-2400MHz to 8100-8600MHz (other frequencies available)
    - **Feed Power Handling:** 50W
    - **Gain (typical):** 16.5dBi
    - **Azimuth:** 3dB
    - **Beamwidth:** 64°
    - **Elevation:** 3dB
    - **Beamwidth:** 8°
    - **Polarisation:** Vertical

### 2dBi Flexible Omni Antenna

- **Specification:**
  - **Electrical**
    - **Frequencies:** From 2000-2400MHz to 8100-8600MHz (other frequencies available)
    - **Feed Power Handling:** 10W
    - **Gain (typical):** 2dBi
    - **Elevation:** 3dB
    - **Beamwidth:** 65°
    - **Polarisation:** Vertical
  - **Physical**
    - **Width/Diameter:** 16mm
    - **Height:** 290mm
    - **Weight:** 160g (approx)

### 2dBi Omni SMA Antenna

- **Specification:**
  - **Electrical**
    - **Frequencies:** 2000-2500MHz
    - **Feed Power Handling:** 10W
    - **Gain (typical):** 2dBi
    - **Elevation:** 65°
    - **Beamwidth:** Vertical
  - **Physical**
    - **Width/Diameter:** 14mm
    - **Height:** 86.6mm
    - **Weight:** 20g (approx)

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For further information please call: +44 (0)1489 566 750 or email: tcs.whiteley.sales@cobham.com
### 3dBi Flexible Omni Antenna

**Specification:**

**Electrical**
- **Frequencies:** From 2000-2700MHz to 6000-7500MHz (other frequencies available)
- **Feed Power Handling:** 10W
- **Gain (typical):** 3dBi
- **Elevation:** 3dB
- **Beamwidth:** 78°
- **Polarisation:** Vertical

**Physical**
- **Width/Diameter:** 22mm
- **Height:** 290mm
- **Weight:** 160g (approx)

### 4.5dBi Omni Antenna

**Specification:**

**Electrical**
- **Frequencies:** From 2000-2400MHz to 8100-8600MHz (other frequencies available)
- **Feed Power Handling:** 10W
- **Gain (typical):** 4.5dBi
- **Elevation:** 3dB
- **Beamwidth:** 40°
- **Polarisation:** Vertical

**Physical**
- **Width/Diameter:** 25mm
- **Height:** Frequency dependent
- **Weight:** 30g (approx)

### 4dBi Flexible Omni Antenna

**Specification:**

**Electrical**
- **Frequencies:** From 2000-2400MHz to 8100-8600MHz (other frequencies available)
- **Feed Power Handling:** 10W
- **Gain (typical):** 4dBi
- **Elevation:** 3dB
- **Beamwidth:** 35°
- **Polarisation:** Vertical

**Physical**
- **Width/Diameter:** 16mm
- **Height:** 340mm (2.0-2.4GHz model), 450mm (2.0-2.4GHz model)
- **Weight:** 180g (approx)

### Blade Antenna – Body Worn

**Specification:**

**Electrical**
- **Frequencies:** 1.26-1.40GHz, 1.60-1.70GHz, 1.15-1.26GHz
- **Feed Power Handling:** 10W
- **Gain (typical):** 1.3dBi
- **Azimuth:** 3dB
- **Beamwidth:** 120°
- **Elevation:** 3dB
- **Beamwidth:** 100°
- **Polarisation:** Vertical

**Physical**
- **Width/Diameter:** 37.5mm
- **Height:** 81.5mm
- **Weight:** 30g
Helicopter Antenna Actuator

Features:
- A typical skid mount COFDM helicopter system is comprised of the following components:
  - HPT COFDM transmitter
  - 6dB Omni antenna
  - Actuator mechanism
  - Skidshoe
  - Actuator control box
  - Remote Control Unit (RCU)
  - Interconnecting cables

Benefits:
- The Helicopter Antenna Actuator System (HAAM) provides superior airborne transmission by extending the antenna below the airship, away from the body of the helicopter. With a flip of a switch, the antenna is brought-up and safely stowed for landing. Designed for safety and convenience, this system can be installed in a few minutes and is designed to safely break away if you forget to retract the antenna.

Broadcast Down-converters

Features:
- Supplied in selectable high/low gain or fixed high and low gain variants
- Excellent low noise performance
- Designed for permanent outdoor deployment
- Variety of mounting kits available

Benefits:
- The Cobham standard barrel down-converter is designed for permanent outdoor installations on the base of the receive antenna. The down-converter will successfully drive 10m of cable with down-converted UHF signal with no loss of performance.

SOLO Fibre – Fibre Antenna Extender System

Features:
- 'One cable solution' for radio-camera receive and data control
- Location of antenna and down-converter can be extended
- TAC or SMPTE cable formats
- Fibre connectors can be customised
- Splash proof head units
- Rack mountable base units
- Return camera control data line

Benefits:
- Cobham offers antenna fibre extension solutions, which allow prime location of receive units in outside broadcast areas for maximum flexibility of monitoring.
Critical Support for Critical Equipment

As a leading designer of surveillance technologies, for over 50 years Cobham Tactical Communications and Surveillance has supplied and maintained equipment across the globe.

Having the right technical equipment and support for each job is critical. But how can organisations make the most of their investments? What happens when that equipment is unavailable? Do they have the support in place to ensure they never have to manage without that solution at a crucial time?

Cobham offers a range of services to help customers operate its solutions with maximum efficiency, giving support and advice on any issues that arise. Rental options for short-term usage of special solutions are included in the Cobham portfolio. Solutions can be tailored and customers are able to work with their Account Managers to create bespoke support packages specific to their needs.

The benefits:

- Critical support for critical equipment, when smooth operation can’t be left to chance
- Training ensures users have total familiarity with every device used
- Cost is managed and a more efficient operation enabled, maximising the lifetime value of solutions
- The services of an ‘extra member of technical staff’ which are only paid for when used
- Discreet maintenance of covert and overt solutions, in secure or open areas.
Training
Cobham solutions are hugely versatile and, as many of them are modular, there is a strong degree of commonality between products, making them more intuitive for users. However, the best way customers can ensure they really get the most out of their solutions is to undertake training with Cobham’s fully qualified instructors.

Professionally trained users save their organisations time and money by deploying solutions more effectively and safely in high pressure situations.

By simply selecting the training modules required from the wide range on offer, customers are able to ensure their operators, maintenance staff and managers benefit from a blend of lectures, computer-based and hands-on training. Training courses are customised to meet their needs whether they be product specific, deployment or background training.

Fully qualified and experienced instructors can provide training in any language at Cobham’s regional training centres or at customer facilities.

Rental Solutions
Customers can reduce capital expenditure by hiring solutions as they need them, for individual operations and events. Cobham offers a wide range of covert, mobile and temporary infrastructure systems. Many of its test assets are also available, if required.

Equipment Hire
Complete, unmanned systems can be hired by customers for operation by their staff, whether short term or long term.

Capability Hire
Security-cleared experts can deliver, install and even operate the required systems, especially useful where organisations are renting solutions they haven’t used before.

Support Services
Cobham offers support to its customers at every stage, ensuring they get the most out of their solution:

Feasibility Studies
Cobham is able to assess what’s possible and recommend the best solutions to its customers, based on a thorough understanding of the technologies available in the market place.

Site Surveys
Before deploying any solutions, Cobham works with its customers to ensure that there are no unpleasant surprises. Its recommendations help customers maximise their potential for success.

System Design
In designing and delivering system architecture, Cobham is able to integrate any existing or third party equipment required.

Installations
Skilled installers undertake the deployment of any Cobham solution and, by prior arrangement, third party equipment.
Onsite Technical Integration and Support
Cobham is committed to providing outstanding long-term support to its customers.

Base repair
Should an equipment failure occur, Cobham’s highly skilled technicians will repair or replace it, free of charge (subject to support package selected).

Annual Inspection
Any faults or missing updates that are required will be flagged up during the annual inspection, giving customers absolute confidence that their equipment will be available when it’s most needed.

Software Upgrades
Cobham’s products continue to grow and develop, with new features becoming available through software upgrades. These upgrades also ensure the interoperability of new and existing equipment, easing the training burden and maximising the effectiveness of assets.

Support Packages
A range of support packages are available throughout the life of these solutions, helping to ensure that they stay in optimum condition and that any issues are promptly fixed. For peace of mind, various levels of support are available.

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<th>Typical Gold</th>
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* Maximum five students
Cobham’s People

The greatest strength of Cobham Tactical Communications and Surveillance is its people. Dedicated engineers are continually developing new solutions, directed by demanding customer requirements.

Project managers and support engineers work closely with designers to fully understand every aspect of the product range and guide customers on how best to maximise their potential. It’s the reason Cobham’s products are used by professionals in areas such as:

Counter-Terrorism and Intelligence
Military Platform Communications
Situational Awareness
Law Enforcement and Public Safety
Critical Infrastructure Protection
Broadcast

Many of Cobham’s key staff are security cleared, to ease integration with our customers’ operational teams and speed their access to restricted areas and equipment that needs to be dealt with in situ.

By utilising leading technologies and engineering support, Cobham’s solutions can be tailored to meet the needs of individual customers. Account Managers are happy to discuss specific requirements.

Customers can contact their Account Managers for further information on Client Services.

Alternatively, contact:

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