

# DUO IP Radio

COFDM – Video, Audio Telemetry and IP Products

# COBHAM

October 2011 Data Sheet

The most important thing we build is trust



\* Phase 1 enclosure, other enclosures available



The DUO range of IP radios from Cobham is a unique range of point-to-point bi-directional single frequency COFDM radios. Offering the same robust performance and range as the established SOLO4 solutions, but with the added advantage of bi-directionality, they feature Cobham technology at their core.

The DUO radio system offers a wireless duplex Ethernet link alongside a one way low latency video link; with exceptional performance in mobile and urban environments. The DUO radio has excellent spectral efficiency and is available in a variety of frequency bands to suit all applications.

Equipped with Ethernet and RS485 interfaces as standard, the DUO radio can be upgraded with video and audio interfaces for direct connection of conventional video solutions. Security of the transmission is ensured by the optional AES128/256 encryption system.

The standard 1W DUO radio system offers ranges in excess of 20km where line of sight can be achieved, and greater than 1000m of range is possible in typical urban environments.

The DUO radio system is supplied in a rugged waterproof chassis, designed specifically for permanent mast mounting. Its bi-directional nature system makes it ideal for use in the following applications:

- Control of remote vehicles such as Unmanned Ground Vehicles, Unmanned Surface Vehicles and Unmanned Aerial Vehicles
- Surveillance from remote cameras requiring PTZ, particularly IP cameras
- Rugged IP links in mobile applications such as between command vehicles.

# DUO IP Radio

COFDM – Video, Audio Telemetry and IP Products



August 2011 Data Sheet

## Specification:

### Interfaces

Antenna 1	TNC
Antenna 2	TNC
Ethernet I/O	4-Way Amphenol Socket
RS485/ RS232 I/O	19-Way Amphenol Socket
Audio/Video	10-Way Amphenol Socket
Power	2-Way Amphenol Socket

### RF

Frequency Bands	2170 to 2500MHz, 1000 to 1500MHz
Power	1W (100mW optional)
Power Control	30dB
Tuning Steps	250KHz

### Modulation

Bandwidth	2.5MHz
FEC	2/3
Modulation Forward Link	QPSK
Modulation Return Link	BPSK
Sensitivity Forward Link	-95 to -102dBm (mode)
Sensitivity Return Link	-97 to -101dBm (mode)

### Ethernet

Physical	100 BaseT
Data Rate Forward Link	3.6Mb/s in 16QAM 2/3 2.7Mb/s 8PSK 2/3 1.8Mb/s QPSK 2/3 900Kb/s QSK 13
Data Rate Return Link	80kb/s or 160kb/s selectable
Protocols	ARP, UDP control, Ping, TFTP upgrade IP and ICMP protocols between the radios MPEG over IP Encapsulation (UDP multicast + SAP)
Delay	15ms (Minimum in 16QAM)

### Video I/O (option)

Line Standard	PAL/NTSC
Resolution	704, 528, 480, 352
Coding Mode	MPEG2 or MPEG4
Delay	60ms to 0.5 sec depending on mode
Frame Rate	Full/Half/Quarter/Eighth (optional)

### Audio I/O (option)

Input	Line Level or Microphone
Sample Rate	32KHz, 16KHz, 8KHz switchable
Bits per Sample	12 or 8 bit switchable
Data Interface	
RS485 Data I/O	1K2 to 115K6 baud switchable

### Encryption

Format	AES128/256 selectable (optional)
--------	----------------------------------

### Control

RS232 Local Control	9K6 Control Port
Remote Control Ethernet	Ethernet control with comprehensive diagnostic capability

### Physical

Dimension	L 260mm, W 194mm, H 57mm
Weight	2.5Kg

### Power

DC input	11.5 to 14V Reverse Polarity Protected
Power Consumption	16W (100mw no AV) 24 to 29W 1W with AV option

### Environment

Temperature Range	-20 to +50 deg C
Case	Waterproof Robust Enclosure

### Product Code:

DUOIP1W-P-034047	DUOIP1W-R-034047
DUOIP1W-P-115140	DUOIP1W-R-115140
DUOIP1W-P-217250	DUOIP1W-R-217250
DUOIP1W-P-450500	DUOIP1W-R-450500
DUOIP1W-P-550600	DUOIP1W-R-550600

Denotes P= Plain, R=Robust (Phase 2)

### Options:

DUO-AVI (Video/Audio Input Option- Phase 1 and 2 (Plain/Robust))
DUO-AVO (Video/Audio Output Option- Phase 1 Unit only.)
AES256 (Option)
AES128 (Option)
SOL4CLC-PSU (AC to 12V Power Supply Option)

For further information please contact:

### Cobham Tactical Communications and Surveillance

The Cobham Centre – Solent, Fusion 2  
1100 Parkway  
Solent Business Park  
Whiteley  
Hampshire, PO15 7AB  
England

T: +44 (0)1489 566 750  
F: +44 (0)1489 880 538  
[css.sales@cobham.com](mailto:css.sales@cobham.com)

Products are available to security users only, in licensed frequency bands. These products are not approved for use by unlicensed users.

Commercial products are available to unlicensed users - contact Cobham Tactical Communications and Surveillance direct for details.

All product specifications are subject to change without notice. Cobham Tactical Communications and Surveillance will not be liable for technical or editorial errors or omissions.

