

SOLO Central Receiver

COFDM – Video, Audio Telemetry and IP Products

COBHAM

September 2011 Data Sheet

The most important thing we build is trust



SOLO Central Receiver

The Cobham SOLO Central Receiver system is a highly flexible solution for use in permanent or temporary installed central receive applications.

The Central Receiver system has Cobham technology as its core and is supplied with the following flexibility:

- Four built in receivers
- Four way diversity
- Built in rebroadcast transmitter for down link (option)
- Built in ethernet for network connection (option)
- Rack mount or outdoor box for installation.

To enable law enforcement organisations and emergency services to improve efficiency and safety in overt and covert surveillance operations, the Cobham video microwave radio system is specifically designed for the development of urban infrastructures. Its central receivers allow 24x7 unattended operation and are supplied in enclosures for ease of integration with other communication peripherals.

The central receiver receives and decodes the transmissions from up to four transmitters simultaneously. The transmissions are received through one of four antennae typically mounted on the four corners of the building for 360 degree omni-coverage.

Thanks to Cobham microwave down-converters, the receive antennae can be remotely located in optimal locations up to 50 metres away from the Central Receiver base unit. Meanwhile, the base unit is typically installed at a permanent elevated receive point, either enclosed in an appropriate enclosure for exterior use or a rack mounted system.

Onward distribution of up to four feeds from each remote site is possible. Multiple video and audio outputs are typically viewed locally or down-linked using the built-in rebroadcast transmitter to the Down Link Receiver or through NETCRXIPUP modular options designed for contended public or private networks.

The Cobham Surveillance narrow bandwidth modulation offers unprecedented spectrum efficiency, while also increasing the system sensitivity and, therefore, range.

The Central Receiver and Down Link Receiver have comprehensive On Screen Display diagnostic capability to show link quality and spectrum and are equipped with video, two voice and data channels. Security of transmission is ensured by the use of optional AES128/256 bit encryption algorithms.

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Benefits:

- Continuous video coverage in a defined area
- Negates need for deployed surveillance vehicles and personnel
- Efficient use of manpower and improved safety of operatives
- Potential roaming coverage from vehicles or body worn systems
- Multiple receivers enabling city wide coverage with onward distribution to command and control
- Rapid deployment PTZ camera 'drop and go'
- Remote control of PTZ wireless street camera from HQ
- Most economical architecture to deliver capability, with maximum re-use of existing digital video equipment
- Initial investment offset by long term savings
- Maximum operational flexibility in deploying transmitters
- Ease of configuration, use and troubleshooting
- Near term future proofing for added features
- Security of video assets from source to viewer (end-to-end encryption)
- Seamless interoperability and interfacing with Network Provider existing infrastructure
- Ability to extend range at edges with higher power.

Features:

- Four simultaneous video reception and viewing
- Comprehensive demodulation 8/7/6/2.5 and 1.25MHz (optional)
- Up to four way maximum ratio combining antenna diversity for fade and multipath elimination
- Built-in options for rebroadcast or IP network distribution (optional)
- Remote control via IP interfaces
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- Rack mount hardware solutions. Weatherproof outdoor solutions available on request
- Comprehensive On Screen Display (OSD) diagnostics for link analysis, including spectrum analyser
- Internal AES128/256 (optional)
- Monitor video output, selectable between any of the four channels and a quad split mode.

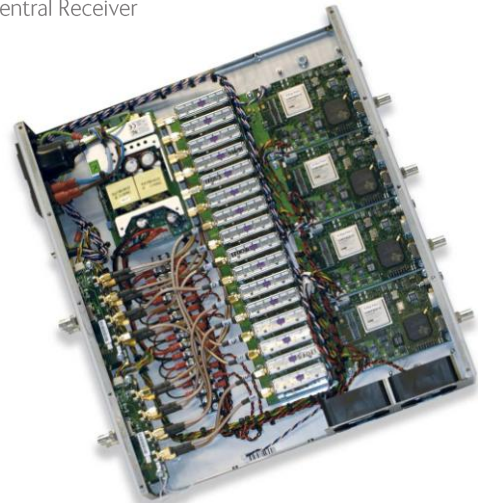
Applications:

- Police metropolitan and urban observation
- Key building surveillance
- Military command control posts
- Airport, ports and terminal security
- Border control
- Major incident support.

Users:

- Police technical support units
- Policy silver and gold command
- Special Forces
- Customs and Excise
- Security Services
- Local/municipal government.

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Specification:

Inputs

Antenna Inputs	TNC
RS232 Control	9 way D-sub
Ethernet	RJ45
AC Supply	IEC

Output

Four Composite Video	BNC
Four S-Video	4 pin MiniDIN
Four Audio Pairs	5 pin Lemo
Monitor Composite Video	BNC
Monitor S-Video	4 pin MiniDIN
Four Way-side Data Outputs	15 way D-sub

Receive Bands

Frequency Bands	2000 to 2500MHz, 1100 to 1400MHz, 70 to 850MHz (set by choice of down-converter)
Tuning Steps	250KHz

Re-broadcast Bands

Frequency Bands	2000 to 2500MHz, 1150 to 1400MHz (optional)
Tuning Steps	250KHz

Modulation

DVB-T Bandwidth	8/7/6MHz (optional)
DVB-T Guard	1/32, 1/16, 1/8
DVB-T FEC	2/3, 5/6
DVB-T Modulation	QPSK, 16QAM and 64QAM
Sensitivity	-95dB Plus
SOLO Bandwidth	2.5/1.25MHz (optional)
SOLO Guard	1/16, 1/8
SOLO FEC	1/3, 2/3
SOLO Modulation	QPSK, 16QAM
Sensitivity	-95 to -105dB

Video

Line Standard	PAL/NTSC
Resolution	704, 528, 480, 352
Coding Mode	MPEG2 or MPEG4
Delay	43ms to 1sec depending on mode
Frame Rate	Full/Half/Quarter/Eighth (selectable in MPEG4)

Audio

Output	Line Level
Sample Rate	32KHz, 16KHz, 8KHz
Bits per Sample	12 or 8 bit

Encryption

Format	AES128/256 (optional)
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Control

Local Control	Via RS232 Control Port
Remote Control Over Ethernet	Via RJ45 Ethernet Port
On Screen Display	Spectrum, RX SNR, RX Power

Physical

Dimension	L 378mm, W 328mm, H 70mm 19" Rack 2U Mounting Kit Supplied
Weight	Less than 8kg

Power

AC Input	110/240V Autoswitching
Power Consumption	65W Maximum

Environment

Temperature Range	-10 to +50 deg C
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Product Code:

SOLCRX444 – Base Model

(DOWN-CONVERTERS, RELAY, NETWORK STREAMING AND AES NOT INCLUDED)

Product Code Includes

1 x AP000479	Null Modem Cable
4 x CA0069	Down-converter RX TNC Cable 10m
1 x CA0121	CRX Data Breakout Cable
1 x CA0183	Single Keyway Audio Output Cable

Accessory Options

None

Licensing Options

NETCRXIPUP	(IP STREAMING OPTION)
SOLCRXT-115140	(RELAY OPTION 1.15 TO 1.4GHz)
SOLCRXT-168168	(RELAY OPTION 1.7 TO 1.9GHz)
SOLCRXT-228255	(RELAY OPTION 2.28 TO 2.55GHz)
RX-UN	Upgrade to MPEG4 Ultra-Narrowband 1.25 MHz
RX-UNX	Upgrade to MPEG4 Ultra Extreme Narrowband 625 kHz

For further information please contact:

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