

PRELIMINARY

Ogier Electronics Limited

Multi-channel Digital Video COFDM Diversity Demodulator



Typical Multi-channel Diversity Demodulator

The DEM120 Multi-channel COFDM Demodulator performs spatial diversity demodulation and video decoding simultaneously on up to 5 COFDM carriers.

The DEM120 is a 19" rack unit (up to 3U depending on the number of channels required). Up to four IF inputs are used for the received COFDM signals from the external antenna downconverters. Internally are up to five dual input COFDM diversity demodulator cards. Each internal demodulator card is fed from all the I.F input ports using combiners where necessary and then uses maximum ratio combining (dynamic spatial diversity) to recover its received signal intact. Each card then decodes (MPEG2 or MPEG 4) its channel back to the original video.

The operating frequency of each internal demodulator is set via a switch to one of a number of factory pre-set frequencies. The unit operates from mains power.

Features

- 19" rack mount enclosure (size depending on the number of channels)
- From 1 to 5 Channel simultaneous demodulation as required.
- COFDM reception in 2.5MHz Narrow Bandwidth.
- Spatial Diversity using Maximum Ratio Combining.
- Factory set operating frequencies selected by internal switch
- Low delay video operation for real time applications.
- Optional Internal AES 128 / 256bit decryption.
- Optional DVB-T compliant reception (6/7/8MHz bandwidths).

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Specification

The specification below shows the usual factory set operating mode. Alternative operating modes are available (16-QAM, 64-QAM, FEC settings, DVB-T operation, frequency settings etc) via the optional configuration interface.

Inputs:	Up to 4 I.F inputs (female N-type) from external Downconverters or Antennas. Note that the unit provides DC power on the N-type inputs for the external Downconverters. Mains Power.
Video channels:	Up to 5 as required.
Outputs:	PAL Video (BNC). Up to 5 off.
Receive Modes	2.5MHz bandwidth. Modulation QPSK.
Channel selection:	Factory preset channels selected by a switch for each demodulator card.
Encryption:	ABS Encryption 32bit factory set key. AES128/256bit factory set key (option).
Video Encoding Output Format:	Composite PAL – optional SD-SDI.
Decoding:	MPEG2 or MPEG4 .
Power Supply:	240Vac
Power consumption:	75W nominal (for 5 video).
Physical Dimensions:	Up to 3U 19" rack.
Operating temperature:	-10 to +50 deg C.
Cooling:	Forced air.

Optional features which can be specified with this equipment type include the number of video channels, RS232 data channels, SVideo or SDI interfaces, DVB-T operating modes, AES Encryption, external RS232 control interfaces.