

CW-4142 QPSK DEMODULATOR



DVB-S compatible QPSK demodulator
with Common Interface (CI) and ASI output

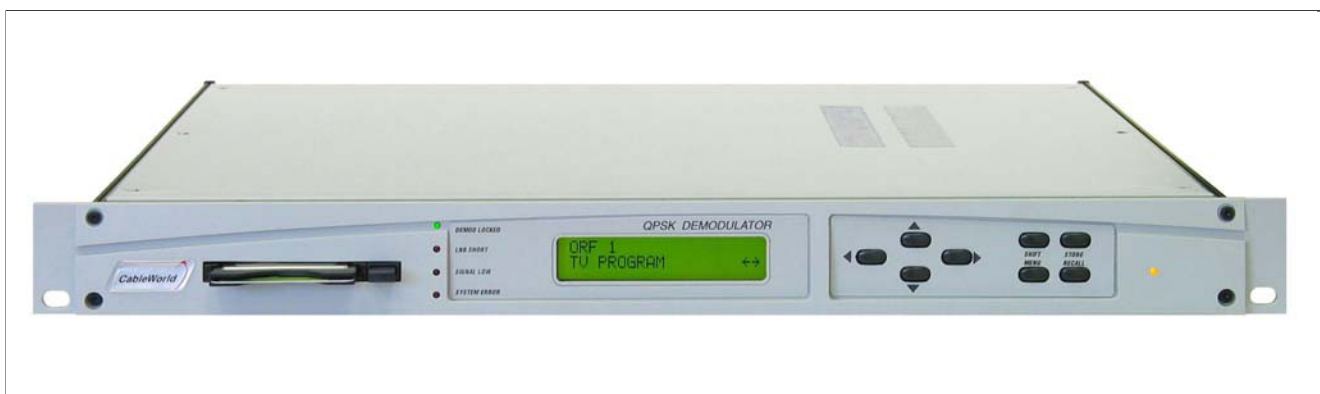
Most of the TV programs used for assembling individual digital program packets at cable TV networks are coming from satellites. Prior to using encrypted (pay-TV) programs for this, they have to be decrypted since further on, these program packets' availability for the subscribers will be controlled by the operator of the cable TV network.

The CW-4142 QPSK DEMODULATOR is a DVB compatible satellite receiver for receiving both MCPC and SCPC transmissions, and it delivers the transport stream at ASI output. The CW-4142 is equipped with Common Interface (CI) for taking up Conditional Access Modules (CAM), which are supported in descrambling up to 16 elementary streams. Thus the CW-4142 used along with the relevant CAM module and valid subscriber card permits descrambling up to 4 services scrambled according to any system.

The output transport stream is suitable to be directly used for driving QAM modulators or TS remultiplexers.

The built-in MPEG-2 test decoder permits watching and listening to one of the descrambled services. The video and audio outputs can be used for driving an analogue channel, too.

Both units are accommodated in a 19" × 1 HU rack frame of CableWorld's new design.



Main features:

- DVB-S compatibility
- Both SCPC and MCPC reception
- Serial asynchronous (ASI) output
- Common Interface supporting the descrambling of up to 16 elementary streams, depending on the CAM module
- Programming with front panel buttons and two row LCD alphanumeric display or through the CW-Bus (RS-485)
- Mode display by LEDs
- 19" × 1 HU rack frame with new design

Technical data

TV system	DVB-S / MPEG-2
Input data	
Input signal	950 to 2150 MHz QPSK modulated signal
Input level	-65 to -25 dBm
IF bandwidth	36 MHz
Input impedance	75 Ω

Transmission characteristics

Symbol rate	4 ~ 45 Msps SCPC/MCPC
FEC	DVB compatible
LNB powering	14 / 18 V short circuit protected
Local oscillator switching	0 / 22 kHz
Video decoding	MPEG2 MP@ML
Video data rate	1.5 ~ 15 Mbps
Maximum resolution	720 × 576
Aspect ratio	4 : 3 and 16 : 9
Audio system	MPEG1 MUSICAM (layer I, II)
Sampling frequencies	32, 44.1, 48 kHz
Teletext signals	inserted into the vertical blanking period according to ITU-R 653-1 System B
Common interface (CI)	according to EN 50221/1997
Number of descrambled streams	up to 16 elementary streams, depending on the module

Output data

<i>Video output:</i>	
Colour system	PAL / SECAM
Output impedance	75 Ω
Output amplitude	1 Vpp

Audio output:

Nominal output level	0 dBm (at 10 reading)
Adjustable range	0 reading: muting 1 ~ 18 reading appr. -24 dBm ~ +8 dBm

ASI output:

	ISO / IEC 13818-1, TM 1449 Rev. 1.
Output data rate	270 MBaud
Output level	typically 800 mVpp

Remote control

	CW-Bus (RS-485)
Mode	simplex
Common mode voltage	max. -7 ... +12 V
Input impedance	min. 12 k Ω
Receiver sensitivity	\pm 200 mV
Termination	approx. 120 Ω , symmetrical
Connector	2 × RJ-12 socket

General data

Mass	approx. 3.5 kg
Physical dimensions	19" × 1 HU
Width	483.0 mm
Height	43.6 mm
Depth	473.0 mm
Service period	continuous
Power requirement	230 V +10 ... -15 % 50 / 60 Hz
Power consumption	max. 50 VA
Operational temperature range	
- to fulfil the specifications	+10 ... +35 °C
- to maintain operation	0 ... +40 °C
- Relative humidity	max. 80 %
Storage temperature range	-25 ... +45 °C
- Relative humidity	max. 95 % non-condensing

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