



DVL SERIES QPSK IF MODULATOR

GENERAL DESCRIPTION -

- **The DVL Series QPSK IF Modulators** are designed to operate in the 863 MHz to 2300 MHz range to transfer multiple high quality digital Video and Audio programs in the same user-defined RF channel bandwidth.
 - **Ultra low phase noise oscillators** and a powerful linearity pre-corrector allow minimizing the Bit Error Rate (BER) also using the maximum spectrum efficiency modulation systems (BPSK, QPSK, 8PSK or QAM).
 - **Bit-rate programmability.** The digital modulators have a fully programmable bit rate allocation for each program to widely define the quality and bandwidth of the modulation: this to guarantee the maximum flexibility in all applications.
 - **Full metering,** control, setting and system diagnostic is available on the front panel.
 - **Multichannel configuration.** The new ONAIR Digital DVL-IF series IF Modulator allows a top quality Video and Audio connection with possibility of multichannel configuration for a very spectrum efficient and cost effective solution.
- DVL-IF series IF Modulator/Encoder has 1, 2, 3 or 4 Video channels capacity and 2, 4, 6, 8 Audio channels capacity

GENERAL TECHNICAL FEATURES

- Operating Frequency from 863 to 2300 MHz
- Accepts up to 4 Video + 8 Audio Channels
- Add / Modify Tables (NIT, SDT...)
- Automatic Bit Rate Adaptation
- Forward Error Correction (RS 188/204; code rates 1/2 to 7/8; convolutional interleaving)
- Symbol Rate up to 20MS/s
- Tuning 1 kHz step
- Compliant to ETS300421 (DVB-S)

To include more than 4 Video and 8 Audio programs is possible to use external multiplexers and demultiplexers for very high capacity networks.

TECHNICAL CHARACTERISTICS

VIDEO INPUT

Video Input Connector	BNC
Video Input Level	1Vp-p
Impedance	75 Ohm
Video format	PAL/NTSC/SECAM
Selectable Encoding Bit Rate	4:2:0 1.5 to 15Mbps
Audio Input Connector	XLR-3

AUDIO INPUT

Audio Input Level	+10dBm max
Impedance	> 100kOhm, Unbalanced
Audio Frequency Interval	25 Hz-15 KHz
Audio Frequency Response	+/-0,5 dB max.
Operating Modes	Stereo, Joint Stereo, Dual channel and single Channel
Sampling Frequencies	32kHz, 48kHz, 56kHz, 64kHz, 80kHz, 96kHz,



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112kHz 128kHz, 160kHz, 192kHz, 224kHz,
256kHz, 320kHz, 384kHz

MODULATOR

Modulation	QPSK
Inner FEC Code Rates	1/2, 2/3, 3/4, 5/6 and 7/8
Outer Code	188/204 Reed Solomon
Modulation Error Rate	>25 dB
Symbol Rate	1-45 Msymbol/s in 1 kSymbol-steps
Programming Resolution	1 Baud
Frequency	70 -482 MHz
Return Loss	>10 dB
Spurious	>-60dBc/4kHz
Connector	F-type in KU band, N type in ISM band

POWER

Line Input Voltage Range	185-265 VAC
Line Frequency	50 Hz +/--%10

ENVIRONMENTAL

Temperature Range	15 C to 50 C
Humidity	% 30-80

ORDER CODES

DVL1/IF/12	1 GHz QPSK IF MODULATOR 1 Video+2 Audio
DVL1/IF/24	1 GHz QPSK IF MODULATOR 2 Video+4 Audio
DVL1/IF/36	1 GHz QPSK IF MODULATOR 3 Video+6 Audio
DVL1/IF/48	1 GHz QPSK IF MODULATOR 4 Video+8 Audio
DVL2/IF/12	2 GHz QPSK IF MODULATOR 1 Video+2 Audio
DVL2/IF/24	2 GHz QPSK IF MODULATOR 2 Video+4 Audio
DVL2/IF/36	2 GHz QPSK IF MODULATOR 3 Video+6 Audio
DVL2/IF/48	2 GHz QPSK IF MODULATOR 4 Video+8 Audio