DD240
Digital Video Broadcast Demodulator

DD240 Digital Video Broadcast Demodulator and PCMCIA Feature Cards

HIGHLIGHTS

▶ Feature and Software Upgrades Readily Available Through Easy-to-Install PCMCIA Feature Cards

▶ Data Rates up to 110 Mbps (Variable in 1 bps steps)

▶ QPSK, 8PSK and 16 QAM Operation

▶ Rate 1/2, 2/3, 3/4, 5/6, 7/8, 8/9

▶ Reed-Solomon Outer Coding

▶ Frequency-Agile 50 – 90, 100 – 180 and 950 – 2150 MHz

▶ EN 300-421, DVBS and MPEG-2 Compliant

▶ EN 301-210, DVB-DSNG Compliant

▶ Low Profile Chassis – 1U High (1.75")

▶ User Friendly Front Panel Interface

▶ Optional Redundancy Configuration

▶ Internal Doppler Buffer

THE NEW STANDARD IN DVB PERFORMANCE

Radyne ComStream's DD240 High-Speed Video Broadcast Demodulator is the ideal choice to meet the exacting standards of high data-rate Video, Internet and Internet satellite applications. Meeting the DVB standards EN301-210 and EN 300-421, the unit supports QPSK, 8PSK and 16QAM applications with symbol rates up to 45 Msps. Supporting a variety of data and IF interfaces, the DD240 is configurable to meet most high-speed satellite applications.

The powerful new onboard Monitor and Control (M&C) processor has the unique capability to download upgraded firmware and enhanced features from a field-changeable PCMCIA card. Offering unprecedented flexibility, this feature represents a new level of Radyne ComStream's outstanding Customer Service. Additionally, features are added to the installed equipment base with extreme ease, allowing the equipment to expand with changes in service while lowering initial installation budgets.

The DD240 offers a frequency-agile IF input from 950 to 2150 MHz and 50 to 90 or 100 to 180 MHz in 1 Hz steps. Variable data rates from 1 Mbps to 110 Mbps can be set in 1 bps steps.

The Demodulator also offers the choice of remotely interfacing through one of three onboard connections: Ethernet, RS485, or RS232. The familiar Radyne ComStream front panel offers push-button control of all features and a backlit LCD display. Menus are specifically designed for ease of use and quick operation as well as changes in all demodulator parameters.

For applications requiring system redundancy, the DD240 may be used with the Radyne ComStream RCS11 1:1 Redundancy Switch or the RCS20 M:N Redundancy Switch.

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DD240 Digital Video Broadcast Demodulator

SPECIFICATIONS (EN301-210 AND EN300-421 COMPLIANT)

Standard IF Specification

IF Interface

L-Band Specification (Standard)

Rx IF:	950-2150 MHz
IF Step Size:	1 Hz
Input Level:	C_0+10 log (Symbol Rate), C_0: -130 dBm/Hz to 105 dBm/Hz
	-70 to -45 dBm @ 1 Msps
	-60 to -35 dBm @ 10 Msps
	-53 to -28 dBm @ 45 Msps
Composite Power:	< -20 dBm total input power
LNB Power:	18V +/- 0.5 V, 350 mA max
Input Impedance:	75 Ohm
Return Loss:	7 dB
Input Connector:	F Connector

Optional 70/140 MHz Specification (Includes L-Band)

Rx IF:	70/140 MHz
IF Step Size:	1 Hz
Input Level:	C_0+10 log (Symbol Rate), C_0: -130 dBm/Hz to 105 dBm/Hz
	-70 to -45 dBm @ 1 Msps
	-60 to -35 dBm @ 10 Msps
	-53 to -28 dBm @ 45 Msps
Composite Power:	< -20 dBm total input power
Input Impedance:	75 Ohm
Return Loss:	15 dB
Input Connector:	BNC Female

BASEBAND

Variable data rate:	1 to 110 Mbps
Step Size:	1 bps
Symbol Rate:	45 Msps max.

Forward Error Correction (FEC) Decoding

Inner Code:	PTCM (8PSK, 16QAM), Viterbi (QPSK)
Code Rates:	QPSK = 1/2, 2/3, 3/4, 5/6, 7/8
	8PSK = 2/3, 5/6, 8/9
	16 QAM = 3/4, 7/8
Outer Code:	Reed Solomon, Per EN 300-421 (204,188, T=8)
Deinterleaving:	Convolutional, I=12, Per EN 300-421
Data Descrambling:	Per EN 300-421
Terrestrial Framing Modes:	204, 188, 187
Internal Clock Source Stability:	10 ppm
Internal Doppler Buffer:	0 to 68 msec.

MONITOR AND CONTROL

Interface:	Serial RS485 (Remote) and RS232 (Terminal) Ethernet 10BASE-T, 100BASE-T
Parameters Controlled:	
	IF Frequency
	Data Rate
	Symbol Rate
	Clock Polarity
	Data Polarity
	Inner Code Rate
	Test Modes
	Spectral Inversion
	Spectral Shape Factor
Parameters Monitored:	
	Input Level (+/- 5 dBm)
	Eb/No (+/- 1.0 dB)
	BER
	Faults
	Stored Faults

OPTIONAL DATA INTERFACES

Serial:	G.703, E3, T3, STS-1
	DVB ASI
	HSSI
Parallel:	RS422 (M2P, DVB)
	LVDS (M2P, DVB)

ENVIRONMENTAL

Prime Power	100-240 Vac, 50-60 Hz, 40 Watts Max.

Operating
Temp:	0 to 50° C.
Humidity:	Up to 95%, Non-condensing

Storage
Temp:	-20 to 70° C.
Humidity:	Up to 99%, Non-condensing

PHYSICAL

Weight:	10 pounds (4 Kg)
Size:	19" W x 17" D x 1.75" H 48.3 x 43.2 x 4.45 (cm)

OPTIONS

48 Vdc Prime Power

CONFIGURATION SERIES

Series 100:	17.5 Mbps - 10 Msps, QPSK
Series 200:	78.75 Mbps - 45 Msps, QPSK
Series 300:	110 Mbps - 45 Msps, QPSK/8PSK
Series 350:	110 Mbps - 45 Msps, QPSK/8PSK/16QAM

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