



# DVB3030

## Digital Video Broadcast Modulator



*DVB3030 Digital Video Broadcast Modulator*

### HIGHLIGHTS

- ▶ 1.0 to 78.75 Mbps (Variable in 1 bps steps)
- ▶ 1.0 to 45.0 Msp/s Symbol Rate
- ▶ QPSK or BPSK Operation
- ▶ Viterbi (K=7) Rate 1/2, 2/3, 3/4, 5/6, 6/7, 7/8
- ▶ Reed-Solomon Outer Coding
- ▶ Low Profile Chassis -1U High (1.75")
- ▶ Frequency-Agile 50 - 90 or 100 - 180 MHz in 100 Hz Steps
- ▶ User-Friendly Front Panel Interface
- ▶ Optional Redundancy Configuration
- ▶ Meets European Telecom Standard 300-421

### THE NEW STANDARD IN PERFORMANCE

The Radyne ComStream DVB3030 is a high-speed, frequency-agile, multi-data rate digital video modulator.

The DVB3030 offers the best features of a flexible and programmable modulator that is fully compatible with all digital video standards at a low price.

Radyne ComStream's DVB3030 is a single rack-unit high digital modulator. The modulator card along with a power supply, display, and data interface board fit into the single rack-unit high chassis for minimal space consumption.

Radyne ComStream's modulator offers a frequency-agile IF output from 50 to 90 or 100 to 180 MHz in 100 Hz steps. Variable data rates from 1 Mbps to 78.75 Mbps can be set in 1 bps steps. The modulator is fully compliant with ETS (European Telecom Standard), DVB and MPEG-2 standards.

The DVB3030 is ideal for use in digital video hub uplinks, flyaway and mobile satellite news gathering vehicles. Other applications include broadcast data distribution.

The DVB3030 is programmable from the front panel. Menus are specifically designed for ease of use and quick online operation as well as changes in modulator configuration. All aspects of the modulator are also monitored and controlled through the RS232 and RS485 serial control ports or through an Ethernet port. Operating parameters, such as data rates and IF frequencies can be readily set and changed at the front panel or remote serial interface.

An optional 1:1 redundancy control switch (RCS11) is employed to provide the DVB3030 with superior systems reliability.

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## SPECIFICATIONS

### IF OUTPUT PORT

Frequency Range	50 to 90 or 100 to 180 MHz
Step Size	100 Hz
Stability	10 ppm
Output Level	+5 to -20 dBm
Step Size	0.1 dB
Accuracy	± 0.5 dB
Stability	± 0.5 dB
Output Impedance	75 Ohms Option: 50 Ohms
Return Loss	20 dB
Phase Noise	100 Hz -63 dBc 1 KHz -73 dBc 10 KHz -83 dBc 100 KHz -93 dBc
Connector	BNC, female
Modulation	QPSK, BPSK
Spectral Mask	Per ETS 300-421
Spurious Output	-55 dBc In-Band -45 dBc Out-of-Band

### BASEBAND

Variable Data Rate	
Variable	1 to 78.74 Mbps
Step Size	1 bps
Symbol Rate	45 Msps max.
Forward Error Correction (FEC) Encoding	
Inner Code	Convolutional K=7, (171, 133)
Code Rate	1/2, 2/3, 3/4, 5/6, 6/7, 7/8
Outer Code	Reed Solomon (204,188, T=8)
Interleaving	Convolutional, I=12
Data Scrambling	Per ETS 300-421
Data Interface	
Serial	RS-422/449 (<16 Mbps) G.703 (HDB3) (Opt.) DVB ASI - 'Hotlink' (Opt.)
Parallel (< 78.75 Mbps)	M2P, RS-422, 25-Pin 'D' DVB, RS-422, 25-Pin 'D' Differential/LVDS (Opt.)
Internal Clock Source	
Stability	10 ppm
External Clock	
Accuracy	100 ppm

### MONITOR AND CONTROL

Interface	Serial RS-485 and RS-232 Options: Ethernet 10 BASE-T
Parameters Controlled	IF Frequency IF Output Level IF Output On/Off Data Rate Symbol Rate Clock Polarity Data Polarity Inner Code Rate Test Modes
Parameters Monitored	Faults Stored Faults

### ENVIRONMENTAL

Prime Power	100-240 Vac, 50-60 Hz, 1.0 A
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)

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