

EXM-2S™ SATCOM Terminal



- Cost-effective satellite modem terminal for Ethernet and T1/E1 transport
- FPGA-based signal processing allows rapid modification to meet customer unique requirements
- Flexible modem and multiplexer
 - ✓ Programmable Bandwidths up to 30 MHz
 - ✓ Programmable Modulation Modes (QPSK to 256 QAM)
 - ✓ Programmable FEC
 - ✓ Mix PDH and Ethernet traffic
 - ✓ Layer-2 Ethernet switch functionality
- FlexBand™ technology allows arbitrary bandwidth occupancy from a single terminal via software command
- Built-in Ethernet line interfaces
 - ✓ Built-in 2-port Ethernet with port-based VLAN & QOS features
 - ✓ Optional line cards for additional interfaces
- Up to 4 T1/E1 circuits may be configured to support legacy applications
- Tx and Rx cable interfaces at 70 MHz IF
- Extensive link management interface support
 - ✓ Web-based link management
 - ✓ SNMP monitoring
 - ✓ Craft menu applications over Telnet/SSH or RS-232
 - ✓ Radio link service channel
- Low-power design
 - ✓ +/- 18 to 75 VDC supply
- Software and signal processing are field-upgradeable
- 1U 19-inch rack mount unit

Escape Communications' EXM-2S™ is an extremely versatile high-capacity single-carrier SATCOM modem solution for efficient Ethernet and T1/E1 transport over satellite.

Escape's Flexible Signal Processing™ architecture allows complete flexibility in combining telco circuit-switched data (T1/E1) and packet data (Ethernet) within the selected transport capacity. Additional line interfaces can be accommodated via an optional line card. The transport capacity can be provisioned and monitored via the web-based Link Manager or craft interface. SNMP monitoring is provided.

The EXM-2S™ supports arbitrary channel bandwidths between 2 and 30 MHz, modulation formats from QPSK through 256-QAM, and arbitrary data rates from 2 Mbps and 170 Mbps. The IF interfaces are 70 MHz for both transmit and receive. The EXM-2S™ is packaged in a standard 19-inch 1-RU rack-mount chassis.

The EXM-2S™ is available for demonstration and evaluation now.

escapecommunications

2790 Skypark Dr., Ste 203
Torrance, CA 90505

www.escapecom.com
+1-310-997-1300

Escape is a provider of leading-edge broadband, wideband, and gigaband modem technologies.

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EXM-2S Specifications

Programmable Modulation Modes	QPSK, 8PSK, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM		
Programmable Channel BWs (FlexBand™)	CEPT/ETSI	1.75, 3.5, 7, 14, and 28 MHz (or arbitrary)	
	ANSI/FCC	1.25, 2.5, 5, 10, 20 and 30 MHz (or arbitrary)	
Programmable Symbol Rates	<ul style="list-style-type: none"> • 2 to ~24 Mbaud • 2 Mbps – 170 Mbps 		
Programmable Forward Error Correction	<ul style="list-style-type: none"> • Configurable Reed-Solomon coding • Configurable interleaving frame length 		
End-to-end latency (without free-space delays)	≤ 1 ms		
Link quality metrics	Supports ITU-T G.826		
Spurious and Out-of-Band Emissions	ETSI and FCC compliant		
Interference Immunity	ETSI and FCC compliant		
Sensitivity Threshold for BER of 10 ⁻⁸ (RS-encoded with T=12 error-correcting)	Modulation	Net bps	Eb/No (dB)
	QPSK	1.81	8.8 dB
	8PSK	2.72	12.2 dB
	16QAM	3.62	12.3 dB
	32 QAM	4.53	14.4 dB
	64 QAM	5.44	16.9 dB
	128 QAM	6.34	19.4 dB
256 QAM	7.24	21.9 dB	
Line Interfaces	Custom line interfaces available per customer request		