

EXM-2L4™ Point-to-Point Radio Indoor Unit (IDU)



- Cost-effective high-capacity PDH and packet IDU for microwave and millimeter-wave radios
 - ✓ 170 Mbps throughput exceeds STM-1
- Optimized for efficient cellular backhaul and private network applications
- Flexible modem and multiplexer
 - ✓ Programmable Bandwidths and Symbol Rates
 - ✓ Programmable Modulation Modes (up to 256 QAM)
 - ✓ Programmable FEC
 - ✓ Mix PDH and Ethernet traffic
- FlexBand™ technology allows arbitrary bandwidth occupancy from a single IDU via software command
- Built-in PDH and Ethernet line interfaces
 - ✓ PDH: 4xE1/T1 (EXM-2L) or 16xE1/T1 (EXM-2L16)
 - ✓ Built-in 2-port Ethernet with port-based VLAN & QOS features
 - ✓ Optional line cards for additional interfaces
- Optional hot stand-by operation
 - ✓ Protect 2 ODUs from single IDU (EXM-2L16)
- Optional errorless receive switching for diversity
- Single cable interface to Outdoor Unit
- Extensive link management interface support
 - ✓ Web-based link management
 - ✓ SNMP monitoring and craft menu applications
 - ✓ RS-232 craft interface
 - ✓ Radio link service channel
- Low-power design
 - ✓ +/- 18 to 75 VDC supply
- Field-upgradeable firmware
- 1U 19-inch rack mount unit

Escape Communications' EXM-2™ Indoor Unit is an extremely versatile high-capacity IDU solution. A single, low-cost design serves both CEPT and ANSI markets.

Escape's Flexible Signal Processing™ architecture allows complete flexibility in combining telco circuit-switched data (up to 4 or 16 E1/T1) 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.

EXM-2™ is designed for easy adoption by an OEM to fit seamlessly into their product line. The EXM-2 provides significant flexibility in a low-cost mechanical design. It is feature-rich including SNMP, hot stand-by, auxiliary control and alarms, and a craft command-line interface. The ODU interface is compatible with major ODU providers and can be customized per OEM requirements.

EXM-2™ is currently in production and available for demonstration and evaluation to qualified OEMs.

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

EXM-2L4™ Point-to-Point Microwave Radio Indoor Unit

EXM-2L4 Specifications

Programmable Modulation Modes	EXM-2L	QPSK, 8PSK, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM	
Programmable Channel BWs (FlexBand™)	CEPT/ETSI	1.75, 3.5, 7, 14, and 28 MHz	
	ANSI/FCC	1.25, 2.5, 5, 10, 20 and 30 MHz	
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	≤ 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	4xT1/E1 or 16xT1/E1 both with Ethernet, optional 32xT1/E1 or E3/DS3; others per customer request		

Transport Configuration Examples

