

Evolution X1 Satellite Router



Cost-effective remote bundle ideal for large-scale networks for SCADA, Point of Sale, ATM, Femtocells, and small Enterprise applications. The remote features DVB-S2/ACM and Adaptive TDMA, routing, VLAN functionality, QoS and optional AES encryption.

Network Configuration

Network Topology	Star (DVB-S2/ACM downstream + ATDMA upstream)		
Modulation	Downstream: QPSK, 8PSK, 16APSK ; Upstream: BPSK, QPSK, 8PSK		
Maximum Rates Supported	<u>Rate</u>	<u>Downstream (DVB-S2)</u>	<u>Upstream (ATDMA)</u>
	Symbol rate	1 - 45 Msps	128 ksps – 4 Msps*
	Info rate	Up to 150 Mbps	Up to 10 Mbps*
	Line Card IP rate	Up to 149 Mbps	Up to 8.5 Mbps ¹
	Remote IP data rate	Up to 76.3 Mbps	Up to 8.5 Mbps*
	Max rates are achieved under optimal conditions.		
	¹ Max line card data rate with 4 Msps upstream on the X1.		
FEC	Downstream: LDPC, 1/4 - 8/9 Upstream: 2D 16-State, 1/2 - 6/7		
E_b/N₀	For full list, please refer to the latest iDirect Link Budget Analysis Guide		

Interfaces

SatCom Interfaces	TxF: Type-F, 950 - 1700 MHz, Composite Power 0dBm / -30dBm RxF: Type-F, 950 - 2150MHz, Composite Power -5dBm / -65dBm
Available BUC Power (IFL)	+24V, 25W max. supporting BUCs up to 3W (65W external PSU)
Available LNB Power (IFL)	+24VDC, 22KHz DiSEqC tone
Data Interfaces	LAN: 10/100 Ethernet Web-based configuration via Ethernet port
Protocols Supported	TCP, UDP, ICMP, NAT/PAT*, DHCP, Local DNS Caching, cRTP*
Security	AES-256 Link Encryption* (optional)
Traffic Engineering	QoS (Priority Queuing, Strict Priority Queuing, WFQ); Application-based QoS; Configurable Packet Classifier; CIR (Static and Dynamic), Minimum CIR, Idle/Dormant Min IR
Other Features	Built-in Automatic Uplink Power Control, Frequency and Timing Control, Authentication

Mechanical/ Environmental

Size	9" x 6.8" x 1.8"
Weight	2.0 lbs (0.91 kg)
Operating Temperature	0° to 50°C (+32° to 122°F) at Sea Level
Humidity	5% - 92% non-condensing humidity
Input Voltage	100-240 VAC Single Phase, 47-63 Hz, 1.4A max. 12-36 VDC
Radio Standards	EN 301-428v1.3.1 – Ku-Band System Level Specifications EN 301-443v1.3.1 – C-Band System Level Specifications
Safety Standards	IEC 60950-1, EN 60950-1, UL 60950-1, CSA C22.2 No. 60950-1
Emission Standard	Complies with EN 55022 Class B, FCC Part 15 Class B, EN 61000-3-2, EN 61000-3-3
EMC/Immunity Standard	Complies with EN 55024, EN 301-489-1, EN 301-489-12, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11
Certification	FCC, CE and RoHS compliant

* iDX 3.3.0 and above