

Evolution X1 Outdoor Satellite Router



Cost-effective remote bundle ideal for large, narrowband networks for SCADA, Point of Sale and ATM applications. The remote features DVB-S2/ACM and TDMA, basic routing, VLAN functionality and QoS and is embedded in a IP67 weatherproof enclosure enabling an extended temperature range, passive cooling and multiple power options, including DC.

Network Configuration

Network Topology	Star (DVB-S2/ACM downstream + Multi Frequency D-TDMA upstream)		
Modulation	Downstream: QPSK, 8PSK, 16APSK ; Upstream: BPSK, QPSK, 8PSK		
Maximum Rates Supported	Rate	Downstream (TDM)	Upstream (D-TDMA)
	Symbol rate	1 - 45 Msps	128 ksps – 2 Msps
	Info rate	Up to 150 Mbps	Up to 4.8 Mbps Max
	Line Card IP rate	Up to 149 Mbps	Up to 11.1 Mbps
	Remote IP data rate	Up to 57.2 Mbps	Up to 3.8 Mbps Max
	Max downstream and upstream data rates can be achieved simultaneously. Max rates are achieved under optimal conditions.		
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	TxIF: Type-F, 950 - 1700 MHz, Composite Power 0dBm / -30dBm RxIF: Type-F, 950 - 2150MHz, Composite Power -5dBm / -65dBm
Available BUC Power (IFL)	+24V, 25W max. supporting BUCs up to 3W (60W 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, DHCP, Local DNS Caching
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, Remote Lock (to network)

Mechanical/ Environmental

Size	10.25" x 3" x 10" in
Weight	5.0 lbs (2.27 Kg)
Operating Temperature	-40° to 60°C (-40° to 140°F) at Sea Level
Humidity	5% - 92% non-condensing humidity
Immersion	IP67/NEMA 6
Input Voltage	100-240 VAC to 24 VDC; 12/24 VDC to 24 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	Complies with IEC 60950, EN 60950, EN 60950-22, UL 60950-1, CSA C222 NO.60950-1-03
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 EN55024, EN301-489-1, EN 301-489-12, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN 61000-4-6, EN61000-4-11
Certification	FCC, CE and RoHS compliant