

## Evolution X1 Outdoor Satellite Router



Cost-effective remote bundle ideal for large, narrowband networks for SCADA, femtocells and pipeline monitoring. 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

<b>Network Topology</b>	Star (DVB-S2/ACM downstream + Multi Frequency D-TDMA upstream)		
<b>Modulation</b>	Downstream: QPSK, 8PSK, 16APSK; Upstream: BPSK, QPSK, 8PSK		
<b>Maximum Rates Supported</b>	Rate	Downstream (TDM)	Upstream (D-TDMA)
	Symbol rate	1 - 45 Msps	128 kps - 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.		
<b>FEC</b>	Downstream: LDPC, 1/4 - 8/9 Upstream: 2D 16-State, 1/2 - 6/7		
<b>E<sub>b</sub>/N<sub>0</sub></b>	For full list, please refer to the latest iDirect Link Budget Analysis Guide		

### Interfaces

<b>SatCom Interfaces</b>	TxIF: Type-F, 950 - 1700 MHz, Composite Power 0dBm / -30dBm RxIF: Type-F, 950 - 2150MHz, Composite Power -5dBm / -65dBm
<b>Available BUC Power (IFL)</b>	+24V, 25W max. supporting BUCs up to 3W (60W external PSU)
<b>Available LNB Power (IFL)</b>	+24VDC, 22KHz DiSEqC tone
<b>Data Interfaces</b>	LAN: 10/100 Ethernet Web-based configuration via Ethernet port
<b>Protocols Supported</b>	TCP, UDP, ICMP, DHCP, Local DNS Caching
<b>Traffic Engineering</b>	QoS (Priority Queuing, Strict Priority Queuing, WFQ); Application-based QoS; Configurable Packet Classifier; CIR (Static and Dynamic), Minimum CIR, Idle/Dormant Min IR
<b>Other Features</b>	Built-in Automatic Uplink Power Control, Frequency and Timing Control, Authentication, Remote Lock (to network)

### Mechanical/ Environmental

<b>Size</b>	10.25" x 3" x 10" in
<b>Weight</b>	5.0 lbs (2.27 Kg)
<b>Operating Temperature</b>	-40° to 60°C (-40° to 140°F) at Sea Level
<b>Humidity</b>	100% condensing humidity
<b>Immersion</b>	IP67/NEMA 6
<b>Input Voltage</b>	100-240 VAC to 24 VDC; 12/24 VDC to 24 VDC
<b>Radio Standards</b>	EN 301-428v1.3.1 - Ku-Band System Level Specifications EN 301-443v1.3.1 - C-Band System Level Specifications
<b>Safety Standards</b>	Complies with IEC 60950-1, EN 60950-1, EN 60950-22, UL 60950-1, CSA C22.2 No.60950-1, IEC 60950-22, EN60950-22, UL 60950-22, CSA C22.2 No.60950-22
<b>Emission Standard</b>	Complies with EN 55022 Class B, FCC Part 15 Class B, EN 61000-3-2, EN 61000-3-3
<b>EMC/Immunity Standard</b>	Complies with EN55024, EN301-489-1, EN301-489-12, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN 61000-4-6, EN61000-4-11
<b>Certification</b>	FCC, CE and RoHS compliant