Evolution X1 Outdoor
Satellite Router

Cost-effective remote bundle ideal for large-scale networks for SCADA, femtocells and pipeline monitoring. The remote features DVB-S2/ACM and Adaptive TDMA, routing, VLAN functionality, QoS, optional AES encryption 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 + ATDMA upstream)
Modulation	Downstream: QPSK, 8PSK, 16APSK ; Upstream: BPSK, QPSK, 8PSK

Maximum Rates Supported	Rate	Downstream (DVB-S2)	Upstream (ATDMA)
	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/N_0	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 (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	10.25" x 3" x 10"
Weight	5.0 lbs (2.27 kg)
Operating Temperature	-40° to 60°C (-40° to 140°F) at Sea Level
Humidity	100% condensing humidity
Immersion	IP67/NEMA 6
Input Voltage	100-240 VAC to 24 VDC; 12-36 VDC to 24 VDC; ±36-76 VDC (±48 VDC nominal) 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 60950-1, EN 60950-1, UL 60950-1, CSA C22.2 No. 60950-1 IEC 60950-22, EN 60950-22, UL 60950-22, CSA C22.2 No. 60950-22
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, EN301-489-12, 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

* iDX 3.3.0 and above

iDirect X1 Outdoor

BUC

Power Supply

O-Ring

DC In Port

O-Ring

LNB

Tranceiver

Wall/Pole Mounting Hardware for Power Supply

Power Cord

Wall/Pole Mounting Hardware for Tranciever