

## Evolution X1 Series Satellite Router Models X1, X1-Ku/C



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

<b>Network Topology</b>	Star (DVB-S2/ACM downstream + ATDMA upstream)		
<b>Modulation</b>	Downstream: QPSK, 8PSK, 16APSK ; Upstream: BPSK, QPSK, 8PSK		
<b>Maximum Rates Supported</b>	<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
	Remote IP data rate	Up to 76.3 Mbps	Up to 8.5 Mbps*
	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 10MHz IFL BUC reference
<b>Available BUC Power (IFL)</b>	+24V, 25W max. supporting BUCs up to 3W (65W external PSU) - X1 +24V, 50W max. supporting BUCs 4W Ku E0001102-0001, 5W C NJT5669F, 6W Ku E0002603-0001 (90W external PSU) - X1-Ku/C
<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, NAT/PAT*, DHCP, Local DNS Caching, cRTP*
<b>Security</b>	AES-256 Link Encryption* (optional)
<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

### Mechanical/ Environmental

<b>Size</b>	9 x 6.8 x 1.8 inches (22.9 x 17.3 x 4.6 cm)
<b>Weight</b>	1.8 lbs (0.82 kg)
<b>Operating Temperature</b>	0° to 50°C (+32° to 122°F) at Sea Level
<b>Humidity</b>	5% - 92% non-condensing humidity
<b>Input Voltage</b>	100-240 VAC Single Phase, 50-60 Hz 12-36 VDC
<b>Radio Standards</b>	EN 301-428 – Ku-Band System Level Specifications EN 301-443 – C-Band System Level Specifications
<b>Safety Standards</b>	IEC 60950-1, EN 60950-1, UL 60950-1, CSA C22.2 No. 60950-1
<b>EMC Standards</b>	EN 301 489-1, EN 301 489-12, EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3, FCC Part 15: Class B, ICES-003: Class B
<b>Certification</b>	FCC, CE, TUV, and RoHS compliant

\* iDX 3.3.0 and above