

**Evolution X1 Series**  
**Satellite Router**  
**Models X1, X1-Ku/C, X1-HSO**



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, 32APSK; 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, 1.5A (max) (65W external PSU) - X1, X1-Ku/C, and X1-HSO +24V, 2.1A (max) (90W external PSU) - X1-Ku/C
<b>Available LNB Power (IFL)</b>	+24VDC, 300mA (max), 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>	65W External PSU: 0° to +50°C (32° to +122°F) with up to 53W max power consumption 0° to +40°C (32° to +104°F) with up to 65W max power consumption	
	90W External PSU: 0° to +50°C (32° to +122°F) with up to 75W max power consumption 0° to +40°C (32° to +104°F) with up to 90W max power consumption	
	<b>Humidity</b>	5% - 92% non-condensing humidity
	<b>Input Voltage</b>	100-240 VAC Single Phase, 50-60 Hz
<b>Certification</b>	FCC, CE, TUV, and RoHS compliant	

\* iDX 3.3.0 and above