

Evolution X5 Series Satellite Router



High-speed, High-performance IP Broadband Connectivity

高速、高性能的IP宽带连接

Designed specifically to support business-critical applications, the Evolution X5 is ideally suited for high-performance broadband applications such as enterprise connectivity, cellular backhaul, maritime, secure banking, and other mobile applications.

Evolution X5专为支持关键业务应用而设计，非常适合于高性能宽带应用，如企业连接、蜂窝回程、海事、安全银行和其他移动应用。

The Evolution X5 features iDirect's highly efficient implementation of the DVB-S2 standard with Adaptive Coding and Modulation (ACM) on the outbound carrier. Along with deterministic MF-TDMA technology or SCPC Return, 2D 16-State FEC, the Evolution X5 maximizes the efficiency of satellite capacity to enable new opportunities.

Evolution X5的特点是iDirect高效实现DVB-S2标准，在出镜载波上具有自适应编码和调制（ACM）。随着确定性MF-TDMA技术或SCPC返回，2D 16-State FEC，Evolution X5将卫星容量的效率最大化，以创造新的机会。

Greater Flexibility 灵活性

The Evolution X5 offers dual-mode operation between iNFINITI TDM or DVB-S2/ACM on the outbound and MF-TDMA or SCPC Return on the inbound, providing more flexibility for network design and bandwidth optimization. Whether initially deploying a DVB-S2 network or starting off with an iNFINITI network that is capable of being upgraded to a DVB-S2 network in the future, the Evolution X5 adapts to a customer's changing requirements. A customer can also temporarily switch from TDMA to SCPC Return without having to swap out the equipment.

Evolution X5提供了出站的iNFINITI TDM或DVB-S2/ACM和入站的MF-TDMA或SCPC返回之间的双模操作，为网络设计和带宽优化提供了更大的灵活性。无论是最初部署DVB-S2网络还是从未来能够升级到DVB-S2网络的iNFINITI网络开始，Evolution X5都能适应客户不断变化的需求。客户也可以暂时从TDMA切换到SCPC，而无需更换设备。

With over-the-air software licensing features that can add data encryption and spread spectrum capabilities, operators are allowed even more flexibility to customize the Evolution X5 to meet their technical and budget requirements.

借助可以添加数据加密和扩频功能的“空中传送”软件许可功能，运营商可以更加灵活地定制Evolution X5，以满足其技术和预算要求。

Features

特征

- ◆ Star topology 星网拓扑
- ◆ Two modes of operation: iNFINITI or DVB-S2/ACM outbound
两种工作模式：iNFINITI 或 DVB-S2/ACM出镜
- ◆ Deterministic MF-TDMA or SCPC Return channel
确定性MF-TDMA或SCPC返回通道
- ◆ Extremely efficient 2D 16-State inbound coding
非常高效的2D 16-State入站编码
- ◆ Advanced QoS and traffic prioritization
先进的QoS和流量优先级
- ◆ Automatic end-to-end Uplink Power Control
自动端到端上行功率控制
- ◆ Optional Spread Spectrum waveform technology supports very small antennas
可选扩频波形技术，支持非常小的天线
- ◆ Optional AES 256-bit encryption
可选AES 256位加密

Increased Efficiency with Superior Quality of Service

以卓越的服务质量提高效率

iDirect's sophisticated Group QoS advanced traffic prioritization dynamically balances the demands of different applications according to their needs and bandwidth availability, across multiple sites and user sub-networks. When combining the Group QoS feature set with DVB-S2/ACM, service providers can increase DVB-S2 efficiency gains by combining multiple small networks into a single, larger carrier. Additional configurations, service pricing models, and reporting capabilities allow service providers to translate ACM benefits into new revenue-generating service offerings.

iDirect的复杂的组QoS高级流量优先级动态平衡不同应用程序的需求和带宽可用性，跨多个站点和用户子网络。当将分组QoS特性集与DVB-S2/ACM相结合时，服务提供商可以通过将多个小型网络组合成一个单一的、较大的载波来提高DVB-S2的效率增益。其他配置、服务定价模型和报告功能允许服务提供商将ACM的好处转化为新的创收服务产品

Greater Mobility

更大的机动性

Leading spread spectrum technology enables use of ultra small and phased-array antennas on aircrafts, ships, and land based vehicles. The Evolution X5 is fully enabled for iDirect's Global Network Management System (GNMS) and Automatic Beam Switching (ABS) technology allowing for a seamless network with truly global coverage.

领先的扩频技术使飞机、船舶和陆基车辆能够使用超小型相控阵天线。Evolution X5完全支持iDirect的全球网络管理系统（GNMS）和自动波束交换（ABS）技术，实现真正覆盖全球的无缝网络。

The Evolution X5's high-stability oscillator allows for operating in environments with steep temperature changes, making it ideal for mobile applications like cellular backhaul and maritime.

Evolution X5的高稳定性振荡器允许在温度急剧变化的环境中工作，使其成为移动应用（如蜂窝回程和海上）的理想选择。

Simple, Intuitive Network Management

简单、直观的网络管

The Evolution X5 Series is easily configured, monitored, and controlled through the iVantage™ network management system, a complete suite of software-based tools

Evolution X5系列可以通过iVantage™网络管理系统（一套完整的基于软件的工具）轻松配置、监控和控制





型号	X5		
尺寸	长29.2cm×宽25.2cm×高5.1cm		
重量	1.99Kg		
RX端口参数	端口型号	F型连接器 (阻抗75欧姆)	
	接收频率	950~2150MHz	
	支持LNB供电	14V/19VDC (最大0.5A)	
	支持LNB 22K	22kHz开启/关闭	
TX端口参数	端口型号	F型连接器 (阻抗75欧姆)	
	接收频率	950~1700MHz	
	支持BUC供电	+24V, 最大功率 70W, 请参阅X5安装手册, 了解支持的BUC的完整列表	
	支持BUC参考信号	10MHz/50MHz	
网络配置	发射电平范围	+7dBm~-35 dBm	
	网络拓扑	Rx	Tx
		DVB-S2 or (iNFINITI TDM)	MF-TDMA or (SCPC Return)
	调制方式	QPSK, 8PSK, 16APSK (BPSK, QPSK, 8PSK)	BPSK, QPSK, 8PSK (BPSK, QPSK, 8PSK)
	编码方式	LDPC 1/4 - 8/9(Turbo, 0.495 - 0.879)	TPC*, 0.431 - 0.793 2D 16-State, 1/2 - 6/7 (SCPC Return: 2D 16-State, 1/2 - 6/7)
	最大符号速率	45 Msps(15Msps)	7.5Msps(15Msps)
	最大信息速率	150 Mbps ₁ (21 Mbps ₂)	12.8 Mbps ₃ (24 Mbps ₄)
	最大线路IP数据速率	149 Mbps ₁ (20 Mbps ₂)	11.1 Mbps ₃ (18.2 Mbps ₄)
	最大远程IP数据速率	35 Mbps ₁ (17 Mbps ₂)	10 Mbps ₃ (15.6Mbps ₄)
提示: 16APSK 8/9 FEC QPSK, .793 FEC		QPSK 6/7 FEC QPSK 4/5 FEC	
最大速度	/	支持1/2/4/8/16倍扩频,最高可达7.5 Msps	
网络协议	TCP, UDP, ACL, ICMP, IGMP, RIP Ver2, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, OpenAMIP, cRTP and GRE		
安全性	具有256位AES链路加密安全功能(可选)		
数据接口	RS-232 RJ45 console口, 支持802.1q VLAN协议		
流量工程组	组QoS, QoS(优先级排队和CBWFQ), 严格优先级排队, 基于应用的QoS, 最小CIR, CIR(静态和动态), 速率限制		
其他特征	内置自动上行链路功率、频率和定时控制、认证、扩频, 天线控制接口 (OpenAMIP协议)		
电源输入	100-240 VAC通用输入, 2A, 50-60 Hz		
无线电标准	EN 301-428 v1.3.1-Ku波段系统级规范, EN 301-443 v1.3.1-C波段系统级规范		
安全标准	符合IEC 60950、EN 60950-1、UL 60950-1、CSA C22.2编号60950-1-03		
排放标准	符合EN 55022 B级、FCC第15部分B级、CISPR 22 B级、EN 61000-3-2、EN 61000-3-3		
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电磁兼容/抗扰度标准	符合EN 55024、EN 301-489-1、EN 301-489-12、EN 61000-4-2、EN 61000-4-3、EN 61000-4-4、EN 61000-4-5、EN 61000-4-6、EN 61000-4-11		
认证	符合FCC、CE和RoHS		
工作温度	0°~+50°C (32°至+122°F), 在海平面上, 温度梯度为每分钟1°C. 0°到+45°C (32°到+113°F), 在一万英尺下, 温度梯度为每分钟1°C. ODU功耗<70W (详见X5安装手册)		
工作湿度	90%非冷凝湿度		