The iDirect Series 5000 Satellite Router

Large enterprises, carriers or any high volume users require a solution that can meet all their current communications demands, and scale to meet future needs. The iDirect Series 5000 Satellite Router provides all the functionality to support your most demanding applications and the networking power to support your most bandwidth intensive users.

Developed specifically to support the business critical applications of enterprise customers, the Series 5000 combines a flexible networking platform with the highest TCP/IP throughput in the industry - 18 Mbps downstream, and 4.2 Mbps upstream. This high bandwidth capacity, combined with iDirect's network flexibility, and Quality of Service (QoS) allows the series 5000 to go beyond traditional satellite networking, and operate as an extension of your landline network.

Performance to support all your applications

- Star Capability
- SCPC Capability
- 8 Port 10/100 Managed Ethernet Switch
- Star/Mesh Capability (Optional)
- Embedded 3DES/AES encryption (Optional)

Bandwidth optimization

- D-TDMA – allows 98% payload efficiency
- Data Compression – Provides higher bandwidth up to four times the capacity
- iDirect networks save 40-50% capacity compared to most competitive solutions
- Turbo Product Codes on the forward and return channel for a 1.5 dB power advantage over RSV
- Support for 1.2 Carrier Spacing – delivers 14% savings in bandwidth
- Pure IP-over-the-air transport that is 15% more efficient than most competitive solutions
- Built-in TCP and HTTP Acceleration
- Built-in CIR-on-Demand By Application and true Application-QoS
- MF-TDMA return channel
- Automatic End-to-End Uplink Power Control for higher network availability
- Adaptive Inbound Channel provides industry leading reliability and availability of the network

The iDirect line of remote satellite routers (series 3000, 5000 and 7000) is part of a family of solutions designed to meet the communications challenges of customers anywhere in the world. By providing different levels of functionality within the product lines, while insuring their interoperability, iDirect is uniquely capable of delivering the ideal solution for each customer network, or individual site based on their specific situation or challenges. iDirect's combination of flexibility and scalability allow us to deliver all the functionality of traditional broadband networks, beyond the constraints of the wired world.

Series 5000 Remote Satellite Router

Network Configuration

Network Topology	Star (TDM/TDMA with MF-TDMA), SCPC, Star/Mesh* (Optional)
Symbol Rates	Downstream: 64 ksps up to 11.5 Msps Upstream: 64 ksps up to 2.875 Msps (5.75* Msps)
Modulation	Downstream: QPSK (BPSK*, 8PSK*) Upstream: QPSK (BPSK*)
IP Data Rates	Downstream: 128 kbps – 18 Mbps Upstream: 64 kbps – 4.2 Mbps (8.4* Mbps)
FEC	Downstream: TPC Rate 0.879*, 0.793, 0.533 Upstream: TPC Rate 0.793, 0.66, 0.533 (*Other FEC Rates will be available in the future*)
E_b/N_o	4.2 E_b/N_o for 10^{-9} Quasi Error Free @ 0.533 FEC 4.6 E_b/N_o for 10^{-9} Quasi Error Free @ 0.793 FEC 5.1 E_b/N_o for 10^{-9} Quasi Error Free @ 0.879 FEC 5.4 E_b/N_o for 10^{-9} Quasi Error Free @ 0.66 FEC

Interfaces

SatCom Interfaces	TxIF: Type-F, 950 - 1700 MHz, Composite Power +7dBm / -35dBm RxIF: Type-F, 950 - 1700 MHz, Composite Power -5dBm / -65dBm TVRO: Type-F, 950 - 1700 MHz
Available BUC Power (IFL)	+24V @ 3.2 Amps (Nominal, Typically up to 5W BUC)
Available LNB Power (IFL)	+19.5V (Nominal)
10 Mhz Reference	Available
Data Interfaces	LAN: Single 10/100 and 8-Port 10/100 Switch, 802.1q VLAN RS-232: RJ45 (for GPS or Console connection or Antenna Pointing)
Protocols Supported	TCP, UDP, ICMP, IGMP, RIP Ver2, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, cRTP, ACLs
Security	AES or 3DES Link Encryption (Optional) (Built-in IPSec Support* [*will require Model 1200 at the HQ*])
Traffic Engineering	QoS (CBWFQ), Minimum CIR, CIR (Static and Dynamic), Rate Limiting, Bandwidth on Demand
Other Features	Built-in Automatic Uplink Power, Frequency and Timing Control Adaptive Inbound Channel*

Mechanical/Environmental

Size	W 11.375 in x D 9.5 in x H 2 in (W 28.9 cm x D 24.1 cm x H 5.1 cm)
Weight	10 lbs (Including Power Supply) [4.6 Kg]
Operating Temperature	0^0 to 50^0C ($+32^0$ to $+122^0$F) at Sea Level 0^0 to 45^0C ($+32^0$ to $+113^0$F) at 10000 Feet
Input Voltage	100-240 VAC Universal Input, 50-60 Hz, 2A Max @ 100VAC

* - Planned for future release. Specifications subject to change without notice