

The iDirect Series 3000 Satellite Router

The iDirect series 3000 Satellite Router is specifically designed to address the distinct IP network communications needs of small remote branch offices. The series 3000 supplies all the hardware and software you need to meet all your essential remote broadband requirements.



Optimized for remote internet access, the iDirect series 3000 is an ideal solution for small to medium enterprise customers with basic remote networking needs. Able to deliver broadband access of up to 18 Mbps downstream, and 4.2 Mbps upstream, the 3000 series can support all your IP applications remotely, including VoIP and basic Video.

iDirect's series 3000 Remote Satellite Router is a "single box" solution that includes a satellite modem, IP router, TCP acceleration over satellite, and QoS/prioritization in an easy to deploy, reliable design. The 3000 also offers:

Reduced total cost of ownership

- ◆ Low cost of entry
- ◆ D-TDMA – allows 98% payload efficiency iDirect networks save 40-50% capacity compared to most competitive solutions
- ◆ Turbo Product Codes on both the forward and return channel for a 1.5 dB power advantage over RSV codes
- ◆ 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)

Efficient networking performance

- ◆ Built-in TCP and HTTP Acceleration
- ◆ Built-in CIR-on-Demand By Application and true Application-QoS
- ◆ MF-TDMA return channel
- ◆ Bandwidth allocation with only 0.5 second lag between a request for capacity and its assignment
- ◆ 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, iDirect is uniquely capable of delivering the ideal networking 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.



Network Configuration

Network Topology	Star (TDM/TDMA with MF-TDMA)
Symbol Rates	Downstream: 64 ksps up to 11.5 Msps Upstream: 64 ksps up to 2.875 Msps
Modulation	Downstream: QPSK (BPSK*, 8PSK*) Upstream: QPSK (BPSK*)
IP Data Rates	Downstream: 128 kbps – 18 Mbps Upstream: 64 kbps – 4.2 Mbps
FEC	Downstream: TPC Rate 0.879*, 0.793, 0.533, 0.431* Upstream: TPC Rate 0.793, 0.66, 0.533, 0.431* <i>(Other FEC Rates will be available in the future)</i>
E_b/N_o	3.9 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 4.8 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 Ethernet, 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
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]
Rack Mounting	19" Rack Mountable, 19" Wide x 3.44" High (2U) x 11.5" Deep
Operating Temperature	0° to 50°C (+32° to +122°F) at Sea Level 0° to 45°C (+32° to +113°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