iDirect 3100-NB
Satellite Solution

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.

iDirect has augmented the 3000 series product line to offer the 3100-NB (NarrowBand) satellite solution for lower cost remote IP access and is an ideal solution for small enterprise or SOHO customers with entry level remote networking needs. Able to deliver broadband access of up to 18 Mbps downstream, and 200 Kbps upstream, the 3100-NB series can support all your primary IP data and VoIP applications.

iDirect's series 3100-NB Solution includes a satellite IP router, antenna and radio equipment.

	3100-NB-0.75-Ku1	3100-NB-0.75-Ku2	3100-NB-1.2-Ku1	3100-NB-1.2-Ku2
IDU	3100-NB	3100-NB	3100-NB	3100-NB
Antenna	0.75m Ku-band X-Pole	0.75m Ku-band X-Pole	1.2m Ku-band X-Pole	1.2m Ku-band X-Pole
BUC	1 Watt Ku-band	2 Watt Ku-band	1 Watt Ku-band	2 Watt Ku-band
LNB	+-900 kHz DRO	+-900 kHz DRO	+-900 kHz DRO	+-900 kHz DRO
Note: Please refer to *iDirect 3000 Series Installation and Safety Manual* for IFL cabling specifications. Antenna's max BUC 2 Watts.				

The 3100-NB also offers:

Reduced total cost of ownership
✦ Low cost of entry
✦ D-TDMA – allows 98% payload efficiency
✦ 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

Efficient networking performance
✦ Built-in TCP and HTTP Acceleration
✦ Built-in QoS/prioritization
✦ 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.

Series 3100-NB Remote Satellite Router

Network Configuration

Network Topology	Star (TDM/TDMA with MF-TDMA)

Modulation	Downstream:	QPSK
	Upstream:	QPSK

IP Data Rates	Downstream:	128 kbps – 18 Mbps
	Upstream:	64 kbps – 200 Kbps

FEC	Downstream: TPC Rate 0.879*, 0.793, 0.533, 0.431*
	Upstream:　　 TPC Rate 0.793, 0.66, 0.533, 0.431*
	(*Other FEC Rates will be available in the future*)

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
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	0^0 to 50^0C (+32^0 to +122^0F) at Sea Level
	0^0 to 45^0C (+32^0 to +113^0F) 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