

iNFINITI 7000 Series Satellite Router

Delivering Highly Secure, Reliable and Fast IP Broadband Connectivity

Developed to meet the most demanding user requirements for security and performance, the 7000 series satellite router is ideal for high-speed two-way IP traffic supporting the communications, command, and control requirements of today's highly mobile military forces and government agencies.

The iNFINITI 7000 Series uses the high performance TDM on the outbound and highly efficient deterministic MF-TDMA technology on the inbound, delivering speeds up to 20 Mbps on the outbound and up to 6.5 Mbps on the inbound. Supporting multiple topologies such as star, mesh, and hybrid networks as well as point-to-point SCPC enable maximum flexibility when it comes to the integration of a variety of applications into a single platform.

High Security

Compliant with the highest military security requirements the 7000 Series features embedded AES encryption and TRANSEC with advanced FIPS 140-2 certification, X.509 digital certificate encryption, and automatic over the air key exchange.

Superior Quality of Service

Flexible Quality of Service and prioritization capabilities enable network operators to not only prioritize traffic and applications over their networks but with iDirect's state-of-the-art Group QoS they can segregate bandwidth by groups of remotes, by multiple sub-networks, and by multiple mission-critical applications.

Increased Bandwidth Efficiencies and Network Availability

Supporting a wide variety of the most advanced turbo product codes (TPC) FECs, the 7000 Series remote offers efficient error correction code techniques and provides a greater flexibility for network design and optimization. Furthermore, iDirect's patented, deterministic MF-TDMA achieves 98% payload efficiency maximizing throughput. Increased network availability is also achieved with built-in automatic end-to-end uplink power control providing effective, automatic, and safe power management to compensate for uplink rain and atmospheric attenuation.

Simple Network Management

Operating with all iDirect hubs, the 7000 Series remotes can be easily configured, monitored, and controlled through the iVantage™ Network Management System. This easy-to-operate and very intuitive NMS has been the industry's most renowned and robust network management system, proven and perfected for nearly a decade.



Features

- ◆ Multiple topologies: Star, Mesh, SCPC
- ◆ High data rates 20 Mbps outbound, 6.5 Mbps return
- ◆ MF-TDMA return channel achieving 98% payload efficiency
- ◆ Advanced QoS and prioritization
- ◆ Unique FIPS 140-2 certified, TRANSEC security with AES encryption
- ◆ Built-in 8-port Ethernet switch
- ◆ Optional +48 VDC output supporting higher BUC power

iNFINITI 7000 Series Satellite Router Model 7350



Network Configuration

| | | | |
|--------------------------------|---|-----------------------------------|---|
| Network Topology | Star (TDM/MF-TDMA), SCPC and Mesh | | |
| Modulation | Downstream: BPSK, QPSK, 8PSK Upstream: BPSK, QPSK, 8PSK | | |
| Maximum Rates Supported | Max Rate | Downstream (TDM) | Upstream (D-TDMA) |
| | Symbol rate | Up to 15 Msps (BPSK, .793 FEC) | Up to 7 Msps (QPSK, .793 FEC, unlimited NMS) |
| | Info rate | Up to 21 Mbps (QPSK, .879 FEC) | Up to 11 Mbps (QPSK, .793 FEC, unlimited NMS) |
| | IP data rate | Up to 20 Mbps (QPSK, .879 FEC) | Up to 6.5 Mbps (QPSK, .793 FEC, unlimited NMS) |
| | For more information on the maximum data rates please refer to the release notes of iDS 8.0.1 | | |
| FEC | For full list please refer to the latest iDirect Link Budget Analysis Guide | | |
| Eb/No | For full list please refer to the latest iDirect Link Budget Analysis Guide | | |
| Hub Requirements | M1D1, M0D1 Line card or M1D1-T for TRANSEC | | |

Interfaces

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| 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 or +48V (Optional +48V supports up to 16W Ku-band or 20W C-band) |
| Available LNB Power (IFL) | +19.5V (Nominal) |
| 10 MHz Reference | Software controllable on Tx and Rx IF ports |
| 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, ACL, ICMP, IGMP, RIP Ver2, BGP*, Static Routes, NAT, DHCP, DHCP Helper, Local DNS Caching, cRTP and GRE |
| Security | AES Link Encryption (256-bit), TRANSEC with FIPS 140-2 certification, x.509 digital certificates authentication, Automatic Key Management |
| Traffic Engineering | Group QoS, QoS (Priority Queuing and CBWFQ), Strict Priority Queuing, Application Based QoS, Minimum CIR, CIR (Static and Dynamic), Rate Limiting |
| Other Features | Built-in Automatic Uplink Power, Frequency and Timing Control, Authentication, Antenna Control Interface (OpenAMIP) |

Mechanical/Environmental

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| Size | W 17.5 in x D16.0 in x H1.75 in (W 44.45 cm x D 40.6 cm x H 4.4 cm) |
| Weight | 11.2lbs (5.1 Kg) |
| Operating Temperature | -10° to +60°C (14° to +140°F) at Sea Level -10° to +55°C (14° to +131°F) at 10000 feet (3048m) |
| Humidity | Max 90% non-condensing humidity |
| Input Voltage | 100–240 VAC Universal Input, 50–60 Hz, 4A max at 90 VAC, 2A max at 240 VAC |
| Radio Standards | EN 301-428 v1.3.1 — Ku-Band System Level Specification EN 301-443 v1.3.1 — C-Band System Level Specification |
| Safety Standards | Complies with IEC 60950, EN 60950-1, UL 60950-1, CSA C22.2 No.60950-1-03 |
| Emission Standard | Complies with EN 55022 Class B, FCC Part 15 Class B, CISPR 22 Class B, EN 61000-3-2, EN 61000-3-3 |
| EMC/Immunity Standard | Complies with 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 |
| Certification | FCC, CE and RoHS compliant |

*Future release