Series 15000 Universal Satellite Hub

The ideal hub for service providers operating multiple high performance IP broadband networks

The Series 15000 Universal Satellite Hub combines scalability, functionality and flexibility benefits, enabling network operators and military service providers to deliver the highest quality connectivity regardless of bandwidth requirement, satellite band or network topology.

Smart Design With Great Scalability

The chassis houses up to 20 line cards, providing a very modular approach to growth. Operators can start off with just a few remotes in one network and easily scale to several thousand remotes on multiple networks. Equipped with 5IF interfaces accessing Ku, C-or Ka-Band on up to 5 satellites, the Series 15000 brings a new level of scalability designed for growth and performance.

Maximum Flexibility

The Series 15000 Universal Satellite Hub is highly flexible, supporting the entire array of topologies and access schemes including star, mesh, iSCPC, deterministic MF-TDMA and iNFINITI TDM or DVB-S2/ACM, all in the same chassis. Bandwidth can be increased on the fly via additional line cards from 64 kbps to 138 Mbps on the outbound and 64 kbps to 10 Mbps on the inbound.

With iDirect's most advanced, built-in Group QoS functionality, network operators can increase quality of service levels, bandwidth optimization, and traffic prioritization for complete flexibility when managing the end-customers SLA's.

Greater Efficiencies Through Bandwidth Optimization

The advantage of DVB-S2/ACM as the most bandwidth efficient transmission scheme, coupled with the ability to deploy iNFINITI TDM for smaller networks makes the Series 15000 Universal Satellite Hub fundamentally more efficient for any network requirement whether voice, data and video applications, business continuity networks, cellular backhauling or military-grade communications.

High Reliability

The Series 15000 Universal Satellite Hub provides high availability by integrating redundancy into all the critical components of the chassis, including auto switchover, timing group synchronization and fault isolation for geographic redundancy, and hub daisy chaining for easy network expansion.

Simple, Intuitive Network Management

The Series 15000 Universal Satellite Hub and integrated line cards are easily configured, monitored, and controlled through the iVantage™ network management system, iDirect's complete suite of software-based tools for configuring, monitoring and controlling networks from one location.

This powerful NMS also enables virtual network operations, reducing initial capital expenses by leasing hub chassis space to operators who want to view and manage their own networks of line cards and remotes while maintaining privacy and absolute traffic segregation from other network operators sharing the same hub.

Features

- Compact, 11U, 19" rack mountable chassis with 20 line card slots enabling multiple in-and outbound networks
- 5IF interface supporting multiple bands and transponders on up to five satellites
- Supports star, mesh and iSCPC
- Supports DVB-S2/ACM and iNFINITI on the outbound, D-TDMA on the inbound
- Gigabit Ethernet LAN interfaces supporting high carrier symbol rates
- High level of redundancy (hub daisy chaining and geographic redundancy)
- Enables Virtual Network Operator management reducing capital investments and increasing ROI

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Hub Chassis Specifications

IF Module	5IF
Line Cards Slots	20
SatCom Range	Works with any iNFINITI or Evolution line card Please refer to line card specification sheets for satcom ranges
Remote Requirements	Works with any iNFINITI or Evolution remote

Power Specifications

Input Voltage Range	100–240 VAC
Frequency	47–63 Hz
Main Power Module	800 Watt, 1+1 redundancy, hot-swappable
BTU	2732 BTU/hr.

Mechanical and Environmental

Size	W 17.5"x D 24"x H 19" (11U) (W 44.45 cm x D 60.96 cm x H 48.3 cm)
Weight	Empty 100 lbs (45.5 kg), Loaded 125 lbs (56.8 kg)
Operating Temperature and Humidity	0º to 45º C (+32º to +113º F), 0–95% non condensing
Fans	Three fans, 2+1 redundant, hot-swappable
LEDs	Line card status, power status, fan status
Reference Clock Module	10 MHz, 1+1 redundant, with auto fail-over, hot-swappable, external GPS Ref. capable
Radio Standards	Complies with EN 301-428 v1.3.1 - Ku-Band System Level Specifications Complies with EN 301-443 v1.3.1 - C-Band System Level Specifications
Safety Standards	Complies with IEC 60950, EN 60950-1, UL 60950-1, CSA C22.2 No.60950-1-03
Emission Standard	Complies with EN 61000-3-2, EN 61000-3-3, EN 55022 Class A, FCC Part 15 Class A, CISPR 22 Class A
Immunity Standard	Complies with EN 55024, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11, EN 301-489-1, EN 301-489-12
Certification	FCC, CE, and RoHS Compliant

Additional Hub Components

Protocol Processor	2 servers, 1+1 redundant
NMS servers	2 servers, 1+1 redundant
LAN Switch	48 port Gigabit Ethernet LAN switch
KVM Switch	8-Port
Networking Software	iDS or iDX with iVantage NMS

Line Card Specifications (optional)

Max. IP Data Rates Per Line Card	Downstream: up to 20 Mbps (iNFINITI) or up to 140 Mbps (Evolution) Upstream: up to 10 Mbps (QPSK, .793 FEC, unlimited NMS under optimal conditions)
Network Access Scheme	iNFINITI TDM or DVB-S2/ACM on the downstream and deterministic MF-TDMA (on the upstream)
Topologies	Star, Mesh, iSCPC

For more details, please consult the line card specification sheets