Series 15100 Universal Satellite Hub

The Series 15100 Universal Satellite Hub is ideal for service providers operating multiple high performance IP broadband networks. More powerful and future-ready, it incorporates the latest advances in performance, enabling network operators and military service providers to deliver the highest quality connectivity regardless of bandwidth requirement.

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 5 intermediate frequency (IF) interfaces accessing Ku, C-or Ka-Band on up to 5 satellites, the Series 15100 brings a new level of scalability designed for growth and performance.

Maximum Flexibility and Greater Bandwidth Efficiencies

The Series 15100 Universal Satellite Hub is highly flexible, supporting an array of access schemes including 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' SLAs.

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 15100 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 15100 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 15100 Universal Satellite Hub and integrated line cards are easily configured, monitored, and controlled through the iVantage™ and SatManage network management systems, iDirect's complete suite of software-based tools for configuring, monitoring and controlling networks from one location.

iVantage reduces initial capital expenses for Virtual Network Operators (VNOs) 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 others sharing the same hub.

SatManage is a powerful extension of iVantage through automation, monitoring and integration of hybrid networks and NOC based applications. Featuring a powerful range of Web-based tools, SatManage enables service providers to improve overall service quality and network operations.

Features

- Compact, 11U, 19" rack mountable chassis with 20 line card slots enabling multiple in- and outbound networks
- 5 IF interfaces supporting multiple bands and transponders on up to five satellites
- Supports DVB-S2/ACM and iNFINITI on the outbound, D-TDMA on the inbound
- 40 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	5 IF
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	200–240 VAC Single Phase; 10 Amps max.
Frequency	47–63 Hz
Main Power Module	1500 Watt, 1+1 redundancy, hot-swappable
Heat Dissipation	5118 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 110.4 lbs (50.1 kg), Loaded - Varies
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	Minimum of 2 servers, 1+1 redundant
NMS servers	Minimum of 2 servers, 1+1 redundant
LAN Switch	2 switches, 48 port Gigabit Ethernet LAN switch
KVM Switch	8-Port
Networking Software	iDX 2.0 and above with iVantage NMS

Line Card Specifications (optional)

Max. IP Data Rates Per Line Card	Downstream: up to 20 Mbps (iNFINITI) or up to 138 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)
	For more details, please consult the line card specification sheets