

# 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 requirements.

## 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 C, Ku, 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 ATDMA, SCPC Return, DVB-S2/DVB-S2X (ACM), all in the same chassis. Bandwidth can be increased on the fly via additional line cards.

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/ DVB-S2X (ACM) as the most bandwidth efficient transmission scheme 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.

## Simple, Intuitive Network Management

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



## 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/DVB-S2X (ACM) on the outbound, ATDMA or SCPC Return 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

**Series 15100**  
**Universal Satellite Hub**  
**Model 15152**



**Hub Chassis Specifications**

Number of IF Modules	5 IF Tx/Rx Interfaces
Number of Linecard Slots	20 slots, 4 per IF interface
Linecards Supported	Works with any Evolution® or iDirect Velocity™ line card
Remotes Supported	Works with any Evolution or iDirect Velocity remote

**Power Specifications**

Input Voltage Range	200–240 VAC Single Phase; 10 Amps max.
Power Frequency	50/60 Hz
Main Power Module	1500 Watt, 1+1 redundancy, hot-swappable
Heat Dissipation	5118 BTU/hr.

**RF Specifications**

IF Frequency Range	950–2000 MHz
IF Interface	Type F
Impedance	75 Ω
IF Insertion Loss	9 dB +/- 2 dB

**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	0° to 45° C (+32° to +113° 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/PPS, 1+1 redundant, with auto fail-over, hot-swappable, external GPS (10 MHz/PPS) 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 Complies with EN 301-459 v1.4.1 - Ka-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 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, Velocity 1.1 and above with iDirect Pulse

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