Intelligent Hub and Line Card System

ST Engineering

The Intelligent Hub (iHub) and Line Card system provides the high performance needed for today's IP broadband networks in a high density package that provides market leading throughput and reduces total cost of ownership. With iHub, operators can meet the need for high quality connectivity today and be assured of capacity and scale as bandwidth demand increases.

Best-in-Class Density

The iHub supports up to 12 line cards within a compact 3RU chassis. When deployed with 4 transmit and 8 receive line cards as a common configuration, the iHub will support an unprecedented level of aggregate bandwidth. The iHub's embedded 10/40 GbE backplane and 10 GbE external interfaces minimize the need for additional switch infrastructure when deployed with the iGateway compute platform.

Best-in-Class Performance

The ILC-T transmit line cards will support multiple DVB-S2X forward carriers up to 500 MHz /475Msps* per carrier. The ILC-R receive line cards will support multi-carrier Adaptive TDMA returns at aggregate rates of up to 120Msps, with future support for DVB-S2X returns.

Flexible Deployment Architectures

The iHub's compact design suits it well for a variety of deployment architectures. For large HTS gateways, multiple iHub chassis can be deployed to support hundreds of high-capacity beams within a single equipment rack. For emerging distributed HTS gateways, a single iHub can be deployed within a standard IT closet. This flexible approach enables the iHub to be ideally suited for both large GEO satellites and emerging LEO/MEO satellites.

Markets

Enterprise
SME
Cellular Backhaul
Government / Defense
Offshore and Maritime
Aero
Land Mobility

Main Advantages:

- Compact, 3RU, 19" rack mountable chassis with twelve line card slots enables multiple in-and outbound networks
- Simultaneous support for DVB-S2 and DVB-S2X
- Redundant 10GbE SFP+ LAN interfaces aggregate traffic to minimize cabling and switching costs
- Fully redundant and hotswappable data, control, timing, cooling, and power modules ensure high availability
- Standards-based chassis architecture ensures flexibility and opportunities for future upgrades and enhancements

VELOCITY

powered by
Newtec iDIRECT

Front
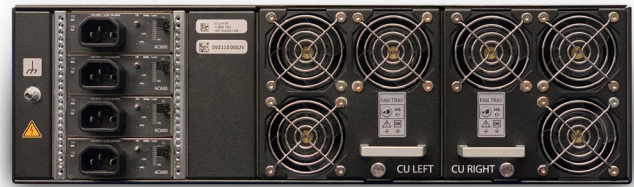
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Hub Chassis Specifications

Number of Line Cards	12
Line Cards & Remotes	Works with ILC line cards and Velocity modems (Velocity 3.3.1 software or above)

Hub Power Specifications

Input Voltage Range	110-265 VAC, Single Phase, 4.85 Amps max per module
Power Frequency	50 – 60Hz
Power Consumption	1800 Watt, 3+1 redundancy, hot-swappable

Hub Mechanical and Environmental

Size	W 19 in. (48.3 cm) x D 14.2 in. (36.1 cm) x H 5.25 in. (13.3 cm)
Weight	Empty 37.8 lbs (17 kg), Loaded – Varies
Temperature	Operating: -5º to +45ºC (+23º to +113ºF) Storage: -40º to +70º C (-40º to +158ºF)
Humidity	5 – 90%, non-condensing
Management Module	1 + 1 redundant with auto fail-over, hot-swappable, with dual 10GbE SFP+
Fans	Two (2) fan modules with six (6) fans each, hot-swappable
Reference Clock Module	PPS, 1+1 redundant, with auto fail-over, hot-swappable

RF Specifications

IF Frequency Range	950 - 2450 MHz
IF Interface	Type F
Impedence	75 Ω
IF Insertion Loss	9 dB +/- 2 dB

* Maximum supported symbol rate is platform and software release dependent