HSN8100NA PRODUCT OVERVIEW

HSN8100NA is a member of the cost-effective and highly scalable flexi**Haul**™ product line. HSN8100NA is generally deployed at a remote location near to RRHs or RUs serving as a remote terminal for HSN8500NA or HSN8300NA aggregator.

Like the other systems in the flexiHaul product line, HSN8100NA has a flexible, pay-as-you-grow architecture with plug-in service cards, thereby allowing the customer the ability to choose any combination of supported services as well as facilitate easy operation and maintenance. This 2U shelf includes two service slots used to transport service via CWDM or DWDM based on transponder type over dark fiber.

HSN8100NA supports point to point, linear chain, point to multi-point and ring with ring protection. In addition, HSN8100NA is efficiently managed by the HSN8800 EMS, which provides the necessary tools for both traffic provisioning and overall system monitoring.

HSN8100NA

PRIMARY APPLICATIONS

- Fronthaul transport at 4G and 5G cell sites
- Ethernet midhaul and backhaul integrated solution
- Wavelength aggregation

ARCHITECTURE

- Compact design
- Modular architecture
- Optionally use the HSN7200NA passive mux shelf to expand fiber fan-out to any HSN8000NA series chassis

OAM and MAINTAINABILITY

- Alarms, statistics, performance monitoring
- Remote management via optical supervisory channel (OSC)
- Local / remote logical loopbacks
- Connectivity, signal level, delay, distance measurement

KEY FEATURES

- Multi-protocol support
  - CPRI (option 2, 3, 4, 5, 7), OBSAI 3G/6G
  - eCPRI/ROE/xRAN up to 25Gbps
  - GbE, 10GbE, 25GbE
- System latency per transponder without FEC
  - Less than 1.4 μs
- Jitter
  - Less than ± 0.35 UI
- Ring protection switching less than 50 ms
  - Delay equalization for ring protection
- FEC (Forward Error Correction) support
- Flexible topology architecture
  - Point to point, linear chain, ring, point to multi-point, BiDi linear
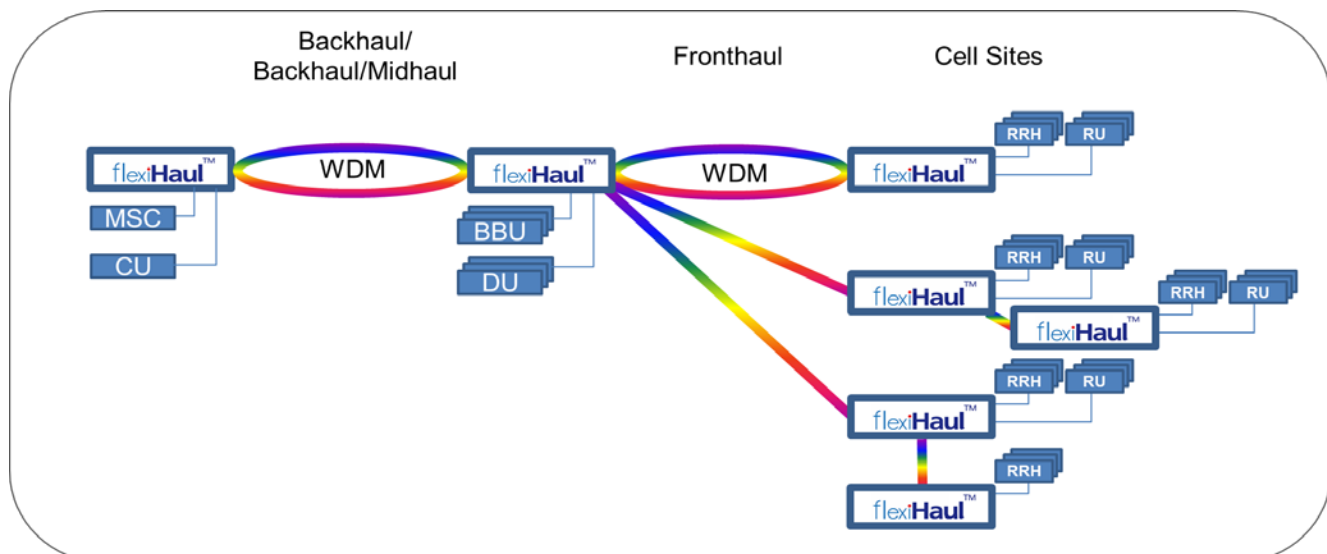
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HSN8100NA SYSTEM SPECIFICATION

System Capacity

Service slots	2
Channel capacity	Up to 8 channels
CWDM/DWDM	ITU-T G.694.1, ITU-T G.694.2
Transmission distance	Up to 40 km

Channel Interface

Service interface	CPRI (option 2, 3, 4, 5, 7), OBSAI 3G/6G, eCPRI/ROE/xRAN up to 25Gbps, GbE, 10GbE, 25GbE
Optical connector type	LC / UPC

Transponder Options

CPRI	4 ports CPRI (option 2, 3, 4, 5, 7),
OBSAI	3G/6G, GbE
Ethernet	4 ports GbE, 10GbE
eCPRI/ROE/xRAN/Ethernet	3 ports eCPRI/ROE/xRAN @ 25G, 25GbE

Configurations/Power/Environmental

Topology	Point to point, linear chain, point to multi-point, ring
Power	–48V DC(-40~ -56V DC) +24V DC(+20 ~ +28V DC)
Environmental	Operating: - 40 °C ~ + 65 °C, Storage: - 40 °C ~ +70 °C Humidity : Up to 85% (non-condensing)

Protection/Switching

Switching time	<50ms
Operating mode	Automatic, manual
Configuration	Non-revertive switching, revertive switching

OAM

Fault control	Alarm severity : Critical, Major, Minor,
Classification level	Warning
Performance monitoring	Unit, Module, Port
Test function	15 min, 1 day Local / remote loopback Delay measurement
Visual LED Indicators	BERT System activity, system failure, Alarms status (Critical, Major, Minor)
Environmental Alarms	7 Housekeeping inputs

Network Management

Operation	EMS (server, client), Local Craft Terminal
Protocols	SNMPv2/ v3
Physical interface	10 / 100/ 1000 Base-TX

Physical Characteristics

For HSN8100NA Chassis

Dimension	88(H) X 483(W) X 300(D) mm
Weight	6.75kg
Power consumption	125W (Fully loaded)
Mounting type	19" or 23" rack mountable

For HSN7200NA Passive Mux Shelf

Dimension	88(H) X 440(W) X 243.5(D) mm
Weight	3.5kg (only shelf)
Mounting type	19" or 23" rack mountable

Supported Service Modules

RoE3J (3-Port 25G transponder)

Type	eCPRI/ROE/xRAN/25GbE
Client/WDM ports	3 / 3
Line monitoring	LOS
Performance monitoring	SFP/SFP+ DDM
eCPRI delay (one-way)	< 1.4 μs

ETU4G (4-Port Ethernet transponder)

Type	eCPRI/ROE/xRAN/10GbE/GbE
Client/WDM ports	4 / 4
Ethernet monitoring	LOS, LF/RF
Performance monitoring	SFP/SFP+ DDM, FCS, Frame counter
Ethernet delay (one-way)	2.0 ~ 13.5 μs (varies based on frame size)

OTU4G (4-Port enhanced transponder)

Type	CPRI 3/4/5/7 x4 ports or CPRI 3/4/5/7 x3 ports +GbE x1 port
Client/WDM ports	4 / 4
CPRI/Line monitoring	LOS, LOF, CV, BIP, AIS, RDI
Performance monitoring	SFP/SFP+ DDM, BIP, ES, SES, UAS
FEC	Support
CPRI delay (one-way)	< 0.5 μs(without FEC)
Profile	Low latency profile Standard OAM profile High link budget profile (FEC enabled)
Delay Equalization	Support

TTU4G (4-Port basic transponder)

Type	CPRI 3/4/5/7 x4 ports or CPRI 3/4/5/7 x3 ports + GbE x1 port
Client/WDM ports	4 / 4
Line monitoring	LOS
Performance monitoring	SFP/SFP+ DDM
CPRI delay (one-way)	< 0.5 μs

Main Control Unit (MCU)

Type	Main Control Process Unit
Console port	RS-232C x1 port
Management port	100 / 1000 Base-TX x2 ports (WAN)
Local Management Port(LMP)	100 / 1000 Base-TX x2 ports (LAN)
LEDs	System activity, system failure System alarm LED : CRI/MAJ/MIN/ACO WAN/LAN status: Act, Link

Data Communication Unit (DCU/DCUE)

Type	Data Communication Unit
OSC ports	6 ports / 8 ports
LEDs	Unit status, Link status

Regulatory & Compliance

FCC Part 15 Class A , CE Mark , UL 60950-1, IEC 60950-1
IC (Canada EMI), CB , NEBS Level 3
ATT-TP-76200, Issue19,June 2014
VZ TPR 9205, Issue 5, October 2011

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