

HSN8500NA PRODUCT OVERVIEW

HSN8500NA is a member of the cost-effective and highly scalable flexiHaulTM product line. This system is generally deployed in central offices or BBU hotels. Like the other systems in the flexiHaul product line, HSN8500NA 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 8U shelf includes twenty service slots used to transport different fronthaul services via CWDM or DWDM based on transponder type over dark fiber.

HSN8500NA serves as an aggregator for the full flexiHaul line-up where the following serve as remote terminals : HSN8300NA, and HSN8100NA.

HSN8500NA supports point to point, linear chain, point to multi-point and ring with ring protection. In addition, HSN8500NA is efficiently managed by the HSN8800 EMS, which provides the necessary tools for both traffic provisioning and overall system monitoring.



HSN8500NA

PRIMARY APPLICATIONS

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

ARCHITECTURE

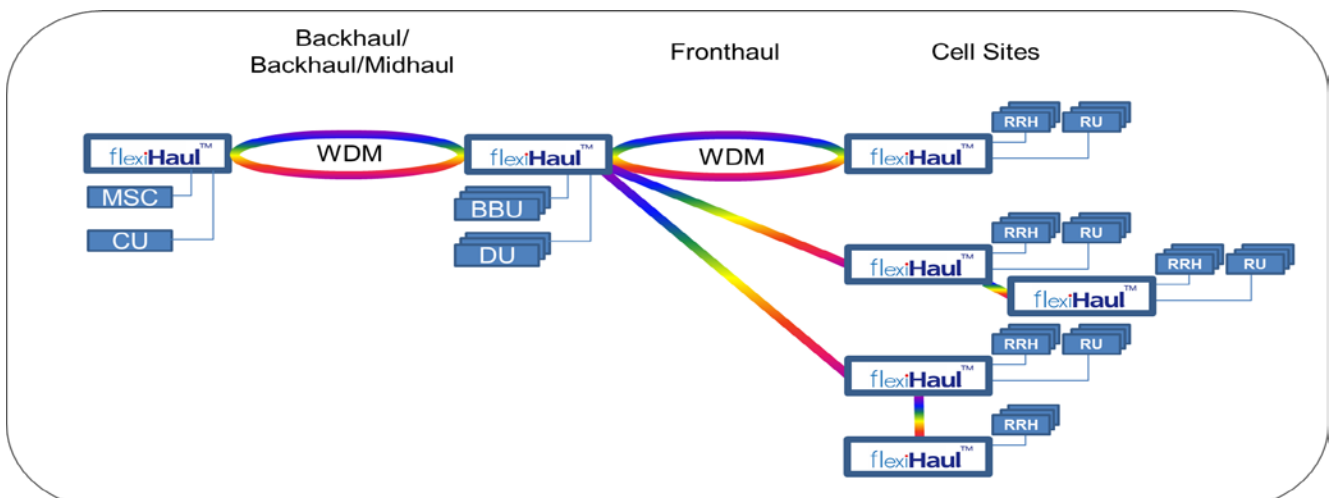
- Compact design
- Modular architecture
- Optionally use the HSN7200NA passive mux shelf to expand fiber fan-out to any HSN8000NA series chassis

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 μ s
- 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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HSN8500NA SYSTEM SPECIFICATION

System Capacity

Service slots	20
Chassis capacity	Up to 80 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, BiDi linear
Power	-48V DC(-40~ -56V DC) +24V DC(+20 ~ +28V DC)
Environmental	Operating: - 5 °C ~ + 55 °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, Warning
Classification level	Unit, Module, Port
Performance monitoring	15 min, 1 day
Test function	Local / remote loopback Delay measurement
Visual LED Indicators	BERT System activity, system failure, ACO, Alarms status (Critical, Major, Minor)
Environmental and Office Alarms	7 Housekeeping inputs 6 Office Alarm outputs

Network Management

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

Physical Characteristics

For HSN8500NA Chassis

Dimension	355(H) X 481(W) X 300(D) mm
Weight	27.05kg
Power consumption	680W (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 μ s

ETU4G (4-Port Ethernet transponder)

Type	eCPRI/ROE/xRAN/10GbE/GbE x4
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 μ s (depends 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 Support
FEC	< 0.5 μ s(without FEC)
CPRI delay (one-way)	Low latency profile
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 μ s

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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