HSN8100NA is a member of the cost-effective and highly scalable flexiHaul 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.

**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

**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
- **CWDI/DWDI**: 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)
- **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, Unit, Module, Port
- **Performance monitoring**:
  - Test function: 15 min, 1 day
  - Delay measurement: Local / remote loopback
- **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
- **CPRILine 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**: CR/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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Manufacturing and support proudly provided by Fujitsu Network Communications, Richardson Texas
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