Coriant

DATASHEET

6350 Switch Node

A High Capacity MSPP and WDM Feeder

The Coriant 6350 Switch Node is a high capacity Multi-Service Provisioning Platform (MSPP) designed for Metro/Core networks. TDM and data services are mapped and multiplexed into SDH and OTN, and carried over the optical transport network. Also, 10G transponders are supported for transparent transport of 10G services (Ethernet, SDH or OTN) over an OTU2 line signal.

APPLICATIONS

The 6350 Switch Node is often located at the edge of metro/core networks. Ethernet switching and Lower Order grooming capabilities ensure that traffic resources are utilized efficiently when carried over the optical transport network. Backhauling and offloading IP connectivity from the edge to the IP core is another application for the 6350 Switch Node. Easily scalable bandwidth and low latency are key features when Ethernet is mapped into SDH/OTN, enabling real time data services to be carried over long distances.

With the high number of 10G ports, the 6350 Switch Node is an efficient feeder that can feed multiple 10G rings and acts as an efficient feeder to WDM systems where line interfaces are carried over same fiber pairs in individual WDM wavelengths. Services are either carried transparently using the transponder modules or multiplexed into wavelength specific 10G STM-64/OTU2 signals. In combination with other MSPP and WDM products from the Coriant 6300 Series, the 6350 Switch Node typically acts as an aggregation node collecting traffic from a high number of 6325 Edge Nodes and 6335 Switch Nodes that are either customer-located or deployed in access networks.

HIGH AVAILABILITY AND FULL REDUNDANCY

The 6350 Switch Node is designed as a carrier class product with a completely redundant architecture ensuring high availability. Core modules as well as traffic interfaces are all equipment protected or protected utilizing standard optical network protection schemes.

FLEXIBLE, MODULAR DESIGN

The product has a modular design with 20 interface slots that can be equipped with a range of traffic modules: electrical or optical, data or TDM services to be multiplexed in the centralized cross-connection matrices or carried as transparent signals. Acting as a Multiple Add/Drop Multiplexer (MADM), the node handles all services in a fully non-blocking cross-connection matrix with a capacity of 400 Gbps. The product also supports up to 40 x STM-64 or a combination of 160 x STM-16/4/1 interfaces.

Ethernet services are either mapped directly into SDH or handled in the Layer 2 Ethernet switch before being mapped into SDH. The Ethernet switching includes hard quality of service (QoS) with guaranteed services end-to-end with MPLS switching enabled. QoS using VLAN switching is another option. All optical interfaces are realized using pluggable or tunable optics. This offers high flexibility as the same interface module can be equipped with a range of pluggable transceivers for different applications: short range, long range, bi-directional over single fiber, CWDM or DWDM.

BENEFITS OF CORIANT'S 6350 SWITCH NODE

- Provide **high capacity MSPP** for Metro/Core networks
- Carry real time data services **efficiently over long distances**
- **Offer high availability** with fully redundant architecture
- Leverage a **flexible, modular design**
- **Reduce operational expenses** with intelligent network management

The Coriant 6350 Switch Node

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TECHNICAL SPECIFICATIONS

Feature Summary
- High capacity Multi-Service Provisioning Platform and Transponder subrack
- Carrier-class product based on fully redundant architecture
- Next Generation SDH with advanced Ethernet Layer 2 Switching capabilities

Node Types
- MADM SDH node combining TDM, Data and WDM in the same node
- 10G Transponder subrack for transparent mapping over WDM
- SDH / 10G Transponder hybrid nodes

Interfaces

Optical SDH/OTN interfaces
- STM-1, STM-4, STM-16, STM-64/OTU2, bi-directional-and single fiber, CWDM and DWDM according to ITU-T G.709, G.957, G959.1, G.691, G.694.1, G.694.2, G.995 and G.798

Electrical SDH interfaces
- STM-1 according to ITU-T G.703

Ethernet interfaces
- FE, GbE and 10GbE, bi-directional single fiber, CWDM and DWDM according to IEEE 802.3ae, 802.3ah, and ITU-T , G.694.1, G.694.2, G.995

Ethernet services
- Ethernet Private Lines (EPL), Ethernet Virtual Private Lines (EVPL) and Ethernet Local Area Networks (E-LAN) in accordance with MEF (MEF-9, MEF-14 certified)

Layer 3 agnostics
- IP DSCP aware QoS
- IGMP v1, v2 and v3 Snooping according to IETF RFC3376

Layer 2 – Ethernet
- IEEE 802.3, IEEE 802.1D (MAC switching), IEEE 802.1Q/1p (priority bit), IEEE 802.1ad (Q-in-Q), IEEE 802.3ah (Ethernet Link OAM), IEEE 802.3ad (Link Aggregation), IEEE 802.1s (MSTP), and IEEE 802.1w (RSTP)

Layer 2 – T-MPLS
- T-MPLS in accordance with ITU-T G.8110.1 (Architecture), ITU-T G.8112 (Interfaces), ITU-T G.8121 (Functional blocks), ITU-T Y.1711 (MPLS OAM), ITU-T Y.1720 (1:1 LSP Protection)
- Ethernet pseudo wire support (PWE3)

Layer 1
- Encapsulation according to ITU-T G.7041 (GFP mapping into SDH), Link Fault Pass-Through
- LCAS according to ITU-T G.7042

Connectivity

Cross-connect levels
- VC-12, VC-3 and VC-4

Cross-connect size
- 2560 ports 4/4 (400G) switch matrix
- 512 ports 4/3/1 (80G) switch matrix

Multiplexing specification
- ITU-T G.707 and ETSI ETS 300 147

Protection

Network protection
- SNC according to EN 300 417-4-1
- MSP 1+1 according to ITU-T G.841
- Two-fibre MS-SPRing according to ITU-T G.841

Equipment protection
- 1:n protection of STM-1 electrical
- 1+1 protection of the cross-connect and synchronization function
- 1+1 protection of power supply filters

Synchronization

Synchronization sources
- STM-N interfaces (T1)
- 2 MHz/2 Mbps station clock ports (T3)

Synchronization outputs
- 2 MHz/2 Mbps station clock ports (T4)

Synchronization management
- SSM support according to EN 300 417-6-1

Performance monitoring
- According to ITU-T G.784

Power Specifications

System power supply
- 2 inputs at -48V with 1+1 redundancy
- Operation range: -40.5V to -72V DC

Environmental Conditions

Environmental specifications
- According to ETS 300 019-1-3 class 3.2

EMC
- According to ETS 300 386-1

Safety
- According to 60950-1

Dimensions
- Subrack dimensions are 500 x 280 x 950 mm (WxDxH)

Management
- 6300 Network Manager
- 8000 Intelligent Network Manager

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