hiT 7300
High Capacity Optical Transport Platform

The Coriant hiT 7300 is a proven, flexible and cost-efficient 96-channel Packet Optical Transport platform that is optimized for high capacity transport in multi-haul networks. The system combines the greatest level of optical layer performance and flexibility with the most simple, scalable and efficient grooming capabilities to provide a superior transport solution.

EASILY REDUCE CAPEX AND OPEX BASED ON OPTICAL REGENERATION

Perhaps the most costly aspect of long distance transport is the need to regenerate optical signals. Regeneration results in both capital expenses for the equipment as well as operational expenses for installation, space, and power at the regeneration location. The hiT 7300 uses a combination of advanced per channel optical power optimization with automated feedback loops with finely tuned digital modulation and signal processing to achieve the best optical performance possible. The high level of automation, coupled with industry-leading transmission performance, results in a solution that requires the least amount of regenerations and provides the greatest amount of service resiliency.

OPTIMIZE YOUR TRANSPORT NETWORK WITH THE INDUSTRY’S MOST FLEXIBLE OPTICAL LAYER

The hiT 7300 provides the greatest optical layer flexibility available in the industry. With configuration options including fixed-grid, super-channel technology, broadcast and select, route and selection ROADM, integrated EDFA, booster and Raman amplifiers, as well as fixed, colorless, directionless, and contentionless add/drop structures, systems can be tailored to provide exactly the amount of flexibility and performance required for virtually any application. The hiT 7300 also features:

- An Innovative optical link control system that provides higher tolerance to optical impairments, changing boundary conditions, and human errors resulting in greater network availability
- Support for virtually every optical layer configuration available including fixed or flexi-grid, 40/80/96ch, B&S and R&S with fixed, colorless, directionless and contentionless add/drop structures
- 70% OPEX savings on integration development and 70% less time to market, with SDN integration that will allow stronger service differentiation and completely new applications, contributing to an increase of the network revenue

BENEFITS OF CORIANT’S hiT 7300

- Obtain significant network savings with superior optical performance
- Improve network resiliency with the Industry’s Most Robust Optical Layer
- Enables optimized transport networks with the greatest number of optical layer configurations
- SDN integration for new business opportunities
- End-to-end electronic workflow and automation of the optical layer to limit human errors and reduce installation effort
The Tools to Take Back Control of Your Transport Network with Coriant Dynamic Optical Cloud™

The hiT 7300 is a foundational component of Coriant’s Dynamic Optical Cloud solution. The Dynamic Optical Cloud is a combination of Coriant’s flexible transport infrastructure and an Intelligent Optical Control (IOC) mechanism. Coriant’s IOC merges SDN-based multi-layer, multi-domain, hierarchical, dynamic network control with comprehensive network planning tools. Traffic patterns and relationships between network domains are more and more dynamic and even unpredictable in many cases. Coriant’s Dynamic Optical Cloud is the right solution to adapt networks to those requirements. It provides the required intelligence and automation for providing agile, simple and efficient services.

With its rich orchestration layer and a software developer kit (SDK), Coriant’s Dynamic Optical Cloud solution allows immediate development of new applications that can take advantage of dynamic network capabilities. In addition, because networking planning functions are integrated into the IOC solution, service providers can ensure that dynamic networking capabilities are not compromised as the network expands. Coriant’s Dynamic Optical Cloud solution combines a flexible transport infrastructure, dynamic network control, and integrated network planning to ensure that our customers are maximizing their network revenue by supporting differentiated services over an efficient transport network both today and long into the future.

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### Improve Network Efficiency with the Industry’s most Simple, Flexible, and Scalable Grooming Capabilities

Supporting Coriant’s innovative mTera solution with 7T of OTN and packet switching in just a ½ rack as an integrated port shelf, the hiT 7300 provides efficient grooming between multi-haul network hubs. Additionally, it is an effective gateway between metro and long-haul networks, 10G DCM compensated networks and all-coherent DCM free 100G+ networks. The hiT 7300’s mTera switching shelf provides 500G per slot of switching capacity and leverages the flexibility and cost effectiveness of pluggable interfaces (SFP, SFP+, and CFP) for all service ports from 1G to 100G.

The mTera switching shelf provides efficient seamless multi-service grooming capabilities for SONET/SDH, Packet, and OTN. Leveraging the ability to support any service on each and every port, as well as seamless interworking between protocols, the mTera switching shelf enables the greatest degree of switching flexibility with a minimal set of interface modules. This provides an extremely efficient and flexible solution with a operationally friendly simple architecture.

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### REDUCE REGENERATION AND IMPROVE RESILIENCY WITH THE INDUSTRY’S MOST ADVANCED OPTICAL LAYER

**ADVANCED OPTICS**
- Advanced Modulation, finely tuned signal processing, and coherent receivers

**FLEXIBLE OPTICAL LAYER**
- Fixed through CDC add/drop
- Variable gain EDFA
- Integrated booster and Raman

**ADVANCED LINK CONTROL**
- Recursive Feedback Loops
- E2E Wavelength Management
- Transient Control
- Fully Automated Link Management

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![CORIANT hiT 7300 Diagram](image)

**CORIANT hiT 7300**
## Technical Specifications

### Dimensions (W x D x H mm)
- ETSI 19” Standard Shelf:
  - 533 x 517.5 x 280 mm
- hiT 7300
- ANSI Standard Shelf:
  - 23” x 20.4” x 11”
- hiT 7300 Flatpack Shelf:
  - 535 x 225 x 290 mm (5 HU)

### Environment and Climatic
- ETSI 300 019, Telcordia GR-63-CORE
- ETS 300 019 Class 3.1e
- Transport class 3.2 and class 3.3

### Synchronization
- Network Timing Protocol (NTP)
- IEEE 1588v2 Precision Time Protocol
- Synchronous Ethernet
- ITU-TG.8261/G.8262/G.8264

### Client Services
- Optical interfaces:
  - Fast Ethernet, 1G, 10GE, 40GE, 100GE 400G+ ready
  - Fiber Channels:
    - 1G (FC-1G), 2G (FC-2G)
    - 4G (FC-4G), 8G (FC-8G)
    - 10G (FC-10G), FICON any-rate 100M-4.25G
- Optical Transport Network
- OTU1 to OTU4
- SONET/SDH interfaces:
  - STM-1/OC-3, STM-4/OC-12, STM-16/OC-48, STM-64/OC-192, STM-256/OC-768

### Transponder, Muxponder
- 100G coherent detection Transponder, Muxponder
- SD-FEC
- 100G regeneration
- 10G and 40G in 100G aggregation
- 40G coherent detection Transponder, Muxponder, Regenerator
- Multiport 10G Transponder
- Pluggable line and client Ifs
- 10G Transponder/ Muxponder/
  - Regenerator
- Full C Band tunable and fixed laser options
- ODU switch integrated on blade
- 10G Multiservice ADM and ODU-0 Cross-Connect
- 2.5G Transponder/ Muxponder/
  - Regenerator

### ROADM
- Bandwidth agile MD-ROADM
- Up to 16 Express and 4 local add/drop, Gridless, Colorless, Directionless and Contentionless, Filterless add/drop

### Functionalities
- Sophisticated link control which provides robustness against transients
- IPoDWDM integration:
  - GMPLS E-NNI for dynamic multi-layer service provisioning for IPoDWDM layers
  - 100G Transponder/ Regenerator interworking with Juniper 100G colored interface
  - TDM switching and grooming of sub-wavelengths services
  - ASON / GMPLS
  - 96 Channels

### Ethernet Interfaces
- Per card:
  - 16 x 10/100/1000 SFP [native Ethernet]
  - 4 x 10G XFP, OTU2/2e Capable [native 10GE is also possible]
  - 2 x 10GE SFP+ [native Ethernet]

### Ethernet Function
- MEF certified Carrier Ethernet Switching
- 76G switch capacity (California Count 152G)
- Support for connection oriented Ethernet
- C-VLAN, S-VLAN adding, stripping, translation
- L2VPN E-line, E-LAN, E-Tree
- QoS L2 and L3 mapping

### Protection
- Protected Controller and power supply
- East/west separation in ROADM
- DCN redundant connection
- 1 + 1 Optical Multiplex Section Protection
- 1 + 1 Optical Channel Protection
- 1+1 GFP Protection
- 1+1 Line Side - Optical Channel Protection
- Link Aggregation Group (LAG)
- Multicard LAG
- RSTP and MSTP for Ethernet traffic

### Management
- Network Management System
  - Coriant TNMS
  - SDN / IOC integration
  - Built in Web LCT