mTera™ Universal Transport Platform
Multi-terabit Packet-Optical Transport Solution

THE SOLUTION TO DOMINATE THE HYPERGROWTH ERA
Telecommunications services are undergoing a rapid and profound transformation. Customers have an insatiable appetite for increased bandwidth and are demanding more flexible, more dynamic, and more customized solutions. As a key component of the Coriant Dynamic Optical Cloud™ networking solution, the Coriant™ mTera™ Universal Transport Platform (“UTP”) can transform transport networks from static and fixed resources to dynamic and software-defined service providing engines. The mTera™ UTP is an extremely flexible multi-service optical transport platform. It seamlessly supports OTN and Packet grooming as well as an advanced ROADM-based optical layer on a single shelf. The system supports numerous applications from a metro core traffic management solution, a long haul traffic grooming solution, and an efficient gateway between traditionally lower speed aggregation networks and dynamic, multi-service, all coherent and high speed core networks.

INNOVATIVE ARCHITECTURE FOR UNPARALLELED FLEXIBILITY AND EFFICIENCY
The mTera™ UTP is designed to handle virtually any application with a minimal set of interface cards and to use every port on every card to its full potential. The system lifts all switching boundaries and restrictions allowing native switching and interworking on every port on every module. The mTera™ UTP architecture provides a new level of flexibility with an extremely dense 500G per slot and 7T per shelf switching capacity, native OTN and L2 switching on every port and seamless service interworking, while simultaneously supporting a variety of ROADM configurations with the hybrid switching functionality, all on a single shelf.

FLEXIBILITY
The mTera™ UTP is designed with the ultimate in flexible architecture. The system supports any card in any slot – including service modules and optical layer (ROADM) modules on the same shelf. The mTera™ UTP supports a fully hybrid switching architecture enabling native packet and OTN switching on every interface on every module with unrestricted service interworking between the protocols.

SIMPLICITY
As with all Coriant transport solutions, the mTera™ UTP is designed with an extremely simplified architecture that requires only a small number of interface cards to support a variety of applications. The optical layer has also been simplified via highly integrated ROADM modules that provide complete ROADM degrees (including amplifiers, WSS, and optical monitoring) on a single one-slot card. This approach simplifies ordering, sparing, and deployment resulting in faster and less complex roll-outs while minimizing errors.

SCALABILITY
The mTera™ UTP provides an extremely compact and dense solution with an all-pluggable interface design for both 10G and 100G interfaces. The result is an extremely dense 7 terabits of switching capacity in ½ a rack. With two shelves supported per rack, this equates to 14T of total switching capacity in a single rack.

Benefits of the Coriant™ mTera™ Universal Transport Platform
- Improve overall network efficiency by providing aggregated hand-offs to routers and maximizing utilization of both metro and core wavelengths
- Simplify network operations with a minimal set of highly flexible multiservice cards that support all applications
- Reduce node and network complexity to simplify installation and service activation and limit the chances for human-induced errors
- Enable an optically and electrically flexible infrastructure that can be leveraged by Coriant’s SDN Controller to provide truly programmable and dynamic network behavior
- Deliver an ultra-high density 10G and 100G interface and seamless support for 400G and 1T wavelengths
KEY FEATURES AND BENEFITS

One Solution for Numerous Applications
With ultra-high density 10G and 100G interfaces and seamless support for 400G and 1T wavelengths, the mTera™ UTP is an ideal solution for metro core, long haul grooming and transport gateway applications to act as the bridge between traditional 10G networks and next generation all coherent networks.

Simplify Network Operations
With a minimal set of highly flexible multiservice cards that support all applications, the mTera™ UTP reduces node and network complexity, reduces sparing, simplifies installation and service activation, and reduces the chances for human induced errors.

Provide the Foundation for the Coriant Dynamic Optical Cloud™
The mTera™ UTP enables an optically and electrically flexible infrastructure that can be leveraged by Coriant’s SDN Controller to provide a truly programmable and dynamic network behavior.

SOLUTION HIGHLIGHTS
- 3T - 7T of switching capacity
- ½ Rack Footprint (23” NEBS & ETSI)
- Optical + Service cards supported in single shelf
- Optical Layer Configurations
  - 8D Broadcast & Select ROADM on-a-blade
  - 20D Route & Select ROADM on-a-blade
  - Fixed, Colorless, Directionless and Contentionless Add/Drop
- 10G, 100G, 400G, 1T Wavelength Support
- Flexible Multi-Services Grooming
  - ODU0 to ODU4 grooming including ODUflex
  - MPLS-TP
  - Carrier Ethernet
- All Pluggable interfaces (SFP, SFP+, CFP)
- Coriant TNMS & 8000 INM Management
- GMPLS, ASON, SDN Support
### TECHNICAL SPECIFICATIONS

#### System Configurations
- Stand-alone hybrid switch
- Integrated hybrid switch and multi-degree ROADM
- Switching port shelf for a 7100 Nano OTS system
- Switching port shelf for a hiT 7300 system

#### Interface Cards
- All services supported by minimal set of modules
- OSM-1s – 32x Sub 10G any-rate SFP interfaces
- OSM-2s – 20x 10G SFP+ interfaces
- OSM-2c – Multi-port 100G CFP interfaces

#### WDM Transmission Speeds
- 10G, 100G, 400G*, 1T* (*future)

#### Switching Capacity
- 3T - 7T per ½ rack
- 500G per slot

#### Native Switching Formats
- OTN – ODU0/1/2/2e/3/4/flex
- Packet - MPLS-TP and Ethernet

#### Physical Shelf Dimensions
- Supports 23” NEBS and ETSI Racks
- Height: 19RU (33.25 inches or 845mm)
- Width: 19.585 inches or 497.5mm
- Depth: 15 inches or 381mm

#### Resiliency
- Redundant Control
- Redundant Switch Fabric
- 1:1, 1+1, 1:N service protection
- SNC/I, SNC/N, SNC/S
- ASON/GMPLS (ODU & OCh)
- Coriant “Always-On” Protection

#### Environmental
- ETSI EN 300 019-1-3 V2.3.2, Class 3.1
- NEBS (GR-63)
- UL & CE compliant
- VCCI certified
- FCC Class A

#### Services
- STM-1/4/16/64, OC-3/12/48/192
- OTU1/2/2e/3/4
- 1G, 10GbE, 40GbE, 100GbE
- FC-1G/2G/4G/8G/10G
- DVB-ASI, SDI, HD-SDI, and 3G-SDI
- “Anyrate” 100M-4.25G and 8-11G
- MPLS-TP & Carrier Ethernet

#### Optical Layer
- Industry leading ROADM density
- B&S and R&S options
- Flexi-grid support
- Fixed, Colorless, Directionless and Contentionless add/drop configurations

#### Interfaces
- All interfaces up to 100G are pluggable
- SFP for 100M - 4.25G
- SFP+ for 8 & 10G
- CFP for 100G and 40G
- Grey light & DWDM options
- 96 channel tunable DWDM interfaces
- Multiple modulation formats

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