

# International Gateway Manages Global Trunks More Efficiently and Cost-effectively

*Force10's Traverse™ Multiservice Transport Switch leads the industry as a single shelf that efficiently performs the service interface conversions and cross-connections required to inter-connect SONET/ANSI and SDH/ETSI based transport networks.*

## International Gateway Overview

A defining characteristic of Force10's Traverse Multiservice Transport Switch is its ability to support the provisioning of either SDH/PDH services (based on ITU-T standards), or SONET/TDM services (based on ANSI standards), as well as provide simultaneous support for both types of services from the same platform. This feature makes the Traverse platform an ideal transport switch solution for carriers with an expanding global network presence or those looking to develop one.

## A Global Solution

The Traverse International Transport Gateway is optimized for global carriers, IXCs, or backbone providers looking to increase transport capacity to meet ever-growing bandwidth requirements, and evolve to ultra-broadband packet services like Ethernet over MPLS. The comprehensive, multi-layer gateway capabilities of the Traverse system enable service providers to seamlessly translate traffic between different continents and/or countries.

The Traverse platform is the industry's only single-shelf International Transport Gateway solution that provides full broadband (high-order) and wideband (low-order) conversion and switching between SONET STS-N, SDH AU-3, and SDH AU-4 formatted payloads, with optical and electrical service interface options ranging from DS1 and E1 to multiple OC-192/STM-64 rings.

By offering the optional ability to integrate 10/100 and GigE switching and transport, carriers can also deploy the Traverse platform to deliver ultra-broadband packet services like global, multipoint Ethernet VPNs. The Traverse platform's flexible design, and comprehensive SONET to SDH gateway capabilities enable service providers to manage global trunks more efficiently and cost-effectively.



### Traverse 2000 Multiservice Transport Switch

A single, compact shelf that supports broadband/HO and wideband/LO switching with "any-to-any" conversion between SONET, SDH and Ethernet

A more efficient and less expensive solution than deploying multiple separate ADM and DCS/DXC platforms for SONET and SDH

Broad range of electrical and optical ANSI/ETSI interfaces: DS1, E1, DS3/EC-E3/STM-0, OC-3/STM-1, OC-12/STM-48/STM-16, OC-192/STM-16, 10/100 and GbE

Automated end to end service provisioning and cross-connections using Force10's TransNav™ Management System

Optimized for global carriers, IXCs, or backbone providers looking to increase transport capacity to meet ever-growing bandwidth requirements.

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## Application NOTE

### One Shelf, Multiple Services

To support International Transport Gateway services, the Traverse provides full broadband (high-order, including HO-VCAT for Ethernet) and wideband (low-order, including LO-VCAT for Ethernet) conversion and switching between SONET STS-N, SDH AU-3, and SDH AU-4 formatted payloads. Any SONET payload within an OC-n or EC-1 can be converted and switched to either an SDH AU-3 or AU-4 STM-n facility. DS1, E1, DS3 and E3 services can be added/dropped from SONET or SDH AU-3 or AU-4. Beyond clear channel (intact) mapping of DS3 to SONET or SDH, the Traverse can also perform optical or electrical payload transformation

(Transmuxing) of channelized DS3 signals to all three formats, including an M23 or C-bit framed DS3 with constituent DS1s as well as a G.747 framed DS3 with constituent E1s.

Traverse optical service interface modules (SIMs) are software configurable for either SONET OC-n or SDH AU-3/AU-4 STM-n operational modes. SONET or SDH provisioning is supported on a per-port basis. Additionally, individual ports on the electrical (DS3/E3) SIMs are software configurable for either DS3, E3, EC-1 or STM-0 operation on a per-port basis. This flexible design simplifies module ordering and sparing, as well as network operations and maintenance, further lowering costs for global carriers.

Provides full broadband (high-order) and wideband (low-order) conversion and switching between SONET STS-N, SDH AU-3, and SDH AU-4 formatted payloads.

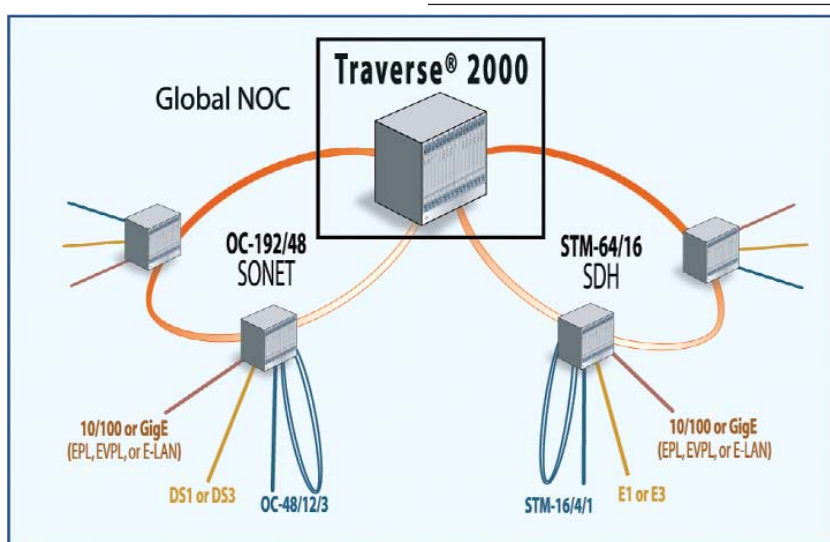


Figure 1: Cassatt Active Response port control information.



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