

Today, service providers face the challenge of needing to maintain their profitable TDM services while at the same time reducing their huge OPEX associated with their aging legacy infrastructure that has reached the end of life. They're looking for practical solutions that can help them cost-effectively migrate at their own pace towards the next-gen packet network.

In the access, or edge, of the network, a packet platform with integrated TDM ports or TDM SFT is sufficient for efficiently addressing the small number of TDM requirements. However, in the central office, a much more scalable platform is needed, one that integrates the functions of a 3/3, 3/1, and 1/0 cross-connect and can transport thousands of TDM services over a modern and efficient packet switched infrastructure via circuit emulation. This is where in the 6500 PTS comes in.

The 6500 PTS configuration provides circuit emulation and transport of TDM services over an ethernet or MPLS transport network, along with the aggregation of switching and native ethernet services. The PTS also supports packet gateway functionality allowing the termination of PPP, GFP, and other packet-over-TDM protocols.

Additionally, the 6500 PTS inter-works with Ciena's packet networking portfolio to provide TDM access over a packet network that terminates on PTS. Here, we have a two-node 6500 system consisting of two 6500 cells operating in a packet transport configuration.

The configuration utilizes the existing 6500 S series S8 and S14 cells, as you can see here, as well as the same common equipment and 6500 software. What designates the 6500 as PTS configuration are the specific packet switching fabric cards and the corresponding service interface cards. Let's take a quick look at each of the 6500 PTS modules.

This is the new 6500 800 gig packet switching fabric with the integrated 10 gigE, 40 gigE, and 100 gigE uplinks. It supports both ethernet as well as MPLS services, leveraging Ciena's Service-Aware operating system that is used across our packet portfolio of over 850,000 deployed devices. The packet fabric also provides synchronization across the packet infrastructure which allows for the distribution of timing information that these services depend on.

The multi-rate optical circuit pack can accommodate any mix of TDM and ethernet services up to a total capacity of 20 gig. SONET and SDH interfaces from OC-3/STM-1 to OC-192/STM64 are supported, as are ethernet interfaces from 10 meg to 10 gigE. The card supports up to 20 gigs of TDM processing, including high-order or low-order grooming, path, and line-level protection, as well as PDH payload muxing and mapping