

Customer

GigNet is a premier digital infrastructure company with a comprehensive digital services portfolio of Internet, WiFi, fiber-to-the-home, and other advanced solutions for hospitality and enterprise customers in Mexico

Challenge

Customer needed an efficient end-to-end network that can

- Meet demanding scalability requirements with ease of expansion to new regions and adding new end customers
- Provide extreme service agility and seamless feature upgrades to new technologies
- Satisfy stringent SLA requirements of end customers
- Significantly reduce capital and operating expenditure

Solution

- TJ1600-11 for DWDM/OTN core/backbone network
- TJ1400 for PTN Metro Access/Aggregation and GPON/NG-PON based broadband access
- TJ2100N series ONTs with Power over Ethernet to feed IP phones, cameras for monitoring and access points
- TejNMS for end-to-end network management



GigNet selects Tejas Networks for building a state-of-the-art, high-capacity green-field metro optical network in Cancun, Mexico

Broadband providers are exploring innovative and cost effective approaches to modernize their network. GigNet is the broadband provider of choice for sophisticated business customers and developers in Mexico demanding the strictest reliability, quality and service-level guarantees. GigNet plans to lead the digital transformation for enterprises, residential developers and service providers seeking high-speed connectivity in Cancun and Riviera Maya. In addition, they are expanding to provide wholesale services. Tejas Networks has supplied products to support their end-to-end optical network, including GPON for hotels and residential services, metro aggregation and high capacity DWDM-OTN based backbone network.

Network Requirements

Along with providing high-speed broadband services, Gignet wants to evolve their business model to become carrier’s carrier and requires a cost-effective solution for expanding the network presence in Cancun region. The network needs to be robust, flexible and scalable to efficiently deliver premium, SLA driven connectivity services to their end customers.

Tejas Networks Solution

To support the rapid growth of GigNet’s “Smart Communities” business segment for planned developments across the region, Tejas Networks will supply its full range of last-mile access products based on GPON/NG-PON fiber broadband technology, ultra-converged packet aggregation products based on MPLS-TP/PTN technology, and terabit-scale optical backbone products based on OTN/DWDM

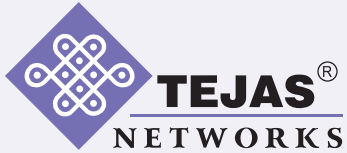
technology, all centrally managed by a universal and versatile SDN-ready network management system (NMS).

- TJ1600-11 is a versatile 100G+/400G DWDM/OTN system for core/backbone networks which supports a programmable mix of SDH/SONET, Ethernet, OTN, Storage and MPLS-TP client services using a combination of transponders, muxponders and switching cards.
- TJ1400 Ultra-Converged Broadband provides unparalleled integration of Access, Transport and IP Network technologies in one integrated box and introduces a revolutionary way of building modern-day telecom infrastructure, bringing down the cost of network build-outs dramatically.
- TJ2100N is a series of versatile ONT products that is available in

ruggedized, portable enclosures for remote installation in rural areas and can also be solar powered in power constrained environments.

- TejNMS is a centralized Network Management System to monitor all Tejas equipment – be it DWDM, PTN, OTN, GPON, LTE.

TJ1600-11 DWDM/OTN is used at the core of the network. For PTN aggregation, a metro PTN network formed by TJ1400 series of aggregation products from Tejas is deployed. For PTN access, third party demarcation devices are used for small bandwidth services and TJ1400-P for high bandwidth services. GPON network is used to deliver internet services and last mile connectivity to end customers such as residences, hotels and enterprises. TJ1400 OLT is placed in a central location and TJ2100N-20PS/TJ2100N-14E series of Tejas ONTs are installed at rooms or



lobbies to deliver internet services like surveillance, internet connectivity, IPTV etc. The entire network is centrally managed through TejnMS Network Management System.

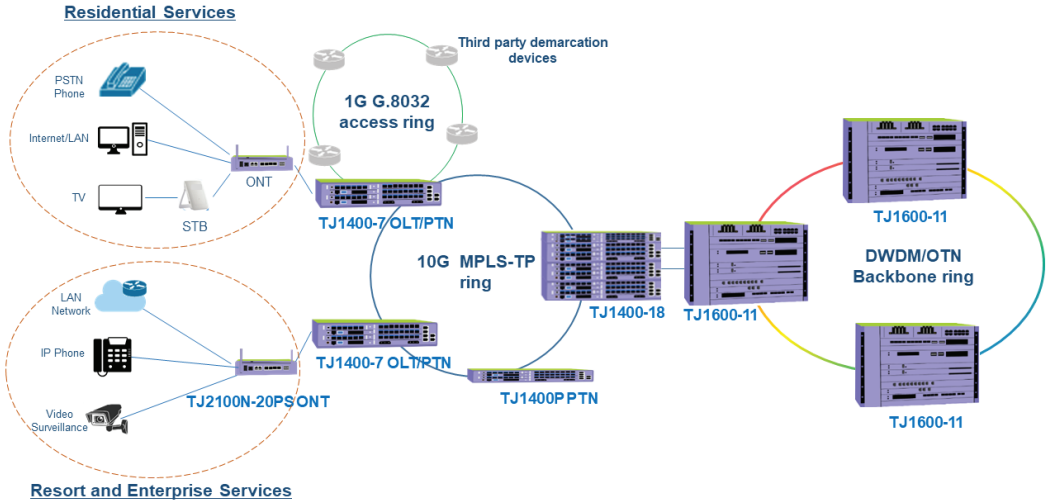
Why Tejas Networks

The key features of Tejas solution are:

Traffic Management: Tejas DWDM solution optimizes 1G and 10G transport by using OTN switching to efficiently pack and route traffic through the network. The use of OTN switching also reduces the complexity of the Packet network by offloading high bandwidth services directly onto the OTN/ DWDM optical layer. Ethernet services with Q-in-Q for customer tunneling and comprehensive fault and performance monitoring can be used for Enterprise connectivity. Mission critical and premium customer traffic can leverage deterministic CE based MPLS-TP based private line for advanced traffic engineering, proactive and reactive fault management and comprehensive OAMP features.

Industry-leading ONT family: TJ2100N ONT supports plug-and-play provisioning and can be easily added or removed as per customer needs. TJ2100N-20PS ONT has PoE capability and can act as the Power Source Equipment (PSE) to power end devices.

Future-ready products: Tejas products use



revolutionary Software-defined Hardware™ approach and can be upgraded to advanced, emerging, high-capacity TWDM PON technologies through a simple software upgrade. Tejas GPON solution has a combo PON functionality and can handle both NG-PON and GPON traffic. Tejas DWDM solution is very scalable supports high channel data rate from 1GE to 200G and 400G/600G in future. Tejas PTN solution supports advanced packet synchronization and circuit emulation features for pure-packet backhaul of 2G/3G voice and TDM services.

Comprehensive OAMP Functions: Tejas products support advanced fault, alarm and performance management complemented

by a powerful visual interface for alarm notifications, fault localization and SLA reporting developed using modern web technologies.

Protection from fiber cuts and equipment failures : Tejas DWDM solution will have two different levels of protection : SNC protection at OTN layer and FPU based protection at optical layer. Tejas GPON solution supports protection for fiber cuts, splitter damage, CPE and OLT port failures.

Results

Tejas end-to-end optical and broadband access solution is being deployed by GigNet in phases.

“GigNet selected Tejas for their innovative, software-defined hardware™ architecture that enables extreme service agility and seamless feature upgrades to new technologies, to help us maintain our competitive advantage. They have also demonstrated outstanding technical support capabilities locally in Mexico and have been very responsive to our rapidly accelerating customer installations.”

-Mr. Paul A. Moore, Chairman & CEO of GigNet

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