TJ3011

8-channel CWDM Transmission System

TJ3011 is an ultra-compact and cost effective Coarse Wave Division Multiplexing (CWDM) Optical Transport system designed to transport high-bandwidth services in metro networks. TJ3011 enables Service Providers to maximize the bandwidth in metro networks, thus enabling new revenue generating services such as IP-TV and high-speed Internet.

TJ3011 provides telecom carriers with a high-availability system, and offers them a simpler and more cost-effective upgrade path towards 10Gbps and beyond. TJ3011 is compact, and leads to savings on costly real-estate in Telecom Shelters. TJ3011 chassis is designed to operate at extended temperatures ranging from -5 to 65 degrees Celsius.

TJ3011 can multiplex and demultiplex up to eight CWDM wavelengths in both East and West fiber directions. This makes it ideal for use in access ring deployments.

TJ3011 being a fully passive system does not require any external powering. It can be used in conjunction with other members of the TJ3000 family especially the active 1U CWDM system, TJ3101. Active products in the Tejas' TJ3000 portfolio are characterized by a unique ability to combine SDH/SONET, Ethernet Switching, CWDM and DWDM technologies in the same enclosure.

Features	Advantages	Benefits
Support for standard wavelengths in the CWDM grid with 20nm spacing specified in ITU G.694.2	Greater spectral width enables use of uncooled DFB laser technology	Significantly lower cost than DWDM systems for similar capacity expansion. ~60-70% savings in capex for up to 8x2.5G wavelengths.
Multiplex up to 8 CWDM wavelengths on a single fiber pair	Achieve 8x magnification in available capacity on the existing fiber	Considerable savings in fiber plant by reusing existing infrastructure. Low cost alternative to SDH which consumes additional fiber.
Transmit up to 10Gbps on a CWDM wavelength using suitable XFPs	Delay expensive DWDM upgrades on an existing 2.5Gbps CWDM access network	Investment protection by leveraging existing CWDM network elements such as muxes and filters with lower cost CWDM pluggables for 10Gbps.
Passive optical transport solution in a compact 1 RU form factor	No external powering requirements ensure ease of network deployment	Translates to ~15-30% savings in opex especially for larger telecom carriers. Small footprint frees up expensive real-estate in the central offices.
Supports multiple protocols such as Gigabit Ethernet, STM-16, STM-64, 10 Gigabit Ethernet, Fiber Channel	Multiple voice, video and data services can be transparently carried on the network	Carriers can roll out premium, high-speed wavelength services on a more cost-effective CWDM infrastructure
Launch eight CWDM channels in each of two fiber directions	Ease of use in linear, ring and bus scenarios	Cost-effective solution with greater flexibility to use one chassis for both directions on a ring

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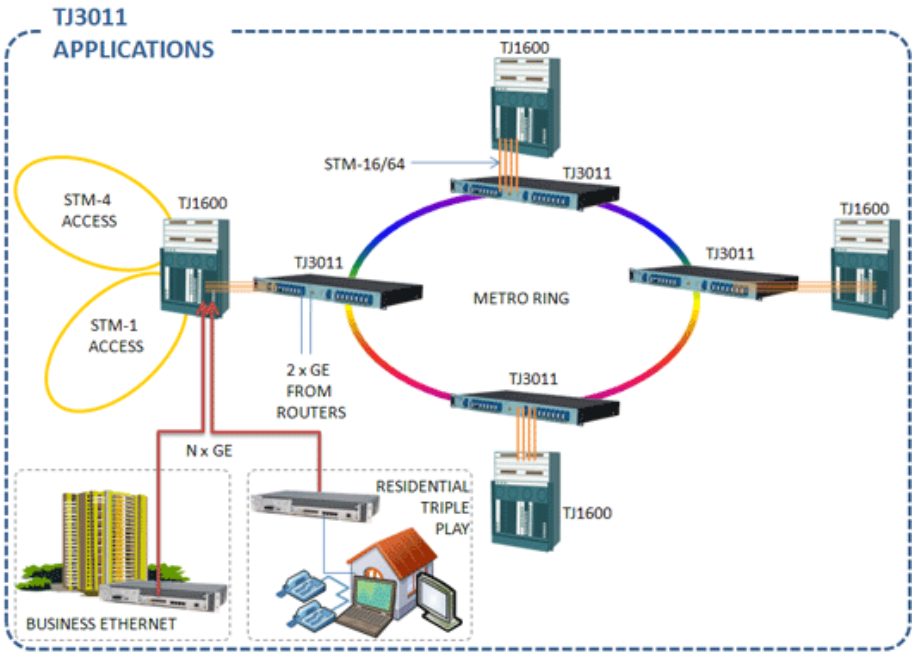
Applications



Technical Specifications*

Optical Wavelengths

- Confirms to ITU G.694.2
- 1471nm to 1611nm, 20nm spacing
- 8 Channels East (Mux and DeMux)
- 8 Channels West (Mux and DeMux)

Traffic Rates

- Gigabit Ethernet
- STM-16
- STM-64, 10GbE
- Fiber Channel
- LC/PC connectors with Duplex Adaptors

Applications

- Fiber Multiplication
- Reach extension
- Bandwidth expansion
- Wholesale Lambda services
- Storage Extension

Topologies

- Linear
- Ring
- Bus

Mux-Demux Parameters

- Insertion Loss: <3.2dB
- Pass-band Ripple: <=0.5dB
- Adjacent Channel Cross-talk: >30dB
- Return Loss: >45dB

Physical Specifications

- 1U High, 19” Rack Mounting
- Operating Temperature: -5 to +65 Celsius
- Relative Humidity: 5 to 95%
- Optical Power Handling: 300mW
- Passive – No External Powering

Scalability Options

- Active CWDM for up to 16 channels using TJ3101, TJ3301 and TJ3500
- DWDM for up to 80 channels in C-Band using TJ3301 and TJ3500
- Single fiber and Dual fiber options for CWDM and DWDM including hybrid transmission
- 4D ROADM, EDFA amplifiers, Raman amplifiers, DCM modules available with active TJ3000 products

* Specifications are subject to change without notification

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