

OPTICAL MULTIPLEXING

PRODUCT OVERVIEW

BTI OFFERS FLEXIBLE MULTIPLEXING CONFIGURATIONS FOR GROWING BROADBAND SERVICES AT THE NETWORK EDGE, WITH A COMPLETE SUITE OF DWDM, CWDM MULTIPLEXING/DE-MULTIPLEXING, AND OPTICAL ADD/DROP MODULES. ALL MODULES ARE ENVIRONMENTALLY HARDENED FOR OUTSIDE PLANT (OSP) OPERATIONS, MEETING THE TELCORDIA GR-3108 OSP REQUIREMENT FOR EXTENDED TEMPERATURE.



APPLICATIONS

FIBER EXHAUST AND NEW SERVICE DELIVERY OVER FIBER CONSTRAINED NETWORK

The Optical Multiplexing mux/demux and OADM can be used to overlay new broadband services and expand fiber capacity up to 32 DWDM and/or 16 CWDM channels on a single fiber pair. No changes to existing client equipment are required – mux/demux ports connect directly to CWDM or DWDM client ports, or connect to 850nm, 1310nm or 1550nm client ports via a transponder conversion module. For seamless in-service scalability, 8-channel (DWDM) or 4-channel (CWDM) mux/demux units are cascaded via an expansion ports. A CWDM to DWDM hybrid combination can be provided with the CWDM/DWDM coupler/splitter.

KEY FEATURES

- CWDM and DWDM mux/demux and OADM configurations available
- Scalable to 32 λ DWDM, 16 λ CWDM
- Active DWDM mux/demux for enhanced operational simplicity
- CWDM to DWDM hybrid configurations available
- CWDM and DWDM modules hardened for outside plant applications
- Optional bidirectional single fiber solution
- C-band red/blue filter to maximize optical reach performance
- Full inventory management visibility
- Expansion port for cascading and hitless in-service upgrades

OPTICAL MULTIPLEXING

SINGLE FIBER WORKING

For additional cost savings in low channel count applications, the bidirectional mux/demux and double bi-directional coupler/splitter modules allow signals to be transmitted and received on a single fiber – cutting fiber use in half over standard WDM implementations. The bidirectional mux/demux provides muxing and demuxing of 8 channels in each direction with a combination of different bands: Band 1/2, 1/3, 1/4, 2/3, 2/4, or 3/4. The signals are added and dropped onto the fiber using the double bidirectional coupler/splitter. All modules are environmentally hardened.

TECHNICAL INFORMATION

Module Size Double Slot - 8 λ DWDM mux/demux

Single Slot – All other modules

Supported Chassis All BTI Chassis

CWDM Multiplexing (1271– 1611nm)

16 Channel CWDM mux/demux (in bands of 4 λ)
1 and 2 Channel CWDM OADM

DWDM Multiplexing (1530.33 – 1559,79nm)

32 Channel DWDM mux/demux (in bands of 8 λ)
1 Channel DWDM OADM
2 Channel DWDM OADM
4 Channel DWDM OADM

DWDM Bidirectional Multiplexing

32 Channel DWDM mux/demux – mux Band 2, demux Band 4
32 Channel DWDM mux/demux – mux Band 4, demux Band 2
32 Channel DWDM mux/demux – mux Band 1, demux Band 2
32 Channel DWDM mux/demux – mux Band 2, demux Band 1

DWDM Active Multiplexing (requires active chassis)

32 Channel DWDM mux/demux (in bands of 8 λ)
Automatic power equalization with integrated VOA and power monitoring

CWDM & DWDM Splitter/Combiner (1528.77 - 1559.79 nm)

Hybrid CWDM/DWDM on a single fiber pair

1310 nm Coupler/Splitter (1460 - 1620 nm)

Bidirectional device used as a coupler to combine signals or as a splitter to divide a signal

Red/Blue C-Band Filter

Blue band under 1546.12 nm
Red band over 1546.12 nm