



# FC4-T FIBRE CHANNEL MUXPONDER MODULE

For the 4200 Family

## Features and Benefits

- Provides up to three client ports for industry-leading service density on a single module
- Supports either 2G FC or 4G FC with built-in service flexibility
- Allows point-to-point transport for 2G/4G FC through an OTN
- Features discrete optics port, choice of fixed wavelength (46  $\lambda$ ) or C-band tuneable on 50 GHz ITU boundaries (92  $\lambda$ )
- Supports extended transport distances up to 500 km without regeneration
- Accommodates remote provisioning for all supported services
- Provides full performance monitoring support for FC clients and OTU-2 transport stream

The FC4-T module for the 4200 is a service aggregation muxponder that combines Fibre Channel (FC) client services into a single 10G OTU-2 stream. Unlike most competing single module solutions that provide FC aggregation, the FC4-T aggregates up to three FC client services—either 2G or 4G—rather than two for greater utilization of available bandwidth and lower overall solutions costs.

The module also features a system controller function isolated to avoid interruption to services transport due to standard system maintenance practices.

The FC4-T has three pluggable SFP transceiver ports used for connecting FC client services, and a single network port implemented in discrete Dense Wavelength Division Multiplexing (DWDM) optics and intended for long-range OTU-2 transport. This port can be ordered with either a fixed- or tunable-wavelength transmitter. FC client services enter the FC4-T module at the SFP interfaces where service aggregation is performed in a round-robin fashion from FC client 1 to 3. The aggregated data stream is then mapped into OTU-2 frames, complete with the OTU-2 header for performance monitoring and alarming, plus Forward Error Correction (FEC) to improve transmission performance over lengthy or degraded spans. The result is a standard OTU-2 frame clocked at 11.05G, rather than the 10.7G line rate, to accommodate all three clients.



Figure 1. Aggregating three FC clients using the FC4-T muxponder module