VIAVI

DWDM Test and Monitoring Solutions for Wireless Service Providers

OTDR and spectrum analysis test solutions to deploy, maintain, monitor and troubleshoot C-RAN and 5G access networks

VIAVI DWDM testing solutions enable wireless network operators and contractors to perform complete end-to-end link certification, monitoring and troubleshooting of DWDM networks.

Whether it’s small cell deployment, migration to C-RAN or preparation for 5G, wireless network operators are pushing fiber deeper into their networks to meet requirements for current and future capacity as they expand networks and prepare to roll out new network topologies and technologies. More often, they are turning to Dense Wavelength Division Multiplexing (DWDM) to get the most out of their new fiber investment and fully leverage any existing dark fiber or PON networks. DWDM allows a wireless network operator to increase bandwidth and coverage by adding wavelengths to already existing fiber.

Whether constructing, provisioning, monitoring or maintaining a network, the VIAVI DWDM portfolio has what you need. DWDM OTDR and verifier modules empower technicians to fully certify DWDM links end-to-end after construction and validate transmitted channels during the turn-up phase. While the rack-mounted DWDM OTDR solution provides 24/7 monitoring of live links for signs of degradation or failure.

Benefits

- High performance single-ended test tools to qualify and troubleshoot DWDM access networks through MUX(s) and DEMUX(s)
- Deliver right-first-time deployment during construction
- Mainframes supported by VIAVI Cloud Application for Test Process Automation
- Monitor and test DWDM links on demand and get real time alerts with fault location data

Applications

- Verifying presence, power levels, and OSNR of DWDM channels
- Certify WDM routes for new radio/antenna or capacity increases
- Verifying end-to-end continuity prior to service turn-up
- Troubleshooting faulty links without disrupting other services
- Monitor live DWDM links via unused DWDM wavelength
Right tools for the Job

Whatever phase in the life of the network, the ability to measure link loss, channel strength or OSNR, and identify and locate fiber events is crucial. The job must be quick to do, results easy to interpret and kit easy to carry around.

Construction

Perform a complete end-to-end link characterization through MUX/DEMUX for all wavelengths to certify the network build and validate performance criteria.

Wavelength Provisioning

Test and verify specific DWDM wavelengths and routes without interrupting existing services to ensure network and service performance. Turn on channels and verify their signal strength to ensure maximum QoS for your new towers/cell sites.

Monitoring and Troubleshooting

Avoid incurring SLA penalties; investigate and fix faulty links without disrupting traffic on active channels and avoid excessive network downtime or maintenance windows. Identify weak channels on the link.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2331/12</td>
<td>OCC-4056C DWDM Optical Channel Verifier module with SFP/SFP+ bays, C-band channels 12 to 61 (1567.95nm - 1528.77nm) – 50/100/200GHz channel spacing. Requires T-BERD/MTS -2000, -4000, or -5800 mainframe.</td>
</tr>
<tr>
<td>OSA-110M/H</td>
<td>Full-band compact OSA modules +23 dBm (-110M) or +30 dBm (-110H) versions. Requires T-BERD/MTS-6000A mainframe.</td>
</tr>
<tr>
<td>ONMSi Optical</td>
<td>Fiber Test Head OTU-8000 with DWDM OTDR module and associated monitoring software.</td>
</tr>
</tbody>
</table>

For more information on ONMSi and OTU8000 or T-BERD/MTS -2000, -4000, -5800, -6000 test platforms or individual modules, refer to their respective data sheets.