Integrated DWDM Device
Product Description
### Integrated DWDM Device Product description

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author</th>
<th>Reviewer</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1.0</td>
<td>2017/05/12</td>
<td></td>
<td></td>
<td>Not open to the third party</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS

1 Overview ......................................................................................................................... 3
  1.1 Product Description .................................................................................................. 3
  1.2 Feature ...................................................................................................................... 3

2 Technical Specifications ................................................................................................... 4
  2.1 System Interface ....................................................................................................... 4
  2.2 Working Principle Diagram ...................................................................................... 6
  2.3 Product Specifications ............................................................................................... 6

3 Environmental Requirements ............................................................................................. 7
1 Overview

1.1 Product Description

This integrated DWDM system based on WDM technology and is developed by our company. It provides 80G, 160G, 240G and 400G capacity to Eliminate the complex optical layer configuration, reduce redundant optical fiber connection, provide similarly switch function, support fast network construction and maintain easily. This solution perfectly matches the MAN transmission needs, to solve the customer's demands to the greatest extent.

Figure 1-1  Front Panel

1.2 Feature

The equipment has the following features:

1. 1U rack type equipment, high integration design

2. Single service module support 8 channel service access

3. Support expansion service card for system upgrade

4. Single channel access rate up to 15Gbit/s, and self-adaptive rate of 15G or below all types of service access (such as: GE/10GE LAN, 10GE WAN, STM-16/64, FC1G/2G/4G/8G/10G/16G etc.)
Integrated DWDM Device Product description

5. The single device supports the maximum 400G transmission capacity, and can be flexibly matched with 80G/160G/240G/400G equipment according to service requirements

6. Support built-in BA/PA card to transmit further distance

7. Complete physical isolation of service ports, transparent transmission, improve network security

8. Uplink support single core or two cores, maximum saving cable resources

9. In-band monitoring channel and connecting optical network to realize the whole network SNMP management.

10. Dual server power supply, support 1+1 hot standby

11. Simple networking, no change the original network topology and no complex optical layer design

2 Technical Specifications

2.1 System Interface

Figure 2-1  System Interface---Front panel
Integrated DWDM Device Product description

Figure 2-2 System Interface---Front panel

Table 2-1 Panel Definition

<table>
<thead>
<tr>
<th>Type</th>
<th>Function</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module</td>
<td>Service Module, One module max 80G</td>
<td>Total 5 service module, 2~5 module can be plug out, each module can connected with jumper in the front panel.</td>
</tr>
<tr>
<td>ETH</td>
<td>Management port</td>
<td>RJ45</td>
</tr>
<tr>
<td>Power</td>
<td>AC or DC</td>
<td>Optional, 1+1 protection</td>
</tr>
</tbody>
</table>
2.2 Working Principle Diagram

Figure 2-3  400G flew mode diagram

Module1~5 can combined by jumper from front panel, After integrating 40-wave 10G service, appropriate amplifier and dispersion compensation unit can be selected according to the line distance and attenuation.

2.3 Product Specifications

Table 2-2 Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Technical Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>1U: 44 mm ×440 mm ×560 mm</td>
</tr>
<tr>
<td>Transmission capacity</td>
<td>One module max 80G , Device max 400G ( 5Module )</td>
</tr>
<tr>
<td>Support Access Type</td>
<td>8 channel 1.25G~15G full-service access, including STM-16/64, OC48/192, GE, 10GELAN,10GEWAN FC1G/2G/4G/8G/10G/16G,etc.</td>
</tr>
<tr>
<td>Network topology</td>
<td>Point to point Symmetric transmission</td>
</tr>
</tbody>
</table>
Protection
Network level protection: 1+1
Device level: Power and Fan backup

Installation
19” or 21” Rack or 600mm Cabinet

Heat Dissipation
FAN

Power mode
AC: 90 ~ 260V, DC:-36V~72V, 1+1 Protection

Power Dissipation
300W (Typical)

3 Environmental Requirements

Table 3-1  Environmental Parameters

<table>
<thead>
<tr>
<th>Item</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation Temperature</td>
<td>-5</td>
<td>-----</td>
<td>+45</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40</td>
<td>-----</td>
<td>+80</td>
<td>°C</td>
</tr>
<tr>
<td>Operation Humidity*</td>
<td>10</td>
<td>-----</td>
<td>90</td>
<td>%</td>
</tr>
<tr>
<td>Storage Humidity</td>
<td>10</td>
<td>-----</td>
<td>90</td>
<td>%</td>
</tr>
</tbody>
</table>

*No condensation