

## Intelligent Optribution Chassis



*The final product may vary from the above image depending on the options selected.*

### Product

**DEV 7113**

Intelligent Optribution Chassis; 20 Slots

### Features

- ▀ Versatile 3 RU Chassis for up to 20 Optical Modules
- ▀ 50 Ohm, SMA (f) or 75 Ohm, F (f) or 75 Ohm, BNC (f)
- ▀ 1+1 Redundancy Options for CATV-Band or for L-Band
- ▀ Automatic Switch Back / Main Backup Swap Option for 1+1 Redundancies
- ▀ N+1 Redundancy Options for CATV-Band or for L-Band
- ▀ RGC (Redundancy path Gain Compensation) for n+1 Redundancy
- ▀ CWDM for 4, 8, and 9 Channels
- ▀ DWDM for up to 49 Channels, max. 16 Channels per Chassis
- ▀ Optical Ethernet Options
- ▀ Chassis can be enabled for the application of LNB Powering Products
- ▀ SNMP Support
- ▀ DEV Web Interface
- ▀ Signal Recording and Data Backup Feature
- ▀ Power Supply Redundancy

## DEV 7113 Intelligent Optribution Chassis

	Value	Condition
<b>Capacity</b>		
Front Side	20 Slots (max. 20 Optical Channels with Single Link Modules, max. 40 Optical Channels with Twin Modules)	
<b>Remote Communication</b>		
Interface (Connector)	Ethernet (RJ-45)	
Remote Control & Surveillance	via Web Interface and via SNMP	
<b>Redundant Power Supply</b>		
Supply Voltage	100...240 V AC supplied by two different Lines	
Power Consumption	<600 VA	
<b>General Specifications</b>		
Size	19" (483 mm) Width, 3 RU (133 mm) Height, ~470 mm + max. 80 mm (Optical Connectors) Depth	
Weight	~9 kg	empty Chassis
Environmental Conditions	ETS 300019 Part 1-3 Class 3.1E	

### Option 28 Automatic Switch Back / Main Backup Swap

Either functionality can be selected via a configuration menu:

**Automatic Switch Back:**

Automatic Switch Back enables the autonomous switching back from the redundant link to the main link based on the RF Sensing functionality.

**Main Backup Swap:**

Main Backup Swap enables the dynamic change of main and backup assignment to realize the autonomous switching from the backup link to the main link in addition to the (standard) autonomous switching from the main link to the backup link.

■ Available for 1+1 Rx redundancies

### Option 34 Chassis prepared for DWDM Modules, 16 Slots

The chassis is prepared with redundant fan modules for the installation of DWDM modules.

■ Up to three DEV 7658 (1:8 DWDM optical de-/multiplexer with extension port) can be installed in addition to the optical Tx/Rx modules.

■ In addition to 16 optical Tx/Rx modules, one EDFA amplifier module can be installed; this leaves space for up to two DEV 7658.

■ Up to 6\* 1+1 redundancy options can be installed in combination with Option 34.

■ 1\* 4+1 or 1\* 8+1 redundancy options can be installed in combination with Option 34.

### Option 54 SFP Ethernet Module

The SFP Ethernet Module is to be applied in one optical slot. The SFP Ethernet Media Converter can be equipped with any SFP module that is appropriate to the application requirements.

- Option 55**    **Change Ethernet to optical Ethernet Interface; 30 km**
- Option 56**    **Change Ethernet to optical Ethernet Interface; 1530 nm; 100 km**
- Option 57**    **Change Ethernet to optical Ethernet Interface; 1550 nm; 100 km**
- Option 58**    **Additional Ethernet Port with integrated Switch Functionality;  
only in Conjunction with Option 55, 56 or 57**

With Option 55, Option 56, or Option 57 the CPU module of the device provides a 100Base-FX Ethernet interface with SC/PC connectors (instead of the standard 100Base-TX Ethernet interface with RJ-45 connector) for the optical transmission of Ethernet signals.  
With applied Option 58 in addition to one of these options, the device provides a second 100Base-TX Ethernet interface with RJ-45 connector with integrated switch functionality.

**Option 82    Chassis enabled for LNB Powering Products**

The chassis is enabled for the application of up to 20 LNB Powering Modules DEV 8121.

**Option 84    RF Monitoring for LNB Powering Products**

In combination with Option 82, RF Monitoring is enabled for the LNB Powering Modules DEV 8121.

**Cabling Options**

Cabling options are used for stand-alone optical Tx or Rx modules, to be configured per 4 modules.

- Available in 50 Ohm with SMA (f) or in 75 Ohm with F (f) or with BNC (f) connectors
- Available for DC...3000 MHz, or for 10...1006 MHz, or for DC, 700...2500 MHz

**1+1 Redundancy Options**

1+1 redundancy options are used to realize a redundant optical link to a dedicated main link.

- Available for 47...1006 MHz or for DC, 950...2150 MHz in 75 Ohm with F (f) connectors
- Available for DC, 950...2150 MHz in 50 Ohm with SMA (f) connectors
- Up to 10\* with single link modules and up to 16\* with twin modules
- A mix of Tx or Rx redundancies is allowed
- A mix of single link modules and twin modules is not allowed
- A mix with stand-alone optical Tx or Rx modules is allowed
- A mix with n+1 redundancy options is not allowed
- Link gain will be decreased by ~5 dB

	Value	Condition
Return Loss	>14 dB	
Slot Requirements (F: Front, R: Rear)	<ul style="list-style-type: none"> <li>2F+1R Slots for a single 1+1 Redundancy w/ Single Link Modules</li> <li>4F+1R Slots for two 1+1 Redundancies with Single Link Modules</li> <li>2F+1R Slots for two 1+1 Redundancies with Twin Modules</li> </ul>	

## N+1 Redundancy Options

N+1 redundancy options are used to provide a redundant optical link to a number of main links.

- Available for 47...1006 MHz or for DC, 950...2150 MHz in 75 Ohm with F (f) connectors
- Available for DC, 950...2150 MHz in 50 Ohm with SMA (f) connectors
- Up to 4\* with single link modules or up to 8\* with twin modules for a 4+1 redundancy option
- Up to 2\* with single link modules or 2\* with twin modules for a 8+1 redundancy option
- 1\* with single link modules or 2\* with twin modules for a 12+1 or 16+1 redundancy option
- A mix of n+1 Tx redundancies with n+1 Rx redundancies with different sizes is allowed
- A mix with stand-alone optical Tx or Rx modules is allowed
- A mix with 1+1 redundancy options is not allowed
- Link gain for main links will be decreased by ~2 dB for 4+1 redundancy options and by ~5 dB for all other n+1 redundancy options

	Value	Condition
Number of Main Channels (n) per Redundancy Option	4, 8, 12, or 16	
Return Loss (Signal Path)	>14 dB	
Slot Requirements (F: Front, R: Rear)	<ul style="list-style-type: none"> <li>• 5F+1R Slots per 4+1 Redundancy with Single Link Modules</li> <li>• 5F+2R Slots per two 4+1 Redundancies with Twin Modules</li> <li>• 10F+2R Slots per 8+1 Redundancy with Single Link Modules</li> <li>• 11F+4R Slots for two 8+1 Redundancies with Twin Modules</li> <li>• 14F+3R Slots for a 12+1 Redundancy with Single Link Modules</li> <li>• 15F+6R Slots for two 12+1 Redundancies with Twin Modules</li> <li>• 18F+4R Slots for a 16+1 Redundancy with Single Link Modules</li> <li>• 19F+8R Slots for two 16+1 Redundancies with Twin Modules</li> </ul>	

## Order Information

### Optribution Chassis

DEV 7113	Intelligent Optribution Chassis; 20 Slots
Option 28	Automatic Switch Back / Main Backup Swap
Option 34	Chassis prepared for DWDM Modules, 16 Slots
Option 54	SFP Ethernet Module
Option 55	Change Ethernet to optical Ethernet Interface; 30 km
Option 56	Change Ethernet to optical Ethernet Interface; 1530 nm; 100 km
Option 57	Change Ethernet to optical Ethernet Interface; 1550 nm; 100 km
Option 58	Additional Ethernet Port with integrated Switch Functionality; only in Conjunction with Option 55, 56 or 57
Option 82	Chassis enabled for LNB Powering Products
Option 84	RF Monitoring for LNB Powering Products

### Cabling Options

Option 40	Cabling for 4 Slots; DC...3000 MHz; 50 Ohm, SMA (f)
Option 40 Twin	Cabling for 4 Slots for Twin Modules; DC...3000 MHz; 50 Ohm, SMA (f)
Option 41	Cabling for 4 Slots; 10...1006 MHz; 75 Ohm, F (f)
Option 42	Cabling for 4 Slots; DC, 700...2500 MHz; 75 Ohm, F (f)
Option 42 Twin	Cabling for 4 Slots for Twin Modules; DC, 700...2500 MHz; 75 Ohm, F (f)
Option 43	Cabling for 4 Slots; DC, 700...2500 MHz; 75 Ohm, BNC (f)
Option 43 Twin	Cabling for 4 Slots for Twin Modules; DC, 700...2500 MHz; 75 Ohm, BNC (f)

### 1+1 Redundancy Options

Option 44/75/Rx	1+1 Rx Redundancy Kit; 10, 47...1006 MHz; 75 Ohm, F (f)
Option 44/75/Tx	1+1 Tx Redundancy Kit; 10, 47...1006 MHz; 75 Ohm, F (f)
Option 45/50/Rx	1+1 Rx Redundancy Kit; 950...2150 MHz; 50 Ohm, SMA (f)
Option 45/50/Tx	1+1 Tx Redundancy Kit; DC, 950...2150 MHz; 50 Ohm, SMA (f)
Option 45/75/Rx	1+1 Rx Redundancy Kit; 950...2150 MHz; 75 Ohm, F (f)
Option 45/75/Tx	1+1 Tx Redundancy Kit; DC, 950...2150 MHz; 75 Ohm, F (f)

### N+1 Redundancy Options

■ Please specify **n = 4, 8, 12, or 16**

Option 46/75/n+1	n+1 Redundancy Kit; 47...1006 MHz; 75 Ohm, F (f)
Option 47/50/n+1	n+1 Redundancy Kit; DC, 950...2150 MHz; 50 Ohm, SMA (f)
Option 47/75/n+1	n+1 Redundancy Kit; DC, 950...2150 MHz; 75 Ohm, F (f)

## Contact

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