

## Intelligent Opttribution® Chassis



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

### Product:

**DEV 7113** Intelligent Opttribution® 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 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 48 Channels, max. 16 Channels per Chassis
- Optical Ethernet Options
- SNMP Support
- DEV Web Interface
- Signal Recording and Data Backup Feature
- Power Supply Redundancy

## Technical Data

### DEV 7113 Intelligent Optribution® Chassis

#### Capacity

|            |                                                                                                          |
|------------|----------------------------------------------------------------------------------------------------------|
| Front Side | 20 Slots (max. 20 Optical Channels with Single Link Modules, max. 40 Optical Channels with Twin Modules) |
|------------|----------------------------------------------------------------------------------------------------------|

#### Remote Communication

|                                           |                                                           |
|-------------------------------------------|-----------------------------------------------------------|
| Interface (Connector)                     | • Ethernet (RJ-45)                                        |
| Remote Control & Surveillance (Interface) | • via Web Interface (Ethernet);<br>• via SNMP (Ethernet). |

#### Redundant Power Supply

|                   |                                                |
|-------------------|------------------------------------------------|
| Supply Voltage    | 100...240 V AC supplied by two different Lines |
| Power Consumption | <600 VA                                        |

#### General Specifications

|                          |                                                                                              |
|--------------------------|----------------------------------------------------------------------------------------------|
| Size                     | 19" (483 mm) Width, 3 RU (133 mm) Height,<br>~470 mm + max. 80 mm (Optical Connectors) Depth |
| Weight                   | ~9 kg (empty Chassis)                                                                        |
| Environmental Conditions | ETS 300019 Part 1-3 Class 3.1                                                                |

### Option 22 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 28 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.

■ 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 (optical de-/multiplexer 1:8; DWDM 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 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.

## Technical Data (cont.)

### 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...2300 MHz

### 1+1 Redundancy Options

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

- Available in 50 Ohm with SMA (f) or in 75 Ohm with F (f) connectors
- Available for 10, 47...1006 MHz or for DC, 950...2150 MHz
- 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

Return Loss >14 dB

Slot Requirements (F: Front, R: Rear)

- 2F+1R Slots for a single 1+1 Redundancy w/ Single Link Modules
- 4F+1R Slots for two 1+1 Redundancies with Single Link Modules
- 2F+1R Slots for two 1+1 Redundancies with Twin Modules

### N+1 Redundancy Options

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

- Available in 50 Ohm with SMA (f) or in 75 Ohm with F (f) connectors
- Available for 47...1006 MHz or for DC, 950...2150 MHz
- 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 is not allowed
- A mix with stand-alone optical Tx or Rx modules is allowed
- A mix with 1+1 redundancy options is not allowed
- Redundancy path Gain Compensation (RGC) to align the gain of the redundant link with the related main link in case of redundancy switching
- 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

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)

- 5F+1R Slots per 4+1 Redundancy with Single Link Modules
- 5F+2R Slots per two 4+1 Redundancies with Twin Modules
- 10F+2R Slots per 8+1 Redundancy with Single Link Modules
- 11F+4R Slots for two 8+1 Redundancies with Twin Modules
- 14F+3R Slots for a 12+1 Redundancy with Single Link Modules
- 15F+6R Slots for two 12+1 Redundancies with Twin Modules
- 18F+4R Slots for a 16+1 Redundancy with Single Link Modules
- 19F+8R Slots for two 16+1 Redundancies with Twin Modules

## Order Information

### Optribution® Chassis

|           |                                                                                                                |
|-----------|----------------------------------------------------------------------------------------------------------------|
| DEV 7113  | Intelligent Optribution® Chassis; 20 Slots                                                                     |
| Option 22 | Main Backup Swap                                                                                               |
| Option 28 | Automatic Switch Back                                                                                          |
| Option 34 | Chassis prepared for DWDM Modules, 16 Slots                                                                    |
| 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;<br>only in Conjunction with Option 55, 56 or 57 |
| Option 78 | Additional Web License 3-4 RU                                                                                  |

### 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...2300 MHz; 75 Ohm, F (f)                    |
| Option 42 Twin | Cabling for 4 Slots for Twin Modules; DC, 700...2300 MHz; 75 Ohm, F (f)   |
| Option 43      | Cabling for 4 Slots; DC, 700...2300 MHz; 75 Ohm, BNC (f)                  |
| Option 43 Twin | Cabling for 4 Slots for Twin Modules; DC, 700...2300 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 46/50/ <b>n</b> +1 | <b>n</b> +1 Redundancy Kit; 47...1006 MHz; 50 Ohm, SMA (f)      |
| Option 46/75/ <b>n</b> +1 | <b>n</b> +1 Redundancy Kit; 47...1006 MHz; 75 Ohm, F (f)        |
| Option 47/50/ <b>n</b> +1 | <b>n</b> +1 Redundancy Kit; DC, 950...2150 MHz; 50 Ohm, SMA (f) |
| Option 47/75/ <b>n</b> +1 | <b>n</b> +1 Redundancy Kit; DC, 950...2150 MHz; 75 Ohm, F (f)   |

## Contact

DEV Systemtechnik GmbH & Co. KG  
Grüner Weg 4A  
61169 Friedberg  
GERMANY  
Phone: +49 6031 6975 100  
Fax: +49 6031 6975 114  
info@dev-systemtechnik.com  
www.dev-systemtechnik.com

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*Technical specifications are subject to change*