

...designed for perfect signals

1:1 redundant RF-over-Fiber System

The 1:1 redundant FiberLinkplus RF-over-Fiber system is available in 1RU/19" and 4RU/19" rack mount design. It is designed for flexible, high quality, secure and stable optical transmission in a 1:1 redundant configuration for up to 16 RF signals (10MHz, IF, L-Band, Extended L-Band and Broadband) over a distance of up to 20km.

The 1RU/19" chassis can be populated with 2 TX/RX modules for a single 1:1 redundant or 4 TX/RX modules for a dual x 1:1 redundant operation. The 4RU/19" chassis can hold up to 32 TX/RX modules for max. 16 x 1:1 redundant operation.

All available chassis are designed to allow mixed population with TX/RX modules within the same chassis, while the chassis are equipped with corresponding RF ports (50Ohm or 75Ohm), which are used either as input or output port as per the individual configuration.

Once an active TX or RX module fails, the corresponding hot-standby TX or RX module becomes active thus ensuring an almost interference-free signal transmission at any time. Additionally, the system comes with beneficial features such as Laser/Link monitoring, status LED's at any TX/RX module, variable gain control, RF power monitoring, switchable LNB-supply*, hot-swappable TX/RX modules and 1:1 redundant dual power supply.

Configuration and monitoring is possible via the front panel LC-Display or 7" touchscreen while remote configuration is available via its Ethernet-Interface (WebGUI, SNMP).

This professional 1:1 redundant RF-over-Fiber system stands for perfect RF performance, secure signal distribution and is perfectly suited for Teleports, Satellite Earth Stations, Broadcasting and Cable/IPTV operations.

**depends on chassis type*



FEATURES & BENEFITS

- ▶ Versatile 1:1 redundant RF-over-Fiber system
- ▶ Supporting 10MHz, IF 40 – 200MHz, L-Band 950 – 2150MHz, Extended L-Band 850 – 2450MHz and Broadband 3,2GHz
- ▶ 1RU/19" rack mount chassis for max. 4 TX/RX modules (max. 2 x 1:1 redundant operation)
- ▶ 4RU/19" rack mount chassis for max. 32 TX/RX modules (max. 16 x 1:1 redundant operation)
- ▶ Manual and automatic redundancy switching
- ▶ Hot-swappable TX/RX modules

- ▶ Support of mixed TX/RX population
- ▶ Variable gain control at each TX/RX module
- ▶ RF power monitoring at each TX/RX module
- ▶ Switchable LNB-supply
- ▶ Status LED's for each TX/RX module
- ▶ Easy local & remote configuration & monitoring
- ▶ Laser, link, PSU & access status monitoring
- ▶ Excellent quality and superior RF performance
- ▶ 1:1 redundant dual power supply

TECHNICAL SPECIFICATIONS

1RU/19" and 4RU/19" Chassis

| | |
|---|---|
| Dimensions: | 1RU/19" (260mm deep) or 4RU/19" (300mm deep) |
| Power Supply: | 85 – 265V, 50/60Hz, 1:1 redundant (hot-swappable) |
| Power Consumption: | <20W (1RU/19"), <600W (4RU/19") |
| Frequency Range: | FLCR1111 <i>plus</i> , FLCR1211 <i>plus</i> and FLCR41611 <i>plus</i> 800 – 2500MHz FLCR1111B <i>plus</i> , FLCR1211B <i>plus</i> and FLCR41611B <i>plus</i> 10/40 – 3200MHz |
| Insertion Loss: | -4dB @ all paths |
| TX/RX Module Capacity: | 2 slots for 1 x 1:1 redundant operation @ 1RU/19" chassis 4 slots for max. 2 x 1:1 redundant operation @ 1RU/19" chassis 32 slots for max. 16 x 1:1 redundant operation @ 4RU/19" chassis |
| RF Connectors @ Chassis: | 50Ohm SMA(f) or 75Ohm F(f) |
| Local Configuration: | LC-Display/keypads or 7" colored touchscreen display |
| Remote Configuration: | Ethernet (WebGUI, SNMPv2c) |
| LNB Bypass: | FLCR1111 <i>plus</i> , FLCR1211 <i>plus</i> and FLCR41611 <i>plus</i> = YES (not for broadband operation) FLCR1111B <i>plus</i> , FLCR1211B <i>plus</i> and FLCR41611B <i>plus</i> = NO |
| MTBF: | |
| FLCR1111<i>plus</i>/FLCR1211<i>plus</i>: | >400kHrs at 25°C / 24 hrs. |
| FLCR11611<i>plus</i>: | >207kHrs at 25°C / 24 hrs. |
| Operating Temperature: | 0°C to 45°C |
| Storage Temperature: | -10°C to 70°C |
| Humidity: | 90%, non-condensing |
| RoHS: | Compliant |

Link Specifications (IF 200MHz, L-Band 950 – 2150MHz & Extended L-Band 850 – 2450MHz)

| | |
|--------------------------------|------------------|
| Modulation Type: | Direct |
| F/O Diff. EFF: | 0,15 to 0.17 W/A |
| Dynamic Range: | -50dBm to 0dBm |
| Max. Link Gain: | 24dB (±1,0dB) |
| Gain Stability: | < ±0,3dB |
| Group Delay Distortion: | <2ns |
| Nominal RF Input Level: | 0dBm |
| Noise Figure: | < 24dB |
| SFDR: | -107dB Hz typ. |
| RF Output Power: | +13dBm max. |
| IMA3 @ -10dBm: | < -60dBc |

Link Specifications Broadband (50 – 3200MHz)

| | |
|--------------------------------|------------------|
| Modulation Type: | Direct |
| F/O Diff. EFF: | 0,15 to 0.17 W/A |
| Max. Link Gain: | 26dB (±1,0dB) |
| Gain Stability: | < ±0,3dB |
| Group Delay Distortion: | <2ns |
| Nominal RF Input Level: | 0dBm |
| Noise Figure: | < 24dB |
| SFDR: | -101dB Hz typ. |
| IMA3 @ -10dBm: | < -50dBc |
| Input Power Dyn. Range: | -50 to +10dBm |
| Output IP3: | +30dBm |
| Output IP1: | +5dBm |



10MHz Application

TX Module 10MHz FLT10plus and QTX10

| | |
|----------------------------------|---|
| Frequency Range: | 10MHz |
| RF Output Connector: | Via Chassis RF I/O ports (50Ohm SMA, 75Ohm F) |
| Optical Output Connector: | SC/APC |
| Fiber Type: | Single mode 9/125 |
| RF Input Power Level: | +15dBm max. (damage level) |
| Return Loss: | 25dB typ. |
| Laser Type: | DFB with Isolator |
| Laser Class: | 1M |
| Operating Wavelength: | 1310nm ±5nm |
| Optical Output Power: | +3dBm min. |
| Status LED's: | OK, Fail, Stand-By |
| Operating Temperature: | 0°C to 45°C |
| Storage Temperature: | -10°C to 70°C |
| Humidity: | 90%, non-condensing |
| RoHS: | Compliant |

RX Module 10MHz FLR10plus and QRX10

| | |
|-----------------------------------|---|
| Frequency Range: | 10MHz |
| Optical Input Connector: | SC/APC |
| Fiber Type: | Single mode 9/125 |
| RF Output Connector: | Via Chassis RF I/O ports (50Ohm SMA, BNC* or 75Ohm F, BNC*) |
| Optical Input Power Level: | -5dBm (min. optical sensitivity) |
| Return Loss: | 25dB typ. |
| Operating Wavelength: | 1310nm – 1560nm |
| RF Output Power: | +10dBm max. |
| Status LED's: | OK, Fail, Stand-By |
| Operating Temperature: | 0°C to 45°C |
| Storage Temperature: | -10°C to 70°C |
| Humidity: | 90%, non-condensing |
| RoHS: | Compliant |

40MHz – 200MHz Application

TX Module IF 40 – 200MHz FLT251plus

| | |
|----------------------------------|---|
| Frequency Range: | 40 – 200MHz (IF) |
| RF Input Connector: | Via Chassis RF I/O ports, Chassis Type FLCR41611Bplus |
| Measurement Port: | Front side -20dB |
| Optical Output Connector: | SC/APC |
| Fiber Type: | Single mode 9/125 |
| RF Input Power Level: | +16dBm max. (damage level) |
| Frequency Response: | ±0,5dB max. |
| Return Loss: | 25dB typ. |
| OIP3: | +28dBm |
| SFDR: | < -105dB/Hz |
| Noise Figure: | 12dB |
| Laser Type: | DFB with Isolator, 35dB Isolation |



| | |
|-------------------------------|---|
| Laser Class: | 1M |
| Operating Wavelength: | 1310nm ±5nm |
| Optical Output Power: | +3dBm min. |
| Variable Gain Control: | -12dB to +12dB (1dB steps); -16 to +8dB in 1:1 Configuration; -13 to +11dB in N+M Configuration |
| RF Power Monitoring: | 70dB dynamic range |
| Status LED's: | OK, Fail, Stand-By |
| Operating Temperature: | 0°C to 45°C |
| Storage Temperature: | -10°C to 70°C |
| Humidity: | 90%, non-condensing |
| RoHS: | Compliant |

RX Module IF 40 – 200MHz FLR251plus

| | |
|-----------------------------------|--|
| Frequency Range: | 40 – 200MHz (IF) |
| Optical Input Connector: | SC/APC |
| Measurement Port: | Front side -20dB |
| Fiber Type: | Single mode 9/125 |
| RF Output Connector: | Via Chassis RF I/O ports, Chassis Type FLCR41611Bplus |
| Optical Input Power Level: | -10dBm (min. optical sensitivity) |
| Frequency Response: | ±0,5dB max. |
| Return Loss: | 20dB typ. |
| OIP3: | +28dBm |
| SFDR: | < -105dB/Hz |
| Noise Figure: | 12dB |
| Operating Wavelength: | 1310nm – 1560nm |
| RF Output Power: | +10dBm max. |
| Variable Gain Control: | 0dB to +20dB (1dB steps); 0 to +16dB in 1:1 Configuration; 0 to +19dB in N+M Configuration |
| RF Power Monitoring: | 70dB dynamic range |
| Status LED's: | OK, Fail, Stand-By |
| Operating Temperature: | 0°C to 45°C |
| Storage Temperature: | -10°C to 70°C |
| Humidity: | 90%, non-condensing |
| RoHS: | Compliant |

L-Band and Extended L-Band Application

TX Module (L-Band 950 – 2150MHz & Extended L-Band 850 – 2450MHz) FLT2150, FLT2151, FLT2450, FLT2451

| | |
|----------------------------------|--|
| Frequency Range: | 950 – 2150MHz (L-Band) & 850 – 2450MHz (extended L-Band) |
| RF Input Connector: | Via Chassis RF I/O ports |
| Measurement Port: | Front side -20dB (only FLT2151 and FLT2451) |
| Optical Output Connector: | SC/APC |
| Fiber Type: | Single mode 9/125 |
| RF Input Power Level: | +15dBm max. (damage level) |
| Frequency Response: | ±0,5dB typ., ±1,0dB max. |
| Return Loss: | 15dB typ. |
| OIP3: | +26dBm |
| SFDR: | < -102dB/Hz |
| Noise Figure: | 12dB |
| Laser Type: | DFB with Isolator |
| Laser Class: | 1M |

| | |
|-------------------------------|---|
| Operating Wavelength: | 1310nm ±5nm |
| Optical Output Power: | +3dBm min. |
| Variable Gain Control: | -12dB to +12dB (1dB steps); -16 to +8dB in 1:1 Configuration; -13 to +11dB in N+M Configuration |
| Switchable LNB-Supply: | 13/15/18VDC, 22kHz tone, 450mA max (current monitoring) |
| RF Power Monitoring: | 70dB dynamic range |
| Status LED's: | OK, Fail, Stand-By |
| Operating Temperature: | 0°C to 45°C |
| Storage Temperature: | -10°C to 70°C |
| Humidity: | 90%, non-condensing |
| RoHS: | Compliant |

RX Module (L-Band 950 – 2150MHz & Extended L-Band 850 – 2450MHz) FLR2150, FLR2151, FLR2450, FLR2451

| | |
|-----------------------------------|--|
| Frequency Range: | 950 – 2150MHz (L-Band) & 850 – 2450MHz (extended L-Band) |
| Optical Input Connector: | SC/APC |
| Measurement Port: | Front side -20dB (only FLR2151 and FLR2451) |
| Fiber Type: | Single mode 9/125 |
| RF Output Connector: | Via Chassis RF I/O ports, Chassis Type FLCR41611 <i>plus</i> or FLCR41611B <i>plus</i> |
| Optical Input Power Level: | -5dBm (min. optical sensitivity) |
| Frequency Response: | ±0,5dB typ., ±1,0dB max. |
| Return Loss: | 16dB typ. |
| OIP3: | +29dBm |
| SFDR: | < -102dB/Hz |
| Noise Figure: | 12dB |
| Operating Wavelength: | 1310nm – 1560nm |
| RF Output Power: | +10dBm max. |
| Variable Gain Control: | 0dB to +24dB (1dB steps); 0 to +12dB in 1:1 Configuration; 0 to +23dB in N+M Configuration |
| RF Power Monitoring: | 70dB dynamic range |
| Status LED's: | OK, Fail, Stand-By |
| Operating Temperature: | 0°C to 45°C |
| Storage Temperature: | -10°C to 70°C |
| Humidity: | 90%, non-condensing |
| RoHS: | Compliant |

Broadband Application

TX Module Broadband (50 – 3200MHz), FLT3251

| | |
|----------------------------------|--|
| Frequency Range: | 50 – 3200MHz |
| RF Input Connector: | Via Chassis RF I/O ports, only with FLCR41611B <i>plus</i> Chassis |
| Measurement Port: | Front side -20dB |
| Optical Output Connector: | SC/APC |
| Fiber Type: | Single mode 9/125 |
| RF Input Power Level: | +10dBm max. (damage level) |
| Frequency Response: | 50MHz – 850MHz ±0,5dB typ., ±1,0dB max. 850MHz – 2450MHz ±1,0dB typ., ±1,5dB max. 2450MHz – 3200MHz ±1,5dB typ., ±2,0dB max. |
| Return Loss: | 14dB typ. |
| OIP3: | +25dBm |
| SFDR: | < -101dB/Hz |
| Noise Figure: | 12dB |
| Laser Type: | DFB with Isolator |



| | |
|-------------------------------|---|
| Laser Class: | 1M |
| Operating Wavelength: | 1310nm ±5nm |
| Optical Output power: | +3dBm min. |
| Variable Gain Control: | -12dB to +12dB (1dB steps); -16 to +8dB in 1:1 Configuration; -13 to +11dB in N+M Configuration |
| RF Power Monitoring: | 70dB dynamic range |
| Status LED's: | OK, Fail, Stand-By |
| Operating Temperature: | 0°C to 45°C |
| Storage Temperature: | -10°C to 70°C |
| Humidity: | 90%, non-condensing |
| RoHS: | Compliant |

RX Module Broadband (50 – 3200MHz), FLR3251

| | |
|-----------------------------------|--|
| Frequency Range: | 50 – 3200MHz |
| Optical Input Connector: | SC/APC |
| Measurement Port: | Front side -20dB |
| Fiber Type: | Single mode 9/125 |
| RF Output Connector: | Via Chassis RF I/O ports, only with FLCR41611Bplus Chassis |
| Optical Input Power Level: | ~ -10dBm (min. optical sensitivity) |
| Frequency Response: | 50MHz – 850MHz ±0,5dB typ., ±1,0dB max. 850MHz – 2450MHz ±1,0dB typ., ±1,5dB max. 2450MHz – 3200MHz ±1,5dB typ., ±2,0dB max. |
| Return Loss: | 16dB typ. |
| OIP3: | +27dBm |
| SFDR: | < -101dB/Hz |
| Noise Figure: | 12dB |
| Operating Wavelength: | 1310nm – 1560nm |
| RF Output Power: | +10dBm max. |
| Variable Gain Control: | 0dB to +16dB (1dB steps); 0 to +12dB in 1:1 Configuration; 0 to +15dB in N+M Configuration |
| RF Power Monitoring: | 70dB dynamic range |
| Status LED's: | OK, Fail, Stand-By |
| Operating Temperature: | 0°C to 45°C |
| Storage Temperature: | -10°C to 70°C |
| Humidity: | 90%, non-condensing |
| RoHS: | Compliant |



ORDER INFORMATION

| Chassis | | | | | | |
|--|--------------------|--|--------------|----------------------|------------|--------------------------------------|
| Type | Type-No.: | Short Description | Chassis Size | Capacity TX/RX Slots | Max. Links | RF Coax I/O Connectors |
| FLCR1111 <i>plus</i> -50S FLCR1111 <i>plus</i> -75F | 9000918 9001320 | 1RU/19" modular TX/RX rack mount chassis, 2 TX/RX slots, 1 x 1:1 TX/RX redundancy, 1 RF coax I/O, local configuration via LC-Display/keypad, remote configuration via Ethernet-Interface (WebGUI, SNMP), 1:1 redundant dual power supply | 1RU/19" | 1 x 1:1 redundancy | 1 | 2 x 50Ohm SMA(f) 2 x 75Ohm F(f) |
| FLCR1111B <i>plus</i> -50S | on request | 1RU/19" modular TX/RX rack mount chassis, Broadband 10/40 – 3200MHz, no LNB Bypass, 2 TX/RX slots, 1 x 1:1 TX/RX redundancy, 1 RF coax I/O, local configuration via LC-Display/keypad, remote configuration via Ethernet-Interface (WebGUI, SNMP), 1:1 redundant dual power supply | 1RU/19" | 1 x 1:1 redundancy | 1 | 2 x 50Ohm SMA(f) |
| FLCR1211 <i>plus</i> -50S FLCR1211 <i>plus</i> -75F | 9000939 9000986 | 1RU/19" modular TX/RX rack mount chassis, 4 TX/RX slots, 2 x 1:1 TX/RX redundancy, 2 RF coax I/O's, local configuration via LC-Display/keypad, remote configuration via Ethernet-Interface (WebGUI, SNMP), 1:1 redundant dual power supply | 1RU/19" | 2 x 1:1 redundancy | 2 | 4 x 50Ohm SMA(f) 4 x 75Ohm F(f) |
| FLCR1211B <i>plus</i> -50S | 9001007 | 1RU/19" modular TX/RX rack mount chassis, Broadband 10/40 – 3200MHz, no LNB Bypass, 4 TX/RX slots, 2 x 1:1 TX/RX redundancy, 2 RF coax I/O's, local configuration via LC-Display/keypad, remote configuration via Ethernet-Interface (WebGUI, SNMP), 1:1 redundant dual power supply | 1RU/19" | 2 x 1:1 redundancy | 2 | 4 x 50Ohm SMA(f) |
| FLCR41611 <i>plus</i> -50S FLCR41611 <i>plus</i> -75F | 9000889 9000987 | 4RU/19" modular TX/RX rack mount chassis, 32 TX/RX slots, 16 x 1:1 TX/RX redundancy, 16 RF coax I/O's, local configuration via touchscreen, remote configuration via Ethernet-Interface (WebGUI, SNMP), 1:1 redundant dual power supply | 4RU/19" | 16 x 1:1 redundancy | 16 | 16 x 50Ohm SMA(f) 16 x 75Ohm F(f) |
| FLCR41611B <i>plus</i> -50S | 9001004 | 4RU/19" modular TX/RX rack mount chassis Broadband 10/40 – 3200MHz, no LNB Bypass, 32 TX/RX slots, 16 x 1:1 TX/RX redundancy, 16 RF coax I/O's, local configuration via touchscreen, remote configuration via Ethernet-Interface (WebGUI, SNMP), 1:1 redundant dual power supply | 4RU/19" | 16 x 1:1 redundancy | 16 | 16 x 50Ohm SMA(f) |

TX & RX Modules 10MHz

| Type | Type-No.: | Short Description | Optical I/O Connector | Frequency Range |
|-----------------------|-----------|---|-----------------------|-----------------|
| FLT10 <i>plus</i> | 9001090 | Optical Transmitter TX-Module, 10MHz, RF coax Input via FLC(R) chassis RF coax I/O panel, Optical Output SC/APC | SC/APC | 10MHz |
| FLR10 <i>plus</i> | 9001091 | Optical Receiver RX-Module, 10MHz, RF coax Output via FLC(R) chassis RF coax I/O panel, Optical Input SC/APC, | SC/APC | 10MHz |
| QTX10-50S 10MHz TX | 9001220 | Optical 10MHz TX module for QLink series, RF input 50Ohm SMA(f), Optical Output SC/PC | SC/APC | 10MHz |
| QRX10-50S 10MHz RX | 9001219 | Optical 10MHz RX module for QLink series, Optical input SC/APC, RF output 50Ohm SMA(f) | SC/APC | 10MHz |



TX & RX Module IF 40 – 200MHz

| Type | Type-No.: | Short Description | Optical I/O Connector | Frequency Range |
|------------|-----------|---|-----------------------|-----------------|
| FLT251plus | 9000914 | Optical Transmitter TX-Module, 40 – 200MHz, RF coax Input via FLC(R) chassis RF coax I/O panel, Optical Output SC/APC, variable gain control, switchable LNB-supply, RF power monitoring, front side measurement port -20dB | SC/APC | 40 – 200MHz |
| FLR251plus | 9000915 | Optical Receiver RX-Module, 40 – 200MHz, Optical Input SC/APC, RF coax Output via FLC(R) chassis RF coax I/O panel, variable gain control, RF power monitoring, front side measurement port -20dB | SC/APC | 40 – 200MHz |

TX & RX Module L-Band 950 – 2150MHz

| Type | Type-No.: | Short Description | Optical I/O Connector | Frequency Range |
|-------------|-----------|--|-----------------------|-----------------|
| FLT2150plus | 9000887 | Optical Transmitter TX-Module, 950 – 2150MHz, RF coax Input via FLC(R) chassis RF coax I/O panel, Optical Output SC/APC, variable gain control, switchable LNB-supply, RF power monitoring | SC/APC | 950 – 2150MHz |
| FLR2150plus | 9000888 | Optical Receiver RX-Module, 950 – 2150MHz, Optical Input SC/APC, RF coax Output via FLC(R) chassis RF coax I/O panel, variable gain control, RF power monitoring | SC/APC | 950 – 2150MHz |

TX & RX Module L-Band 950 – 2150MHz with front side measurement port -20dB

| Type | Type-No.: | Short Description | Optical I/O Connector | Frequency Range |
|-------------|-----------|---|-----------------------|-----------------|
| FLT2151plus | 9001077 | Optical Transmitter TX-Module, 950 – 2150MHz, RF coax Input via FLC(R) chassis RF coax I/O panel, Optical Output SC/APC, variable gain control, switchable LNB-supply, RF power monitoring, front side measurement port -20dB | SC/APC | 950 – 2150MHz |
| FLR2151plus | 9001078 | Optical Receiver RX-Module, 950 – 2150MHz, Optical Input SC/APC, RF coax Output via FLC(R) chassis RF coax I/O panel, variable gain control, RF power monitoring, front side measurement port -20dB | SC/APC | 950 – 2150MHz |

TX & RX Module Extended L-Band 850 – 2450MHz

| Type | Type-No.: | Short Description | Optical I/O Connector | Frequency Range |
|-------------|-----------|--|-----------------------|-----------------|
| FLT2450plus | 9000886 | Optical Transmitter TX-Module, 850 – 2450MHz, RF coax Input via FLC(R) chassis RF coax I/O panel, Optical Output SC/APC, variable gain control, switchable LNB-supply, RF power monitoring | SC/APC | 850 – 2450MHz |
| FLR2450plus | 9000885 | Optical Receiver RX-Module, 850 – 2450MHz, Optical Input SC/APC, RF coax Output via FLC(R) chassis RF coax I/O panel, variable gain control, RF power monitoring | SC/APC | 850 – 2450MHz |



TX & RX Module Extended L-Band 850 – 2450MHz with front side measurement port -20dB

| Type | Type-No.: | Short Description | Optical I/O Connector | Frequency Range |
|-------------|-----------|---|-----------------------|-----------------|
| FLT2451plus | 9001080 | Optical Transmitter TX-Module, 850 – 2450MHz, RF coax Input via FLC(R) chassis RF coax I/O panel, Optical Output SC/APC, variable gain control, switchable LNB-supply, RF power monitoring, front side measurement port -20dB | SC/APC | 850 – 2450MHz |
| FLR2451plus | 9001081 | Optical Receiver RX-Module, 850 – 2450MHz, Optical Input SC/APC, RF coax Output via FLC(R) chassis RF coax I/O panel, variable gain control, RF power monitoring, front side measurement port -20dB | SC/APC | 850 – 2450MHz |

TX & RX Module Broadband 50MHz – 3200MHz

| Type | Type-No.: | Short Description | Optical I/O Connector | Frequency Range |
|-------------|-----------|---|-----------------------|-----------------|
| FLT3251plus | 9001098 | Optical Transmitter TX-Module, 50 – 3200MHz, RF coax Input via FLC(R) chassis RF coax I/O panel, Optical Output SC/APC, variable gain control, RF power monitoring, front side measurement port -20dB | SC/APC | 50 – 3200MHz |
| FLR3251plus | 9001097 | Optical Receiver RX-Module, 50 – 3200MHz, Optical Input SC/APC, RF coax Output via FLC(R) chassis RF coax I/O panel, variable gain control, RF power monitoring, front side measurement port -20dB | SC/APC | 50 – 3200MHz |

OPTIONS

| Type | Type-No.: | Short Description |
|----------------------|-----------|--|
| FLCR-10MHz-11 Option | 9001305 | 10MHz link option, 1:1 redundant 10MHz link operation, for FLCR-ODA0811plus outdoor enclosure and FLCR41611plus 4RU/19" rack mount indoor chassis, optical TX (QTX10) and/or RX (QRX19) modules not included |