

RedLink RF-over-Fiber System

FLCR Optical TX/RX chassis (1:1 TX/RX redundancy)

Made
in
Germany

GENERAL

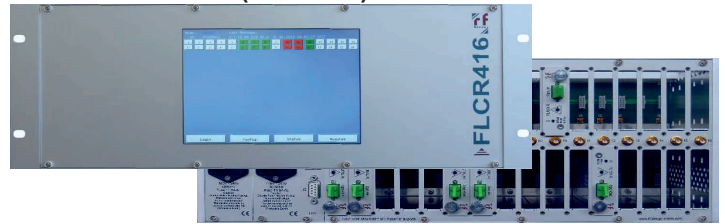
The RedLink RF-over-Fiber redundant chassis FLCR101 (1RU/19") and FLCR416 (4RU/19") allow flexible, high quality and absolute secure optical transmission of max. 16 L-Band, 10MHz* or IF signals in a 1:1 redundant operation over a distance of up to 10 km. The 1RU/19" FLCR101 chassis can be equipped with 2 optical modules (TX/RX) while one is actively operating and 1 hot-standby so to assure a 1:1 optical transmission redundancy. The 3RU/19" FLCR416 chassis can hold up to 32 optical modules (TX/RX) while 16 are actively operating and 16 hot-standby assuring a 1:1 optical transmission redundancy. The chassis are designed to allow mixed configurations for insertion of L-Band, 10MHz* or IF TX and/or RX modules within the same chassis.

Furthermore the chassis are equipped with corresponding RF ports, acting either as input or output port as per the individual configuration. The redundancy switching can be realized manually via the front panel LC-Display/touchscreen and remotely via the Ethernet-Interface (http/WebGUI, SNMP). The RedLink system features an automatic redundancy switching as per preconfigured adjustments. Once an active TX or RX module fails the corresponding hot-standby TX/RX module becomes active manually or automatically assuring interruption free signal transmission. The redundant RedLink system features a front side LC-Display or 8" touchscreen as well as remote interfaces for remote access and configuration. Besides this the Redlink features Laser, Link and RF power monitoring, gain adjustment and switchable LNB-supply.

FLCR101 Cassis (1RU/19")



FLCR416 Cassis (4RU/19")



FEATURES

- 1RU/19" optical transmission chassis
- Professional, stable and secure signal transmission (for L-Band, IF & 10MHz* frequency-range)
- 1:1 TX/RX redundancy (hot-swappable)
- 1 active RF signal over fiber transmission
- Insertion of max. 6 TX/RX modules (1 active/1 hot-standby)
- Manual and automatic redundancy switching
- 1:1 redundant dual power-supply (hot-swappable)
- Front side LC-Display & keypads for local configuration
- Remote access and configuration via WebGUI, SNMP
- LED's displaying laser, link, psu & access status
- Optionally with potential free error-contact (DB9 female), 3 status levels (unit fail, power-supply fail, module fail)

*Upon request

SPECIFICATIONS

- **Mechanical dimension:** 1RU/19", 260mm deep
- **Power-supply:** 85...230V, 50/60Hz (1:1 redundant)
- **Power consumption:** <10W
- **Frequency-ranges:** L-Band 950...2150MHz
IF 40...200MHz / 10MHz *
- **Optical module slots:** 2 (1 active & 1 hot-standby TX/RX)
- **RF Inputs/Outputs:** 1
- **RF-Connectors:** 50Ohm SMA(f) or 75Ohm F(f)
- **RoHS:** Compliant

OPTIONS

- **Option 103:** potential free error-contact (DB9 female), 3 status levels (unit fail, power-supply fail, module fail)

FEATURES

- 4RU/19" 1:1 redundant optical TX/RX chassis
- Professional, stable and secure signal transmission (for L-Band, IF & 10MHz* frequency-range)
- 1:1 TX/RX redundancy (hot-swappable)
- Up to 16 active RF signals over fiber transmission
- Insertion of max. 32 TX/RX modules (16 active/16 hot-standby)
- Supports mixed configurations for IF/L-Band & TX/RX
- Manual and automatic redundancy switching
- 1:1 power-supply redundancy (hot-swappable)
- Front side 8" color touchscreen display
- Remote configuration via WebGUI, SNMP
- LED's displaying laser, link, psu & access status
- Optionally with potential free error-contact (DB9 female), 3 status levels (unit fail, power-supply fail, module fail)

*Upon request

SPECIFICATIONS

- **Mechanical dimension:** 4RU/19", 295mm deep
- **Power-supply:** 85...230V, 50/60Hz (1:1 redundant)
- **Power consumption:** <100W
- **Frequency-ranges:** L-Band 950...2150MHz
IF 40...200MHz / 10MHz *
- **Optical module slots:** 32 (16 active & 16 hot-standby TX/RX)
- **RF Inputs/Outputs:** 16
- **RF-Connectors:** 50Ohm SMA(f) or 75Ohm F(f)
- **RoHS:** Compliant

OPTIONS

- **Option 103:** potential free error-contact (DB9 female), 3 status levels (unit fail, power-supply fail, module fail)

RedLink RF-over-Fiber System

Optical TX (Transmit) & RX (Receive) modules



FLTXI-R/FLRXI-R Modules (IF)

FLTX10M-R/FLRX10M-R Modules (10MHz)



FLTXL-R/FLRXL-R Modules (L-Band)



FLTXI-R Optical Transmitter IF

FLTX10M-R Optical Transmitter 10MHz* (*upon request)

- Frequency range: 40...200MHz (FLTXI-R)
10MHz (FLTX10M-R)
- RF Input connector: via Chassis RF I/O ports
- RF Input level: 0dBm max.
10dBm max. (FLTX10M-R)
- Frequency response: $\pm 0,5\text{dB typ./} \pm 1,0\text{dB max.}$
- Return loss: 18dB (Δ VSWR: 1:1.29)
- Optical Output connectors: E2000 or SC/APC
- Operating wavelength: 1310nm
- Optical power: +5dBm
+6dBm
- Ip1: all ports 18dB
- Port matching: all ports 18dB
- Gain adjustment*: -15...+15dB* (*not for 10MHz)
- RF power monitoring: 60dB
- Status LED's: OK, Fail, Stand-by
- Operating temperature: 0...45°C
- Storage temperature: -10°C...70°C
- Humidity: 90% non-condensing
- RoHS: Compliant

FLTXL-R Optical Transmitter L-Band

- Frequency range: 950...2150MHz
- RF Input connector: via Chassis RF I/O ports
- RF Input level: 0dBm max.
- Frequency response: $\pm 0,5\text{dB typ./} \pm 1,0\text{dB max.}$
- Return loss: 16dB (Δ VSWR: 1:1.38)
- Optical Output connectors: E2000 or SC/APC
- Operating wavelength: 1310nm
- Optical power: +5dBm
- Gain adjustment: -15...+15dB
- RF power monitoring: 70dB
- Status LED's: OK, Fail, Stand-by
- LNB supply: 13/15/18V, 22kHz, 400mA
- Operating temperature: 0...45°C
- Storage temperature: -10°C...70°C
- Humidity: 90% non-condensing
- RoHS: Compliant

FLRXI-R Optical Receiver IF

FLRX10M-R Optical Receiver 10MHz* (*upon request)

- Frequency range: 40...200MHz (FLRXI-R)
10MHz (FLRX10M-R)
- Optical Input connectors: E 2000 or SC/APC
- Operating wavelength: 1310 - 1560nm
- Optical Input level: 0dBm max.
- RF Output connector: via Chassis RF I/O ports
- Frequency response: $\pm 0,5\text{dB typ./} \pm 1,0\text{dB max.}$
- Return loss: 18dB (Δ VSWR: 1:1.29)
- Gain adjustment*: -15...+15dB* (*not for 10MHz)
- RF power monitoring: 60dB
- Status LED's: OK, Fail, Stand-by
- Operating temperature: 0...45°C
- Storage temperature: -10°C...70°C
- Humidity: 90% non-condensing
- RoHS: Compliant

FLRXL-R Optical Receiver L-Band

- Frequency range: 950...2150MHz
- Optical Input connectors: E 2000 or SC/APC
- Operating wavelength: 1310 - 1560nm
- Optical Input level: +10dBm max.
- RF Output connectors: via Chassis RF I/O ports
- Frequency response: $\pm 0,5\text{dB typ./} \pm 1,0\text{dB max.}$
- Return loss: 16dB (Δ VSWR: 1:1.38)
- Gain adjustment: -15...+15dB
- RF power monitoring: 70dB
- Status LED's: OK, Fail, Stand-by
- Operating temperature: 0...45°C
- Storage temperature: -10°C...70°C
- Humidity: 90% non-condensing
- RoHS: Compliant

Link Specifications (10MHz & IF modules)

- IMA3 @ -10dBm @ 0dB Gain: < -66dBc
- IP1: +10dBm
- Noise Figure: < 23dB
- Spurious free dynamic range: 109dBm/Hz
- RF output power: +10dBm max.

Link Specifications (L-Band modules)

- IMA3 @ -10dBm: < -60Bc
- IP1: +15dBm
- Noise Figure: < 20dB
- Spurious free dynamic range: 106dBm/Hz
- RF output power: +10dBm max.