

# FlexLink K4 Switch-Matrix

L-Band Switch-Matrix, 32:32...128:128

Made  
in  
Germany

## GENERAL

The FlexLink K4 features a professional, flexible and scalable L-Band switch-matrix system that can be configured from 4:4 to 128:128 inputs/outputs (expandable in increments of 4) while both the Master and Slave-chassis can be equipped with up to 32:32 inputs/outputs. The FlexLink K4 performs as a L-Band switching/routing platform where any input can be switched/routed to any or all outputs. It is designed for today's and future signal management requirements and offers a maximum in flexibility as well as a space and cost efficient L-Band signal management solution with very low power-consumption and excellent RF-performance. All matrix boards (input/output switch-boards) are hot-swappable and equipped with cascading in- and output interfaces giving the possibility to expand the system at any time without the need of any other additional devices, allowing the users to expand as they grow. Furthermore the system supports to mix the in- and output impedances with 50Ohm, 75Ohm and Fiber-optic\* connectors (\*optical connectors only for input switch-boards). Due to its modular design various in- and output configurations from 4:4...32:32 and (4RU/19") to 128:128 are possible while it is easily expandable in increments of 4 inputs/outputs. Therefore many different in- output configurations (like 4:8, 8:16, 16:16, 32:32, 32:48, 32:64, 64:96, 128:128...) are available. The FlexLink K4 is ideal for flexible signal assignment and perfectly suited for RF-distribution applications in Teleports, Satellite earth-stations as well as broadcasting and CATV/IPTV facilities. The FlexLink K4 Switch-Matrix system assures excellent and stable RF-performance, especially at Isolation and frequency response while it also features gain-control and 1:1 power-supply redundancy (hot-swappable). Local access and configuration can be realized via the master-chassis 8" touch-screen LC-Display while remote access and configuration of a complete matrix-system can be done via its ethernet-interface (WEB/http, SNMPv2c).

### Master Switch-Matrix Chassis



### Slave Switch-Matrix Chassis



## FEATURES

- Space saving design 4RU/19" (modular master/slave concept)
- Robust and well engineered mechanical construction for excellent RF performance, low power consumption and low heat generation
- Flexible and scalable modular design, 4:4...32:32 (4RU/19") easy expandable e.g. to 128:128 in increments of 4
- Unique cascading concept for future expansion
- Integrated cascading-interfaces 50Ohm SMA(f), allowing to expand the matrix-system without any other additional devices
- Hot-swappable switch-boards
- Coax inputs & outputs 50/75Ohm SMA(f), F(f) or BNC(f) and optical inputs possible, supports mixed input & output configurat.
- Input and output routing combination freely configurable
- No routing limitation via master/slave conception
- Input RF-power monitoring for all inputs
- Gain-control/adjustment
- 1:1 redundant power supply (hot swappable)
- Swappable CPU/LPC (Master and/or Slave control board)
- Front side 8" touchscreen LC-Display for local access/control
- Ethernet interface for remote access/configuration (WEB/http, SNMPv2c)
- Admin & user login protection

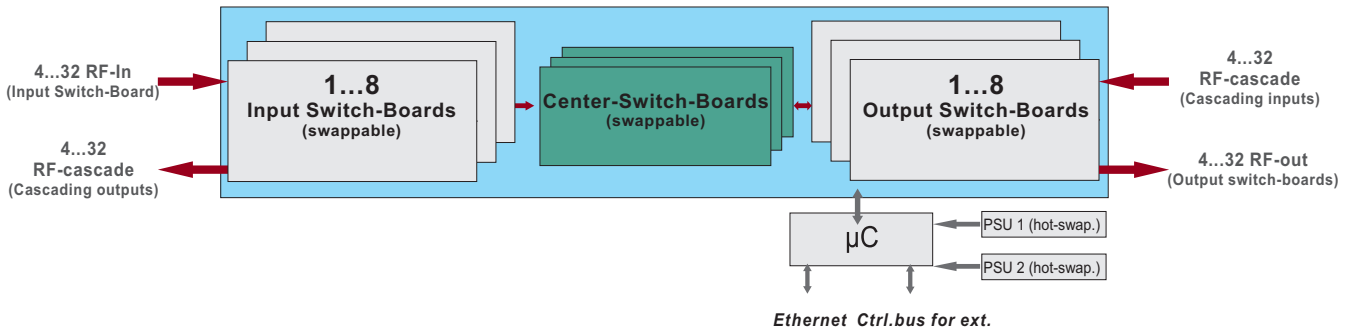
## TECHNICAL SPECIFICATIONS

- **Dimensions:** 4RU/19" (Master/Slave)
- **Matrix configurat. variants:** 4:4 to 32:32 (4RU/19") expandable to e.g. 128:128 in increments of 4
- **Switching elements:** Solid-state switches
- **Power supply:** 85...230V, 50/60Hz  
1:1 redundant (hot-swappable)
- **Power consumption:** < 150W (@ 32:32 configuration)
- **Frequency range:** 950...2150MHz (L-Band)
- **IMA3 @ -10dBm:** < -60dBc
- **Input P1dB (IP1):** +10dBm
- **Output IP3:** +18dBm
- **Noise Figure:** 15dB
- **Insertion Loss:** 0dB...±1dB max.
- **Gain adjustment:** ±10dB
- **Frequency response:** ± 2dB typ. full band
- **Isolation:** ≥60dB min. (all ports), 70dB typ.
- **Max RF Input/Output power:** -10dBm, 0dBm max.
- **Input/Output Return Loss:** 14dB min., 16dB typ.
- **In- & Output connectors** 50Ohm SMA(f) or 50Ohm BNC(f)  
75 Ohm F(f) or 75Ohm BNC(f)
- **Optical fiber input connect.:** E2000 or SC/APC\*  
(1310...1560nm) \*upon request
- **Local access/control:** 8" Touch-screen LC-Display
- **Remote access/control:** Ethernet (Web/http, SNMPv2c)
- **Serial Interface:** RS-232
- **Master/Slave Chassis cascading/comm.-interface:** RS485
- **Environmental conditons:** **Operating Temp.:** 00°C...+45°C  
**Storage Temp.:** -10°C...+70°C  
**Humidity:** 90% non condens.

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## SPECIFICATIONS K4 CHASSIS

### FlexLink K4m-32:32 Master Switch-Matrix chassis

- **Dimensions:** 4RU/19"
- **Input & output capacity:** 4:4 to 32:32 (expansion via Slave-chassis)
- **Power supply:** 2 x 85...230V, 50/60Hz  
1:1 redundant (hot-swappable)
- **Master CPU ctrl.-board:** Swappable
- **Internal center-switches:** Embedded (swappable)
- **Access/Control:** 8" Touch-scrreen LC-Display  
Ethernet/SNMPv2c
- **Master/Slave cascading/com-interface:** RS485

### FlexLink K4s-32:32 Slave Switch-Matrix chassis

- **Dimensions:** 4RU/19"
- **Input & output capacity:** 4:4 to 32:32
- **Power supply:** 2 x 85...230V, 50/60Hz  
1:1 redundant (hot-swappable)
- **Slave CPU ctrl.-board:** Swappable
- **Internal center-switches:** Embedded (swappable)
- **Access/Control:** via Master-Chassis
- **Master/Slave cascading/com-interface:** RS485

## SPECIFICATIONS K4 SWITCH-BOARDS

### FlexLink K4-ISB Input Switch-Board

- **Inputs:** 4 inputs per input switch-board  
50Ohm SMA(f) or BNC(f),  
75Ohm F(f) or BNC(f) or  
E2000 or SC/APC\* optical  
\*upon request
- **Cascading:** 4 cascading output interfaces  
per input switch-board  
50Ohm SMA(f)
- **Max. boards per chassis:** 8 input switch-boards per  
Master/Slave chassis  
(hot-swappable)

### FlexLink K4-OSB Output Switch-Board

- **Outputs:** 4 outputs per output switch-board  
50Ohm SMA(f) or BNC(f) or  
75Ohm F(f) or BNC(f)
- **Cascading:** 4 cascading input interfaces  
per output switch-board  
50Ohm SMA(f)
- **Max. boards per chassis:** 8 output switch-boards per  
Master/Slave chassis  
(hot-swappable)