

Extended L-Band Switch Matrix 4:4 to 32:32 (fan-out/distributive)

The FlexLink-K4 is a professional, flexible and scalable L-Band Switch Matrix in 4RU/19" rack mount design supporting L-Band and Extended L-Band frequency range (850 – 2450MHz), useable for standard L-Band, KA-Band and HTS applications. It allows various switch/routing configurations from 4:4 to 32:32 (increments of 4) where one input can be switched/routed to one or all outputs (fan-out/distributive).

The system comes in two versions, the FlexLink K4-Eco and the FlexLink K4-Plus, each available with max. 32:32 inputs/outputs.

The K4-Eco system is a standard unity gain matrix while the K4-Plus comes with additional features such as variable gain control, slope equalization, RF power monitoring and optionally with switchable LNB-supply and 10MHz external reference signal port.

The FlexLink-K4 Matrix Systems are designed for today's and future signal management requirements e.g. in Satellite downlink operations providing maximum flexibility as well as a space and cost efficient solutions. A front panel touchscreen allows easy local configuration. Remote configuration can be done via its Ethernet-Interface (WebGUI, SNMP).



FEATURES & BENEFITS

- ▶ Space saving 4RU/19" modular rack mount design
- ▶ Extended L-Band frequency range 850 – 2450MHz
- ▶ Expandable from 4:4 to 32:32 (symmetrical/ unsymmetrical)
- ▶ RF input and output connectors 50Ohm SMA, 50Ohm BNC, 75Ohm F or 75Ohm BNC
- ▶ Hot-swappable input & output switch boards

- ▶ Status monitoring of all active components
- ▶ RF power monitoring and threshold alarm function (@ any input and output)
- ▶ Local configuration via front panel touchscreen
- ▶ Remote configuration via Ethernet-Interface (WebGUI, SNMP)
- ▶ 1:1 redundant dual power supply

K4-Plus Version

- ▶ Variable gain control (@ any input)
- ▶ Slope equalization (@ any input)
- ▶ Fix gain low noise post amplifier (output card)
- ▶ Switchable LNB-supply 13/15/18VDC, 500mA max*
- ▶ 10MHz external reference port (@ any input)*

K4-Eco Version

- ▶ Unity gain 0dB $\pm$ 1dB
- ▶ Fix gain high IP1 input amplifier (input card)
- ▶ Fix gain low noise post amplifier (output card)

*Option

SOFTWARE & CONFIGURATION FEATURES

- Supports local and remote configuration
- Local config. & monitoring via front panel touchscreen
- Remote configuration via 100MBit Ethernet-Interface (WebGUI, SNMP)
- User administration with user rights management
- Cross point/routing locking for individual users
- Signal path backup routing with reverse switching
- Logbook and storage function
- Status monitoring of all active components
- Permanent parameter monitoring & error diagnosis functions for critical RF values
- Save operation via double back-up storage

TECHNICAL SPECIFICATIONS

General Specifications

Dimensions:	4RU/19", 400mm deep
Switch Matrix Type:	Fan-out/distributive
Configuration Variant:	4:4 to 32:32 (increments of 4), symmetrical & unsymmetrical
Power Supply:	85 – 265V, 50/60Hz, 1:1 redundant (hot-swappable)
Power Consumption:	<200W (@32:32 configuration)
Frequency Range:	850 – 2450MHz (extended L-Band)
Available I/O Connectors:	50Ohm SMA(f), 50Ohm BNC(f), 75Ohm F(f), 75Ohm BNC(f)
RF Power Monitoring:	70dB dynamic range
Input Level Control:	Monitoring threshold adjustment/alarming
Local Configuration:	7,6" colored touchscreen LC-Display
Remote Configuration:	RJ45 Ethernet-Interface (WebGUI, SNMPv2c)
Operating Temperature:	0°C to 45°C
Storage Temperature:	-10°C to 65°C
Humidity:	90%, non-condensing

K4-Plus Specifications

Frequency Range:	850 – 2450MHz (extended L-Band)
Frequency Response:	±2.5dB (over full band 850 – 2450MHz) / ±0,25dB (@36MHz channel)
Input Return Loss:	< -14dB
Output Return Loss:	< -14dB
Isolation:	≥60dB typ. (In/Out, In/In, Out/Out)
RF Input Power Max:	+6dBm
Max. RF Output Power:	+6dBm
IMA3 @ -10dBm:	<-46dBc
Output IP1:	+3dBm
SFDR:	<-80dBm
Noise Figure:	14dB
Variable Gain Control:	0dB ±10dB (1dB steps)
Slope Equalization:	0 to 6dB (1dB steps)
LNB-Supply/10MHz:	Switchable 13/15/18VDC, 500mA, including 10MHz external reference (Option)*

K4-Eco Specifications

Frequency Range:	850 – 2450MHz (extended L-Band)
Frequency Response:	$\pm 2.5\text{dB}$ (over full band 800 – 2450MHz) / $\pm 0.25\text{dB}$ (@36MHz channel)
Input Return Loss:	< -14dB
Output Return Loss:	< -14dB
Isolation:	$\geq 60\text{dB}$ typ. (In/Out, In/In, Out/Out)
RF Input Power Max:	+6dBm
Max. RF Output Power:	+6dBm
IMA3 @ -10dBm:	< -46dBc
Output IP1:	+3dBm
SFDR:	< -80dBm
Noise Figure:	14dB
Insertion Loss:	0dB $\pm 1\text{dB}$

OPTIONS

K4-Plus LNB-supply	▶ Additional 1:1 dual redundant power supply ▶ Switchable LNB-supply 13/15/18VDC, 500mA max. (@ any input), ▶ Including 10MHz external reference signal port (@ any input)
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