



FlexLink R25S Distributive Matrix

...designed for perfect signals



L-Band / S-Band Switch Matrix System 64:64 800MHz – 4GHz

FlexLink R25S – Advanced RF distribution Matrix for Extended L- to S-Band Applications (800–4000 MHz).

The FlexLink R25CS is a versatile, innovative, and compact RF distributive matrix, designed for high-performance signal routing in satellite, broadcast, test, and defense environments. Housed in a 5RU/19" rackmount chassis with just 500 mm depth, it supports fan-out/distributive configurations from 8:8 up to 64:64, available in both symmetric and asymmetric layouts.

Engineered with a wide frequency range (800–4000 MHz), the R25S goes beyond traditional L-Band, covering parts of the S-Band, making it ideally suited for Ka-Band gateways, HTS (High Throughput Satellites), S-band satellite links, radar systems, and RF test automation.

Its modular design allows flexible combinations of input/output connectors (50 Ohm SMA or BNC), enabling seamless future upgrades or integration into existing infrastructures.

Key features include:

- ▶ Variable gain control and slope equalization
- ▶ RF power monitoring for all signal paths
- ▶ Full status monitoring of active components
- ▶ Hot-swappable, 1:1 redundant power supplies

The FlexLink R25S is a future-proof RF signal management solution for demanding applications in satellite communications, aerospace, defense, and RF laboratories—where flexibility, performance, and reliability are critical.



FEATURES & BENEFITS

- ▶ Space saving 5RU/19" modular rack mount design
- ▶ Extended L-Band frequency 800 – 4000MHz
- ▶ Various input/output configurations from 8:8 to 64:64
- ▶ Coax inputs & outputs 50Ohm SMA(f)
- ▶ Variable gain control any input and any output)
- ▶ Threshold alarming (local and remote signaling)
- ▶ RF power monitoring any input/output
- ▶ Internal monitoring of all active components
- ▶ Hot-swappable controller card and matrix switch boards

- ▶ 10.4" front-side touchscreen LC-Display for local configuration
- ▶ 1:1 redundant dual power supply (hot-swappable)
- ▶ 1:1 redundant dual controller card (hot-swappable)*
- ▶ Local and remote configuration
- ▶ Local configuration via 7/10.4" colored touchscreen LC-Display
- ▶ 1Gbit Ethernet-Interface (WebGUI, https, SNMPv3)
- ▶ Cross point/routing locking for individual users
- ▶ Logbook and storage function

* upon request only

TECHNICAL SPECIFICATIONS

General Specifications 5RU Chassis

Dimensions:	5RU/19", 500mm deep, 45kg
Switch Matrix Type:	Fan-out/distributive
Configuration Variants:	8:8 – 64:64 (increments of 8), symmetrical & unsymmetrical
Power Supply:	85 – 230, 50/60Hz, 1:1 redundant (hot- swappable)
Power Consumption:	<350W (@64:64 configuration)
Frequency Range:	800 – 4000MHz
Available I/O Connectors:	50Ohm SMA(f)
Optical Input Connectors:	SC/APC, 1100...1650nm (Option)
Variable Gain Control:	-20dB to +10dB (1dB steps)
RF Power Monitoring:	65dB dynamic range
Input Level Control:	Monitoring threshold adjustment/alarming
Local Configuration:	10" Touchscreen LC-Display
Remote Configuration:	RJ45 Ethernet-Interface (WebGUI, SNMPv2c)
Serial Interface:	RS232*

*Option

RF Specifications Distributive Matrix

Frequency Range:	800 – 4000MHz
Frequency Response:	± 2dB typ. ±3dB max.
Group Delay Variation (800-4000 MHz):	±2 ns max.
Group Delay Variation (Any width of 36 MHz):	±0.5 ns max.
Noise Figure:	<12dB
Input/Output Return Loss:	12dB min., 14dB typ.
Isolation:	≥60dB typ. (In/In) - ≥60dB typ. (In/Out) - ≥60dB typ. (Out/Out)
Operational Input Power:	-70dBm to -10dBm nominal, 0dBm max. (Recommended)
RF Input Power:	+3dBm max. (damage level, depends on gain setting)
RF Output Power:	+6dBm max. (damage level, depends on gain setting)
IMA3 @ -10dBm:	<50dBc
P1dB:	+3dBm
SFDR:	< -80dBm

Optical Specifications (Unit with optical inputs) – On Request

Fiber Type:	Single mode 9/125
Optical Input Connector:	SC/APC
Optical Wavelength:	1100...1650nm
Optical Input Power:	-10dBm (min. optical sensitivity) to +10dBm max. (damage level)
SFDR:	-107dB/Hz typ.

Environmental Specifications

Location:	Indoor use only
Operating Temperature:	0°C to 45°C
Storage Temperature:	-10°C to 65°C
Humidity:	90%, non-condensing

ORDER INFORMATION

Type	Type No.:	Short Description
FlexLink R25S/5 Switch Matrix Main Chassis For custom configuration	9001469	FlexLink R25S/5 Switch Matrix Chassis, 15 x internal Center Switch, CPU/LPC main controller, 10" touchscreen, RJ45 1Gbit Ethernet Interface (WebGUI, SNMP), 1:1 redundant dual power supply, 5RU/19" rack mount
FlexLink R25S ISB0816D Input Switch Board 8:16	9001470	Input Switch Board, 8 x RF Input, 800 - 4000MHz, 50Ohm SMA(f)
FlexLink R25S OSB1608D Output Switch Board 16:8	9001471	Output Switch Board, 8 x RF Output, 800 - 4000MHz, 50Ohm SMA(f)
FlexLink R25S ISB0816DF Optical Input Switch Board 8:16	on request	Optical Input Switch Board, 8 x RF Input, 800 - 4000MHz, SC/APC