



...designed for perfect signals



FlexLink K7-Pro Switch Matrix

L-Band Switch Matrix 8:8...64:64 expandable to 256:256



GENERAL

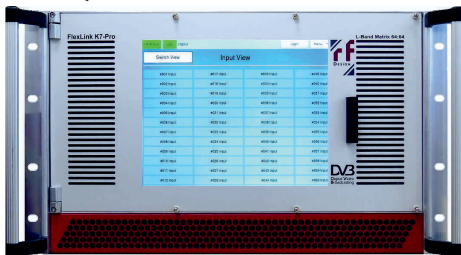
The new “**FlexLink K7-Pro**” is an unique, innovative and fully scalable L-Band Switch Matrix system, built into a space-saving 6RU/19" rack-mount chassis with only 500mm depth. It performs as a scalable L-Band distributive switch/routing platform allowing to switch/route any selected input to any or all outputs and can be assembled with various input/output configurations from 8:8 to 64:64 in one matrix chassis and to up to 256:256 (symmetrical & unsymmetrical) with additional matrix chassis and corresponding I/O switch-boards, while the modular concept also allows other symmetrical and unsymmetrical input/output configurations (increments of 8) as per the user’s requirements .

The “**FlexLink K7-Pro**” covers L-Band frequency range (950...2150MHz) and offers a maximum in flexibility combined with state-of-the-art functionalities, features, excellent RF performance and various options. All matrix switch-boards are hot-swappable while each input and output switch-board is equipped with cascading-interfaces allowing to expand an existing system without the need of any other additional devices. This unique expansion concept results in less space need, reduced power consumption and avoids additional point of failures.

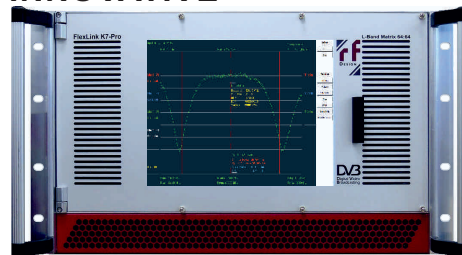
The flexible modular design makes it possible to mix the input and output connectors with various connector types (50Ohm SMA or BNC, 75Ohm F or BNC as well as optical inputs) giving the operator the flexibility for future expansions.

The “**FlexLink K7 Pro**” provides various features and functionalities such as variable gain-control & slope-equalization, RF power monitoring and status monitoring of all active components. Furthermore the “**FlexLink K7-Pro**” provides 1:1 redundant dual power-supply and internal airflow ventilators.

UNIQUE



INNOVATIVE



CLEVER



Additional flexibility is being provided via available options like switchable LNB-supply for each input while this option also allows insertion of an external 10Mhz signal.

A very special and unique optional feature is the “**K7SQA Signal Quality Analyzer**” tool which is an add-on Spectrum-Analyzer/DVB demodulator board. It allows measurement of RF and DVB-S/S2 parameters (any input & output of the matrix). At the RF section it measures parameters like RF power and C/N. At the DVB section (DVB-S/S2) it monitors channel power, MER, BER, frequency drift, symbolrate drift, Network-ID, Service-ID, Service-Type and Service provider name. Furthermore it completely scans all inputs and outputs and its transponders. This option is equipped with an RJ45/100MBit interface allowing IP output streaming (MPTS).

Beyond the state-of-the-art and unique mechanical concept, its functionalities, features and options the “**FlexLink K7-Pro**” also assures superior and stable RF performance at the highest quality level, especially at Isolation and Frequency Response.

The “**FlexLink K7-Pro**” matrix system can be configured and monitored locally via its front-side 10.4" colored touchscreen. Remote configuration can be done via an Ethernet-Interface (WebGUI/SNMP). RF-Design’s local and remote configuration platform for the “**FlexLink K7-Pro**” allows the configuration of all relevant matrix settings including routing/switching settings, crosspoint-locking, signal-path backup routing, double back-up storage of all settings/configurations, variable gain control, slope-equalization and of course all available options (if activated). The configuration software also supports user administration management and user rights assignment, logbook function, storage functions and various parameter monitoring functions for critical RF values but also for each individual switch-board, power-supplies and ventilators.

The “**FlexLink K7-Pro**” is ideal for flexible signal assignment and perfectly suited for RF distribution applications in Teleports, Satellite Earth Stations as well as Broadcast and CATV/IPTV headend operations.

==> Please refer to 2. page for Features, Options & Technical specifications



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L-Band Switch Matrix, 8:8...64:64 expandable to 256:256



FEATURES & BENEFITS

Conceptional features

- Space saving 6RU/19" modular rack-mount design, 500mm deep
- Up to 64:64 inputs/outputs within one chassis, expansion e.g. to 256:256 possible (symmetrical/unsymmetrical, increments of 8)
- Easy expandable via integrated cascade ports (increments of 8)
- Coax inputs & outputs 50/75Ohm SMA(f), F(f) or BNC(f) and optical inputs possible, supports mixed input & output config.
- Hot-swappable matrix switch-boards
- 10.4" front-side touchscreen LC-Display for local configuration
- 100MBit Ethernet-Interface for remote configuration (WEB-GUI/SNMPv2c)
- Low noise ventilators (hot-swappable)
- 1:1 redundant dual power-supply for the matrix (hot-swappable)
- 1:1 redundant dual power-supply for the LNB-supply (option) (hot-swappable)

Hardware & RF features

- Variable gain control/adjustment (@ any input)
- Slope-equalization (@ any input)
- RF power monitoring, dynamic range (@ any input/output)
- Internal monitoring of all active components
- Input connectors available as 50Ohm SMA or BNC, 75Ohm F or BNC or Optical-inputs 1310 - 1550nm (increments of 8)
- Output connectors available as 50Ohm SMA or BNC, 75Ohm F or BNC (increments of 8)
- Superior RF performance especially @ Isolation and Frequency Response

Software & configuration features

- Supports local and remote configuration for all relevant settings and adjustments
- Local configuration via 10.4" colored touchscreen LC-Display
- Remote configuration via 100MBit Ethernet-Interface and Rs232 (WEB-GUI, SNMPv2c)
- User administration with user rights management
- Features crosspoint/routing locking for individual users
- Supports signal-path backup routing
- Features logbook and storage function
- Various parameter monitoring & error diagnosis functions for critical RF values, all switch-boards, psu's and ventilators
- Double back-up storage for entire settings/configurations

CHOICE OF OPTIONS

- Switchable LNB-supply 13/15/18V, 22kHz (@ any input), current monitoring 400mA with extra 1:1 redundant power-supply and external 10MHz feed to all matrix inputs
- FlexLink K7 SQA Signal Quality Analyzer board, RF & DVB-S/S2 measurement and monitoring of all matrix inputs & outputs

K7 SQA SIGNAL QUALITY ANALYZER FEATURES

- RF & DVB-S/S2 measurement & monitoring (for any input and output of the matrix system)
- RF parameter measurement such as RF power, C/N, bandwidth
- DVB-S/S2 parameter monitoring such as frequency & channel power, MER, BER, frequency drift, symbolrate drift, Network-ID, TS-ID, Service-Type and Service-provider
- Supports a complete scan of all inputs and outputs and its transponders
- Spectrum analysis of one or more transponders remotely via Ethernet-Interface with CMS
- IP streaming output of the configured transponder (MPTS) via additional RJ45/100MBit interface
- Ideal for flexible analysis of RF/DVB-S2 signals and parameters

TECHNICAL SPECIFICATIONS

- **Dimensions:** 6RU/19", 500mm deep
- **Configuration variants:** 8:8 to 64:64 (6RU/19") expandable to e.g 256:256 in increments of 8
- **Power supply:** 85...230V, 50/60Hz
1:1 redundant (hot-swappable)
- **Power consumption:** < 200W (@ 64:64 configuration)
- **Frequency range:** 950...2150MHz (L-Band)
- **IMA3 @ -10dBm:** < -53dBc
- **Output Comp. Point 1dB:** +6dBm
- **Noise Figure:** <14dB
- **Variable gain-control:** -20dB...+10dB (1dB steps)
- **Slope equalization:** 0...9dB
- **RF power monitoring:** 70dB dynamic range
- **Frequency Response:** ± 2dB typ, ± 3dB max. (@ full band)
± 0,25dB max. (@ 36MHz channel)
- **Isolation:** ≥60dB (all ports), 70dB typ.
- **Return Loss:** 14dB min., 16dB typ. (input/output)
- **In- & Output connectors** 50Ohm SMA(f) or 50Ohm BNC(f)
75 Ohm F(f) or 75Ohm BNC(f)
- **Optical input connectors:** SC/APC, 1310...1560nm
- **Local configuration:** 10.4" Touch-screen LC-Display
- **Remote configuration:** Ethernet (http., WebGUI, SNMPv2c)
- **Serial Interface:** RS-232 (upon request)
- **Environmental conditions:**
 - **Operating temperature:** 0°C...+45°C
 - **Storage temperature:** -10°C...+65°C
 - **Humidity:** 90% non condensing

OPTIONS

- **Switchable LNB-supply:** 13/15/18V, 22kHz, (@ any input) 400mA current monitoring, including 10MHz feed, rear-side, 50Ohm SMA(f) connector
- **FlexLink-K7 SQA:** Signal Quality Analyzer (RF & DVB-S/S2 monitoring)