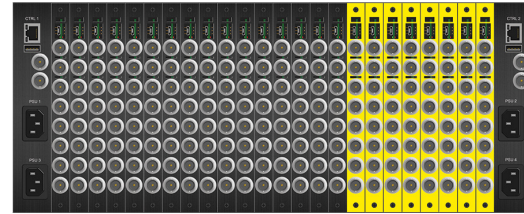# XRF4 — RF Router Series

Distributive (Fan–Out) 64x128, 128x64, 64x64 and more

The **XRF4** is a non–blocking, high–density wideband RF router for signals from 40–2450MHz. In a mere 4RU form factor, the XRF4 starts from a base 8x8 configuration and is expandable in increments of eight–channel input and/or output cards. The XRF4 platform features a modular hot–swappable architecture, built–in 10" touch screen control panel and redundant power supplies and frame controllers. Optional features include direct fiber input modules, integrated spectrum analyzer and more. The XRF4 I/O modules are individually software–upgradable to support LNB powering and/or automatic gain control.

Performance
Industry's best performing large–capacity router with superior frequency response, isolation, return loss and noise figure to preserve signal margin.

Flexibility
Various connector options, adjustable gain and direct fiber options offer flexibility to meet any application requirement. Built–in gain allows expansion up to 512x1024 using Evertz' passive splitters & combiners with no added point of failure.

Reliability
All active components are modular and hot–swappable, facilitating quick serviceability and maximum uptime.

LNB Powering
Optional integrated LNB power supplies with 22kHz LO control, individually controllable on all inputs. Active current protection, advanced monitoring/alarming and automatic recovery per port.
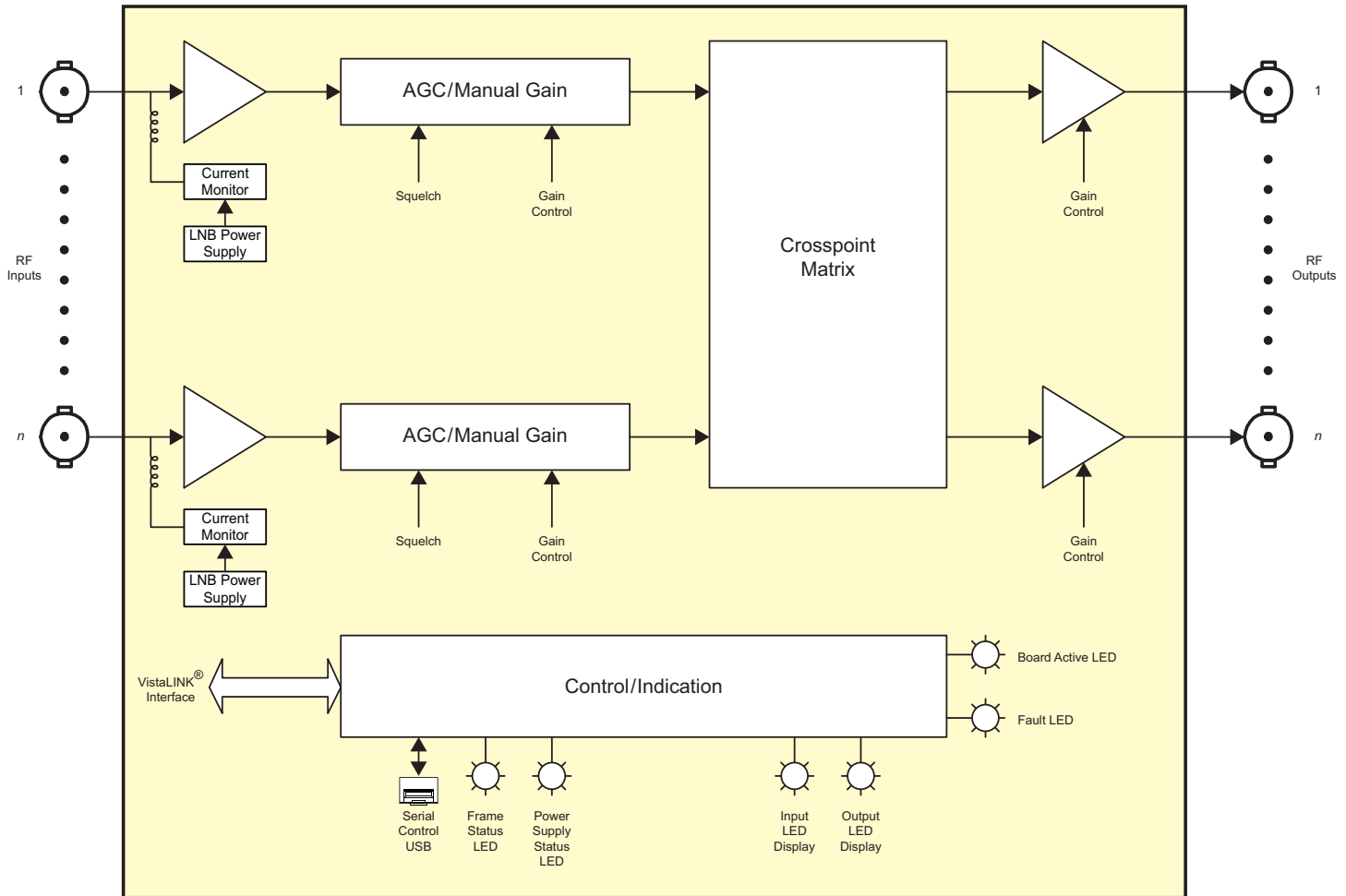
Monitoring & Control
Integrated 10" touch screen display and optional built–in spectrum analyzer allow quick control and monitoring of all routes using customizable graphical user interfaces. User–friendly web browser provides access to all router controls and monitoring using Evertz' own VistaLINK PRO third–party compatible SNMP software. Immediate control and monitoring of routes, gain, threshold adjustments, RF power levels and LNB current values using Evertz' own MAGNUM control software.

Features & Benefits
- Industry's best performing large–capacity router
- Various connector options
- All active components are modular and hot–swappable
- Optional integrated LNB power supplies with 22kHz LO control
- Integrated 10" touch screen display and optional built–in spectrum analyzer

AV SOLUTIONS
CONTRIBUTION & DISTRIBUTION
CONTROL, MONITORING
ENCODING, TRANSCODING, & MULTIPLEXING
FACILITY LINK, FIBER TRANSPORT
INFRASTRUCTURE & CONVERSION
IP SOLUTIONS
LIVE MEDIA PRODUCTION
MEDIA ASSET MANAGEMENT & PLAYOUT
MULTIVIEWERS
RF SOLUTIONS
ROUTERS
WAN TRANSPORT

Specifications

System:

Matrix Sizes:	8x8 up to max. frame configurations
System Expansion:	Inputs and/or outputs expandable in increments of 8; expansion beyond max. configuration is achievable with additional frames and passive splitters/combiners

RF Input:

Impedance:	75Ω (50Ω optional)
Connector Type:	BNC (SMA and F–Type also available)
Output Gain Range:	-20dB to +20dB in 1dB steps
Absolute Max. RF Input Power:	
75Ω:	+20dBm
50Ω:	+13dBm

Fiber Optic Input:
Available with 2307LR modules

Optical Input:	Female LC/UPC

Ordering Information

XRF4–FR–64x128	XRF 4RU router frame, 192 IO connections, with 10" Integrated LCD touch screen
XRF4–FR–128x64	XRF 4RU router frame, 128x64 Maximum configuration, 192 IO connections, with 10" Integrated LCD touch screen
XRF4S–FR–64x64	XRF 4RU router frame, 128 IO connections, Max. 64x64 configuration. 10" Integrated LCD touch screen
XRF4S–FR–32x96	XRF4 4RU router frame, 128 IO connections. Max. 32x96 configuration. 10" integrated LCD touch screen
XRF4S–FR–96x32	XRF4 4RU router frame, 128 IO connections. Max. 96x32 configuration. 10" integrated LCD touch screen

XRF4 — RF Router Series
Distributive (Fan–Out) 64x128, 128x64, 64x64 and more

Specifications (continued)

RF Specifications:

Bandwidth:	40–2450MHz
Frequency Response:	±1.0dB typ. (950–2250MHz); ±1.5dB typ. ±2.0dB max. (45–2400MHz); ±2.0dB typ. (40–2450MHz); ±0.25dB typ. ±0.5dB max. over any 36MHz bandwidth
Isolation:	>80dB output to output >80dB input to input >70dB input to output (>57dB min.)
RF Input Power:	0dBm to -60dBm
Max. RF Output Power:	–5dBm
Input P1dB:	+6dB
OIP3:	+22dBm @ -10dB input > +12dBm @ -20dB input
Input Return Loss:	>16dBm min.
Output Return Loss:	>20dBm min.
Noise Figure:	≤ 21dB @ 0dB output gain ≤ 18dB @ 10dB output gain
Group Delay:	±1.5nS
Gain Tracking:	±1.0dB

LNB Power:

LO Control:	22kHz, on/off (selectable)
Voltage:	13/18V DC, off (selectable)
Current:	400mA
Protection:	Active: short circuit, overload

Communication & Control:

Ethernet:	SNMP, Quartz protocol, web browser
Panels:	Integrated 10" touch screen panel, CP2116–E, CP2232–E panels available
Software:	Web, VistaLINK PRO® SNMP NMS and VUE–SW

Electrical:

AC Input:	Auto–ranging, 100–240V AC, 50/60Hz
Connector:	1x IEC 60320 per PS
Number:	4 (1+1 main PSU, 1+1 LNB PSU)
Max. Power Consuption:	220W (8x8 config.), 425W (64x64 config.), 530W (64x128 config.)

* Note: configurations are fully routed without LNB power consumption

Physical:

Dimensions:	18.96" W x 6.96" H x 29.21" D (482mm W x 177mm H x 742mm D)

Environmental:

Operating Ambient Temperature:	0–50°C

Compliance:

Safety:	NEMKO listed, CB scheme, complies with EU safety directives
EMC/EMI:	Class A, complies with ICES–003, FCC part 15 SUB B, EU EMC/EMI directives

Ordering Information (continued)

Ordering Options:

XRF4–FC	XRF4 RF router frame controller
XRF4–FC–SA	Frame controller with integrated spectrum analyzer for the XRF4 router system. Accessible locally using 10" touch screen or over the network using web browser
XRF4–PS	XRF4 RF router power supply module
XRF–FK–DEMOD	Feature Key to enable integrated DVBS/S2 (optional S2x) demodulator functionality on applicable RF Routers. Includes MPEG–2 and H.264/AVC video decoder functionality for confidence monitoring of SD and HD encoded signals, to be displayed on the integrated VUE interface.
7882DM–FK–S2X	License to enable DVB–S2X (Broadcast and DSNG profiles) demodulation standards, License is enabled per demod channel
2307LR	Miniature L–Band/Wideband fiber receiver
XRF4–FK–8LNB	XRF4 platform feature key to enable 13/18V LNB powering + 22kHz tone on 8 inputs

Non–S Version Frame Options:

XRF96	XRF4 system mid–point module
XRF4–8IP	8–channel input card for XRF RF router system, BNC 75Ω connectors
XRF4–8IP–F75	8–channel input card for XRF RF router system, F–Type 75Ω connectors
XRF4–8IP–B50	8–channel input card for XRF RF router system, BNC 50Ω connectors
XRF4–8IP–S50	8–channel input card for XRF RF router system, SMA 50Ω connectors
XRF4–8OP	8–channel output card for XRF RF router system, BNC 75Ω connectors
XRF4–8OP–F75	8–channel output card for XRF RF router system, F–Type 75Ω connectors
XRF4–8OP–B50	8–channel output card for XRF RF router system, BNC 50Ω connectors
XRF4–8OP–S50	8–channel output card for XRF RF router system, SMA 50Ω connectors

S Version Frame Options:

XRFS96	XRF4 system mid–point module for XRF4S–FR frame
XRF4S–8IP	8–channel input card for XRF4S–FR RF Router System, 75Ω BNC connectors
XRF4S–8IP–F75	8–channel input card for XRF4S–FR RF Router System, 75Ω F–Type connectors
XRF4S–8IP–B50	8–channel input card for XRF4S–FR RF Router System, 50Ω BNC connectors
XRF4S–8IP–S50	8–channel input card for XRF4S–FR RF Router System, 50Ω SMA connectors
XRF4S–8OP	8–channel output card for XRF4S–FR RF Router System, 75Ω BNC connectors
XRF4S–8OP–F75	8–channel output card for XRF4S–FR RF Router System, 75Ω F–Type connectors
XRF4S–8OP–B50	8–channel output card for XRF4S–FR RF Router System, 50Ω BNC connectors
XRF4S–8OP–S50	8–channel output card for XRF4S–FR RF Router System, 50Ω SMA connectors