

The Experts in Reliable RF Signal Management



End-to-End Solutions for RF Signal Routing

- ***Earth Stations and Teleports***
- ***Broadcast and CATV Headends***
- ***Government and Military***
- ***Wireless Lab Test & Measurement Automation***

Quintech Electronics & Communications Customer List

Government



Domestic



International



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About Quintech:

Quintech Electronics & Communications, Inc. (www.quintechelectronics.com) founded in 1989, is a state-of-the-art designer and manufacturer of RF signal management communications equipment. The company's products are globally distributed and vital for RF signal management. Quintech products are the keystones to the automation of today's advanced telecommunication network infrastructures and test laboratories. Our worldwide customers include satellite, government, wireless telecommunications, broadcast and CATV service providers. Quintech produces RF matrix switches, redundancy switches, relay switches, splitters, combiners, amplifiers and DC powering products and equipment. The products are available in L-band, broadband, IF and wireless frequencies. These RF signal management products are used for monitor and control, test and measurement, redundancy applications and surveillance. Quintech products are designed for high reliability and maximized uptime providing years of maintenance free service. We emphasize the design and development of superior RF signal management products to provide the highest quality systems and solutions for our valued customers.

RF & L-Band Matrices:

The company designs and manufactures the world's largest configuration matrix switches in the smallest form factor. These are state of the art products that simplify and facilitate RF signal management solutions. Quintech matrices span frequencies from DC to 6 GHz. These superior designs are used worldwide in teleports, broadcast and cable headends.

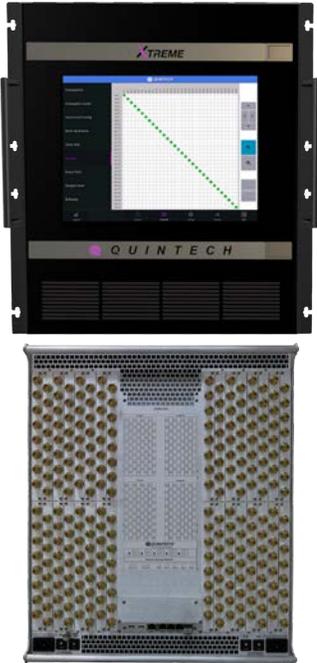
RF Test Matrices:

Our customers include wireless service providers, network equipment and component manufacturers. Our products are used for laboratory, R&D and product conformance, interoperability, network load, software regression and manufacturing testing applications which support legacy network compatibility with MIMO, LTE, LTE-U, WiFi, and other mobility testing. We also provide Lab Automation and Management software that facilitates wireless lab testing.

Quintech Electronics & Communications, Inc. sells its products worldwide in over 100 countries.

XTREME 256

256 Port Fan-Out L-Band RF Matrix Switch



XTREME 256

General Description:

The **XTREME 256** next generation L-band matrix switch features 256 ports in a compact 12 RU chassis. The **XTREME 256** is a full fan-out (distributive), non-blocking switch where an input can be routed to any or all outputs. The **XTREME 256** features an industry exclusive flexible matrix architecture (patented) that supports both symmetric and asymmetric configurations of 256 combined inputs and outputs in a single chassis. Asymmetric configurations such as 64x192, 96x160, and more can be implemented as well as the standard 128x128 configuration. It is designed for maximum reliability with redundant and hot-swappable power supplies, fans trays, and control cards plus RF redundancy. It is also designed for ease of maintenance with built-in self-test (BIST) capability and the ability to hot-swap all active components from the front of the unit. The **XTREME 256** is highly scalable and can easily be expanded up to 2048x2048 using multiple **XTREME 256** modules. Optional integrated expansion ports allow for large systems without using external expansion modules, significantly reducing system size and number of cables.

Features & Benefits:

- Compact modular design, 256 ports in 12 RU, easily expandable to 2048x2048
- Asymmetrical configurations up to 248 outputs in a single chassis
- Adjustable gain on inputs and outputs to allow RF performance optimization
- Option for fiber optic inputs
- Easy hot-swap of all active cards, power supplies, and fan trays from the front
- Redundant hot-swap control cards plus independent GUI control system
- Remotely controlled via web browser GUI interface, SNMP, TELNET or TCP/IP via customer supplied PC

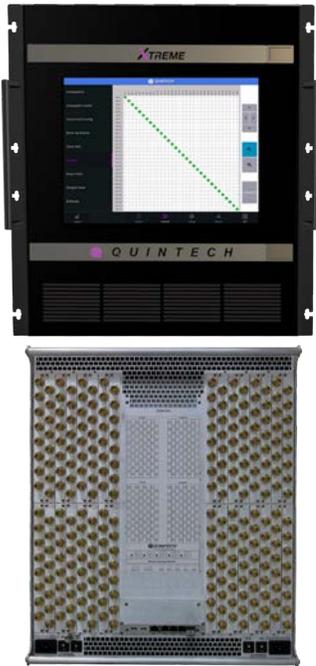
Specifications:*1	XTREME 256
Operating Frequency:	850-2150 MHz
Configuration:	128 Inputs/128 Outputs
Input Gain Range:	-17 dB to +13.5 dB in 0.5 dB Steps
Output Gain Range:	-14.5 dB to +33 dB in 0.5 dB Steps
Impedance:	75 Ω or 50 Ω
Input P1dB:	0 dBm
RF Sensing:	-5 dBm to -50 dBm
OIP3:	+10 dBm Min.
Frequency Response:	± 1 dB Typ. ± 2 dB Max. $\pm .2$ dB Typ. $\pm .5$ dB Max. Over Any 40 MHz Channel
Isolation (input-to-input):	75 dB Typ. 65 dB Min.
Isolation (output-to-output):	75 dB Typ. 65 dB Min.
Isolation (input-to-output):	65 dB Typ. 55 dB Min.
Input Return Loss:	14 dB Typ. 12 dB Min.
Output Return Loss:	16 dB Typ. 12 dB Min.
Noise Figure:	<20 dB @ 0 dB Input Gain
Group Delay:	5 ns Max.
Switching Time:	125 ms
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω , SMA, or Mixed
Power Requirements:	100-250 VAC Autoranging, 50/60 Hz
Power Consumption:	525 W @ 120 VAC 650 W @ 240 VAC
Local Control:	15" Front Panel Touchscreen
Remote Control:	SNMP, TELNET, TCP/IP; Web Browser Interface Via Ethernet, Remote Panel
Mechanical:	12 RU Total Rack Space Required, 21" H x 19" W x 20.5" D to Rear Panel (22" Including Rear Handles)
Weight:	150 lbs

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

*Specifications valid at unity gain (Input gain = 0 dB , Output gain = 0 dB)

XTREME 256-C

256 Port Fan-In L-Band RF Matrix Switch



XTREME 256-C

General Description:

The **XTREME 256-C** next generation L-band matrix switch features 256 ports in a compact 12 RU chassis. The **XTREME 256-C** is a full fan-in (combining), non-blocking switch where one or multiple inputs can be routed to an output. The **XTREME 256-C** features an industry exclusive flexible matrix architecture (patented) that supports both symmetric and asymmetric configurations of 256 combined inputs and outputs in a single chassis. Asymmetric configurations such as 192x64, 160x96, and more can be implemented as well as the standard 128x128 configuration. It is designed for maximum reliability with redundant power, fans trays, and control cards plus RF redundancy. It is also designed for ease of maintenance with built-in self-test (BIST) capability and the ability to hot-swap all active components from the front of the unit. The **XTREME 256-C** is highly scalable and can easily be expanded up to 2048x2048 using multiple **XTREME 256-C** modules. Optional integrated expansion ports allow for large systems without using external expansion modules, significantly reducing system size and number of cables.

Features & Benefits:

- Compact modular design, 256 ports in 12 RU, easily expandable to 2048x2048
- Asymmetrical configurations up to 248 inputs in a single chassis
- Adjustable gain on inputs allow RF performance optimization
- Touchscreen local control and embedded web GUI interface
- Easy hot-swap of all active cards, power supplies, and fan trays from the front
- Redundant hot-swap control cards plus independent GUI control system
- Remotely controlled via web browser GUI interface, SNMP, TELNET or TCP/IP via customer supplied PC

Specifications: ^{*1}	XTREME 256-C
Operating Frequency:	850-2150 MHz
Configuration:	128 Inputs/128 Outputs
Input Gain Range:	-17.5 dB to +14 dB in 0.5 dB Steps
Impedance:	75 Ω or 50 Ω
Input P1dB:	+6 dBm
RF Sensing:	+10 dBm to -50 dBm
OIP3:	+15 dBm
Output P1dB:	+14 dBm
Frequency Response:	± 3 dB $\pm .75$ dB Over Any 36 MHz Channel
Isolation (input-to-input):	75 dB Typ. 65 dB Min.
Isolation (output-to-output):	75 dB Typ. 65 dB Min.
Isolation (input-to-output):	60 dB Typ. 55 dB Min.
Input Return Loss:	14 dB Typ. 12 dB Min.
Output Return Loss:	15 dB Typ. 12 dB Min.
Noise Figure:	<23 dB @ 0 dB Gain
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω , SMA, or Mixed
Power Requirements:	100-250 VAC Autoranging, 50/60 Hz
Power Consumption:	525 W @ 120 VAC 650 W @ 240 VAC
Local Control:	15" Front Panel Touchscreen
Remote Control:	SNMP, TELNET, TCP/IP; Web Browser Interface Via Ethernet, Remote Panel
Inter-Module Control Data:	XR Bus
Mechanical:	12 RU Total Rack Space Required, 21" H x 19" W x 20.5" D to Rear Panel 22" (Including Rear Handles)
Weight:	150 lbs

^{*}Specifications may vary with connector type. See individual specification sheet for specific performance data.

¹Specifications valid at unity gain (Input gain = 0 dB , Output gain = 0 dB)

XTREME 80

80 Port Fan-Out L-Band RF Matrix Switch



XTREME 80

General Description:

The **XTREME 80** next generation L-band matrix switch features 80 ports in a compact 2 RU chassis. The **XTREME 80** is a full fan-out (distributive), non-blocking switch where an input can be routed to any or all outputs. The **XTREME 80** features an industry exclusive flexible matrix architecture (patented) that supports both symmetric and asymmetric configurations of 80 combined inputs and outputs in a single chassis. Asymmetric configurations such as 16x64, 24x40, and more can be implemented as well as the standard 32x32 configuration. Optional 13/18V, 22 kHz tone LNB power is available on all input ports. The **XTREME 80** is designed for maximum reliability with redundant power and control cards.

Features & Benefits:

- 50-200 MHz and 950-2200 MHz frequency range
- Compact modular design up to 80 ports in 2 RU chassis
- Asymmetrical configurations up to (32x32, 16x64, 24x40) in a single chassis
- LNB power 400 MA per input 13/18 V with 22 KHz tone
- Fiber optic receivers
- Adjustable gain and attenuation on all inputs and outputs allows the user to adjust the RF level for optimum performance
- Fast and easy hot-swap (less than 30 seconds) of any active cards

Specifications: ^{*1}	XTREME 80
Operating Frequency:	50-200 MHz - 950-2200 MHz
Configurations:	Symmetric 32 Inputs/32 Outputs, Asymmetric 16 Inputs/64 Outputs
Input Gain Range:	-19.5 dB to +12 dB (32x32); -24 to +8 dB for (16x64)
Output Gain Range:	-15.5 dB to +16 dB, All Builds
Impedance:	75 Ω or 50 Ω
Input P1dB:	0 dBm
OIP3:	+10 dBm
Frequency Response:	+/-1.5 dB +/-0.5 dB Over Any 36 MHz Channel
Isolation (input-to-input):	60 dB
Isolation (output-to-output):	60 dB
Isolation (input-to-output):	55 dB
Input Return Loss:	14 dB
Output Return Loss:	14 dB
Noise Figure:	13 dB @ 0 dB Gain
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω, SMA, or Mixed
LNB Power Each Port:	0/13/18 V, 22 kHz Tone 400 mA 180 W of Total System Power Available to LNB
Optical Wavelength:	900-1650 nm
Optical Return Loss:	14 dB
Optical Connectors:	SC/APC, LC/APC
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz
Power Consumption:	165 W Typical, 345 W with LNB Option (32x32), 255 W with LNB Option (16x64)
Local Control:	Front Panel 2.2" Display and Rotary Switch Joystick
Remote Control:	SNMP, TELNET, TCP/IP, Web Browser Interface Via Ethernet, Remote Panel
Size:	2 RU: 3.5"H x 19"W x 23.25 D"

¹Specifications valid at unity gain (Input gain = 0 dB , Output gain = 0 dB)

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

XTREME 80-C

80 Port Fan-In L-Band RF Matrix Switch



XTREME 80-C

General Description:

The **XTREME 80-C** next generation L-band matrix switch features 80 ports in a compact 2 RU chassis. The **XTREME 80-C** is a full fan-in (combining), non-blocking switch where one or multiple inputs can be routed to an output. The **XTREME 80-C** features an industry exclusive flexible matrix architecture (patented) that supports both symmetric and asymmetric configurations of 80 combined inputs and outputs in a single chassis. Asymmetric configurations such as 64x16, 40x24, and more can be implemented as well as the standard 32x32 configuration. The **XTREME 80-C** is designed for maximum reliability with redundant power supplies and control cards.

Features & Benefits:

- Compact modular design with a variety of configurations adding to 80 ports in 2 RU
- Easy hot-swap of all RF cards, power supplies and control cards
- Independent input and output gain control
- Remotely controlled via web browser GUI interface, SNMP, Telnet or TCP/IP via customer supplied PC
- Redundant hot-swap control cards

Specifications: ^{*1}	XTREME 80-C
Operating Frequency:	950-2200 MHz
Configurations:	Symmetric and Asymmetric Configurations Available
Input Gain Range:	-14.5 to +17 dB
Output Gain Range:	-19.5 to +12 dB (32X32)
Impedance:	75 Ω or 50 Ω
Input P1dB:	0 dBm
OIP3:	+10 dBm
Frequency Response:	+/-1.5 dB +/-0.5 dB Over Any 36 MHz Channel
Isolation (input-to-input):	60 dB
Isolation (output-to-output):	60 dB
Isolation (input-to-output):	55 dB
Input Return Loss:	14 dB
Output Return Loss:	14 dB
Noise Figure:	13 dB @ 0 dB Gain
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω, SMA, or Mixed
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz
Power Consumption:	160 W
Local Control:	Front Panel 2.2" LCD Display with Rotary Switch Joystick
Remote Control:	SNMP, TELNET, TCP/IP, Web Browser Interface Via Ethernet, Remote Panel
Size:	2 RU: 3.5"H x 19"W x 23.25 D"

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

¹Specifications valid at unity gain (Input gain = 0 dB , Output gain = 0 dB)

XTREME 32

32 Port Fan-Out Dual Band RF Matrix Switch



XTREME 32

General Description:

The **XTREME 32** Dual Band matrix switch is a full fan-out (distributive) non-blocking signal management solution that routes an input to any or all outputs. The design features an industry exclusive architecture that supports both symmetric and asymmetric configurations of 32 combined inputs and outputs in a compact 1 RU chassis. Hot-swappable redundant power supplies, I/O Modules, and a field replaceable cooling fan provide maximum reliability.

Features & Benefits:

- 50-200 MHz & 850-2500 MHz Operating Range
- Flexible Matrix Configurations (16x16, 4x28, 8x24)
- LNB Power 400 mA per Input 13/18 V with 22 kHz Tone
- Fiber Optic Receivers
- Adjustable Input and Output Gain
- Redundant Hot-swappable Power Supplies
- Hot-swappable Input and Output Adapters
- Field Replaceable Cooling Fan

Specifications: ^{*1}	XTREME 32		
Operating Frequency:	50-200 MHz	950-2150 MHz	850-2500 MHz
Configurations:	8x24, 16x16		
Input Gain Range:	-19.5 to 12 dB in 0.5 dB Steps		
Output Gain Range:	-15.5 to 16 dB in 0.5 dB Steps		
Impedance:	75 Ω or 50 Ω		
Input P1dB:	Default Gain: 0 dBm		
OIP3:	9 dBm Min.	10 dBm Min.	9 dBm Min.
Frequency Response:	+/- 2.5 dB	+/- 1.5 dB	+/- 2.5 dB
Any 36 MHz:	+/- 0.8 dB	+/- 0.5 dB	+/- 0.7 dB
Isolation (input-to-input):	60 dB		
Isolation (output-to-output):	60 dB		
Isolation (input-to-output):	55 dB		
Input Return Loss:	12 dBm Min.	14 dBm Min.	12 dBm Min.
Output Return Loss:	12 dBm Min.	14 dBm Min.	12 dBm Min.
Noise Figure:	20 dBm Max.	13 dBm Max.	14 dBm Max.
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω, SMA, or Mixed		
LNB Power Each Port:	0/13/18 V, 22 kHz		
	400 mA Nominal (550mA Peak In-rush)		
	Short Circuit Protection with Automatic Reset		
	Status: Under Current (<50mA), Short and Normal		
Optical Wavelength:	900-1650 nm		
Optical Return Loss:	14 dB		
Optical Connectors:	SC/APC, LC/APC		
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz 5A Max.		
Power Consumption:	100W Typical, 200 W Max. with LNB Optional		
Local Control:	Front Panel 2.2" LCD Display with Rotary Switch Joystick		
Remote Control:	SNMP, TELNET, TCP/IP, Web Browser Interface Via Ethernet, Remote Panel		
Size:	1 RU: 1.75"H x 19"W x 18.5 D"		

^{*}Specifications may vary with connector type. See individual specification sheet for specific performance data.

¹Specifications valid at unity gain (Input gain = 0 dB , Output gain = 0 dB)

XTREME 32-C

32 Port Fan-In L-Band RF Matrix Switch



XTREME 32-C

General Description:

The **XTREME 32-C** next generation L-band matrix switch features 32 ports in a compact 1 RU chassis. The **XTREME 32-C** is a full fan-in (combining), non-blocking switch where one or more inputs can be routed to any output. The **XTREME 32-C** features an industry exclusive flexible matrix architecture that supports both symmetric and asymmetric configurations of 32 combined inputs and outputs in a single chassis. Asymmetric configurations such as 28x4, 24x8, and more can be implemented as well as the standard 16x16 configuration. The **XTREME 32-C** is designed for maximum reliability with redundant and hot-swappable power supplies.

Features & Benefits:

- Compact design with a variety of configurations adding to 32 ports in 1 RU
- Easy hot-swap power supplies, fan and adapters
- Independent input and output gain control
- Remotely controlled via web browser GUI interface, SNMP, Telnet or TCP/IP via customer supplied PC

Specifications: ^{*1}	XTREME 32-C
Operating Frequency:	850-2450 MHz
Configurations:	24x8, 16x16
Input Gain Range:	-14.5 to 17 dB in 0.5 dB Steps
Output Gain Range:	-18.5 to 13.0 dB in 0.5 dB Steps
Impedance:	75 Ω or 50 Ω
Input P1dB:	0 dBm
OIP3:	10 dBm Min.
Frequency Response:	+/- 2.0 dB +/- 0.5 dB Max. (Over any 36 MHz Channel)
Isolation (input-to-input):	60 dB
Isolation (output-to-output):	60 dB
Isolation (input-to-output):	55 dB
Input Return Loss:	14 dB
Output Return Loss:	14 dB
Noise Figure:	13 dB @ 0 dB Gain (One Connection)
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω, SMA, or Mixed
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz
Power Consumption:	100W Typical
Local Control:	Front Panel 2.2" LCD Display with Rotary Switch Joystick
Remote Control:	SNMP, TELNET, TCP/IP, Web Browser Interface Via Ethernet, Remote Panel
Size:	1 RU: 1.75"H x 19"W x 18.5 D"

^{*}Specifications may vary with connector type. See individual specification sheet for specific performance data.

¹Specifications valid at unity gain (Input gain = 0 dB , Output gain = 0 dB)

XTREME 32

Dual 8x8 Hybrid RF Matrix Switch

General Description:

The **XTREME 32** Hybrid matrix switch is an L-band matrix switch that features a non-blocking 8x8 splitting matrix and a non-blocking 8x8 combining matrix with hot-swap I/O cards, redundant power supplies, and control module in a compact 1 RU chassis. Dual 10/100/1000 Ethernet ports allow for redundant control connections.



XTREME 32

Features & Benefits:

- 850-2500 MHz Operating Range
- Redundant Hot-swappable Power Supplies
- Hot-swappable Input and Output Adapters
- Adjustable Input and Output Gain
- Dual Gigabit Ethernet Ports
- Field Replaceable Cooling Fan
- Fan-out LNB Power Option on Input Adapters
- Optional Fiber Optic Inputs

Specifications:	Full Fan-out		Full Fan-in	
Operating Frequency:	950-2150 MHz	850-2500 MHz	950-2150 MHz	850-2500 MHz
Configurations:	8x8		8x8	
Input Gain Range:	-15.5 to 16 dB in 0.5 dB steps		-17.5 to 14 dB in 0.5 dB steps	
Output Gain Range:	-14.5 to 17 dB in 0.5 dB steps		-13.5 to 18 dB in 0.5 dB steps	
Impedance:	75 Ω or 50 Ω		75 Ω or 50 Ω	
Input P1dB:	0 dBm Min.		0 dBm Min.	
OIP3:	10 dBm Min.	10 dBm Min.	10 dBm Min.	10 dBm Min.
Frequency Response: Any 36 MHz:	+/- 1.5 dB	+/- 3 dB	+/- 1.5 dB	+/- 2.5 dB
	+/- .5 dB	+/- .7 dB	+/- .5 dB	+/- .5 dB
Isolation (input-to-input):	60 dB Min.	60 dB Min.	60 dB Min.	60 dB Min.
Isolation (output-to-output):	60 dB Min.	60 dB Min.	60 dB Min.	60 dB Min.
Isolation (input-to-output):	55 dB Min.	50 dB Min.	55 dB Min.	50 dB Min.
Input Return Loss:	14 dB Min.		14 dB Min.	
Output Return Loss:	14 dB Min.		14 dB Min.	
Noise Figure:	13 dB Max.	14 dB Max.	13 dB Max.	21 dB Max.
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω, SMA, or Mixed			
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz			
Power Consumption:	110 W typical			
Local Control:	Front panel 2.2" display and rotary knob			
Remote Control:	SNMP, TELNET, TCP/IP, Web Browser Interface Via Ethernet Remote Panel			

¹Specifications valid at unity gain (Input gain = 0 dB , Output gain = 0 dB)

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

XTREME 32-C

32 Port Fan-In L-Band + S-Band RF Matrix Switch



XTREME 32 Dual Band Matrix Switch

General Description:

The **XTREME 32-C** Dual Band matrix switch is a full fan-in (combining) non-blocking signal management solution that routes an input to any or all outputs. The design features an industry exclusive architecture that supports both symmetric and asymmetric configurations of 32 combined inputs and outputs in a compact 1 RU chassis. Hot- Swappable redundant power supplies, I/O Modules, and a field replaceable cooling fan provide maximum reliability.

Features & Benefits:

- 950-3500 MHz Operating Range
- Hot-swappable Input and Output Adapters
- Flexible Matrix Configurations (16x16)
- Adjustable Input and Output Gain
- Redundant Hot Swappable Power Supplies
- Dual Gigabit Ethernet Ports
- Field Replaceable Cooling Fan

Specifications: ^{*1}	XTREME 32-C	
Operating Frequency:	950-2150 MHz	950-3500 MHz
Configurations:	16x16	
Input Gain Range:	-19.5 to 12 dB in .5 dB steps	
Output Gain Range:	-20.5 to 11 dB in .5 dB steps	
Impedance:	75 Ω or 50 Ω	
Input P1dB:	0 dBm	
OIP3:	10 dBm Min.	8 dBm Min.
Frequency Response:	+/- 2.0 dB +/- 0.5 dB Max. (Over any 36 MHz Channel)	
Isolation (input-to-input):	50 dB	
Isolation (output-to-output):	50 dB	
Isolation (input-to-output):	50 dB	45 dB
Input Return Loss:	14 dB	
Output Return Loss:	14 dB	
Noise Figure:		
Default Gain:	13 dB max (22 dB Full Fan-In)	15 dB max (24 dB Full Fan-In)
Max Input Gain:	9 dB Typical* (21 dB Full Fan-In)	10 dB Typical* (23 dB Full Fan-In)
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω, SMA, or Mixed	
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz	
Power Consumption:	100W Typical	
Local Control:	Front Panel 2.2" LCD Display with Rotary Switch Joystick	
Remote Control:	SNMP, TELNET, TCP/IP, Web Browser Interface Via Ethernet, Remote Panel	
Size:	1 RU: 1.75"H x 19"W x 18.5 D"	

Specifications may vary with connector type. See individual specification sheet for specific performance data.

* Typical refers to expected product performance that is useful in application of the product but is not covered by the product warranty

XTREME 32

32 Port Fan-Out L-Band + S-Band RF Matrix Switch



XTREME 32 Dual Band Matrix Switch

General Description:

The **XTREME 32** matrix switch is a full fan-out (distributive) non-blocking signal management solution that routes an input to any or all outputs. The design features an industry exclusive architecture that supports both symmetric and asymmetric configurations of 32 combined inputs and outputs in a compact 1 RU chassis. Hot-Swappable redundant power supplies, I/O Modules, and a field replaceable cooling fan provide maximum reliability.

Features & Benefits:

- 950-3500 MHz Operating Range
- Hot-swappable Input and Output Adapters
- Flexible Matrix Configurations (16x16)
- Adjustable Input and Output Gain
- Redundant Hot Swappable Power Supplies
- Dual Gigabit Ethernet Ports
- Field Replaceable Cooling Fan

Specifications: ^{*1}	XTREME 32	
Operating Frequency:	950-2150 MHz	950-3500 MHz
Configurations:	16x16	
Input Gain Range:	-19.5 to 12 dB in .5 dB steps	
Output Gain Range:	-20.5 to 11 dB in .5 dB steps	
Impedance:	75 Ω or 50 Ω	
Input P1dB:	0 dBm	
OIP3:	10 dBm Min.	8 dBm Min.
Frequency Response:	+/- 2.0 dB +/- 0.5 dB Max. (Over any 36 MHz Channel)	
Isolation (input-to-input):	60 dB	
Isolation (output-to-output):	60 dB	
Isolation (input-to-output):	50 dB	45 dB
Input Return Loss:	14 dB	
Output Return Loss:	14 dB	
Noise Figure:		
Default Gain:	13 dB max	14 dB max
Max Input Gain:	9 dB Typical*	10 dB Typical*
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω, SMA, or Mixed	
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz	
Power Consumption:	100W Typical	
Local Control:	Front Panel 2.2" LCD Display with Rotary Switch Joystick	
Remote Control:	SNMP, TELNET, TCP/IP, Web Browser Interface Via Ethernet, Remote Panel	
Size:	1 RU: 1.75"H x 19"W x 18.5 D"	

Specifications may vary with connector type. See individual specification sheet for specific performance data.

* Typical refers to expected product performance that is useful in application of the product but is not covered by the product warranty

XTREME 32

Dual 8x8 Hybrid RF Matrix Switch

General Description:

The **XTREME 32** Hybrid matrix switch is an L-band matrix switch that features a non-blocking 8x8 splitting matrix and a non-blocking 8x8 combining matrix with hot-swap I/O cards, redundant power supplies, and control module in a compact 1 RU chassis. Dual 10/100/1000 Ethernet ports allow for redundant control connections.



XTREME 32

Features & Benefits:

- 850-2500 MHz Operating Range
- Redundant Hot-swappable Power Supplies
- Hot-swappable Input and Output Adapters
- Adjustable Input and Output Gain
- Dual Gigabit Ethernet Ports
- Field Replaceable Cooling Fan
- Fan-out LNB Power Option on Input Adapters
- Optional Fiber Optic Inputs

Specifications:	Full Fan-out		Full Fan-in	
Operating Frequency:	950-2150 MHz	850-2500 MHz	950-2150 MHz	850-2500 MHz
Configurations:	8x8		8x8	
Input Gain Range:	-15.5 to 16 dB in 0.5 dB steps		-17.5 to 14 dB in 0.5 dB steps	
Output Gain Range:	-14.5 to 17 dB in 0.5 dB steps		-13.5 to 18 dB in 0.5 dB steps	
Impedance:	75 Ω or 50 Ω		75 Ω or 50 Ω	
Input P1dB:	0 dBm Min.		0 dBm Min.	
OIP3:	10 dBm Min.	10 dBm Min.	10 dBm Min.	10 dBm Min.
Frequency Response: Any 36 MHz:	+/- 1.5 dB	+/- 3 dB	+/- 1.5 dB	+/- 2.5 dB
	+/- .5 dB	+/- .7 dB	+/- .5 dB	+/- .5 dB
Isolation (input-to-input):	60 dB Min.	60 dB Min.	60 dB Min.	60 dB Min.
Isolation (output-to-output):	60 dB Min.	60 dB Min.	60 dB Min.	60 dB Min.
Isolation (input-to-output):	55 dB Min.	50 dB Min.	55 dB Min.	50 dB Min.
Input Return Loss:	14 dB Min.		14 dB Min.	
Output Return Loss:	14 dB Min.		14 dB Min.	
Noise Figure:	13 dB Max.	14 dB Max.	13 dB Max.	21 dB Max.
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω, SMA, or Mixed			
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz			
Power Consumption:	110 W typical			
Local Control:	Front panel 2.2" display and rotary knob			
Remote Control:	SNMP, TELNET, TCP/IP, Web Browser Interface Via Ethernet Remote Panel			

¹Specifications valid at unity gain (Input gain = 0 dB , Output gain = 0 dB)

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

XTREME 32

32 Port Fan-Out Bi-Directional RF Matrix Switch



XTREME 32

General Description:

The **XTREME 32** DOCSIS 3.1 compatible matrix switch is a full fan-out (distributive) non-blocking signal management solution that routes an input to any or all outputs. The design features an industry exclusive architecture that supports both symmetric and asymmetric configurations of 32 combined inputs and outputs in a compact 1 RU chassis. Hot-swappable redundant power supplies, I/O Modules, and a field replaceable cooling fan provide maximum reliability.

Features & Benefits:

- 5-1800 MHz Operating Range
- Bidirectional configuration ideal for DOCSIS 3.1 testing
- Redundant Hot-swappable Power Supplies
- Hot-swappable Input and Output Adapters
- Dual Gigabit Ethernet Ports
- Field Replaceable Cooling Fan

Specifications: ^{*1}	XTREME 32		
Operating Frequency:	5-54 MHz	54-1218 MHz	1218-1800 MHz
Insertion Loss:	26	27	30
Configurations:	16x16 (Standard)		
Impedance:	75 Ω		
Input P1dB:	30 dBm Min.		
OIP3:	40 dBm Min.		
Frequency Response:	+/- 4 dB	+/- 2.5 dB	+/- 2 dB
Any 6 MHz Flatness:	+/- 0.5 dB	+/- 0.5 dB	+/- 0.5 dB
Isolation (input-to-input):	60 dB		
Isolation (output-to-output):	60 dB		
Isolation (input-to-output):	50 dB		
Input Return Loss:	7 dB Min. >10 dB Typical		
Output Return Loss:	7 dB Min. >10 dB Typical		
RF Connectors:	F-Type		
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz 5A Max.		
Power Consumption:	55W Typical		
Local Control:	Front Panel 2.2" LCD Display with Rotary Switch Joystick		
Remote Control:	Dual 10/100/1000 Base Tx Ethernet Ports, SNMP, V2c, v3 TCp/ IP, Quintech 2.15 Protocol (Port 9100) Web server: TELNET		
Size:	1 RU: 1.75"H x 19"W x 18.5 D"		

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

¹Specifications valid at unity gain (Input gain = 0 dB , Output gain = 0 dB)

QE3

64x64 L-Band RF Matrix Switch



QE3

General Description:

The **QE3** RF matrix switching system features a compact 64x64 RF Matrix in 6 RU with embedded web browser and touchscreen interface. The **QE3** is a full fan-out, RF matrix switch, where any input can be routed to any or all outputs. The **QE3** features Quintech's latest **Q-ROUTE™** and **Q-SENSE™** technology, which provides maximum reliability with signal path redundancy and auto reroute capabilities. The **QE3** is highly scalable and can easily be expanded to a 1024x1024 system. Front panel hot-swappable component cards enable fast and easy replacement without any special tools or disconnecting any cables. The hot-swappable control cards, which operate independently offer the highest level of redundancy in control. The dual hot-swappable power supplies provide redundancy in powering. The RF level at the inputs and outputs is monitored to facilitate troubleshooting network interfaces. Manual and Automatic Gain Control (AGC) on all inputs allows the user to adjust input signal level for optimum performance.

Features & Benefits:

- Operating frequencies cover 950-2150 MHz
- Compact modular design - 64x64 in 6 RU, easily expandable to 1024x1024
- **Q-ROUTE™** provides internal signal path redundancy by automatically rerouting around a failed signal path
- **Q-SENSE™** provides external signal path redundancy by automatically switching to a backup input signal, if signal level falls below user defined threshold
- Fast and easy hot-swap (less than 30 seconds) of all active cards from the front without using special tools or replacing cables
- Programmable AGC and attenuation on all inputs allows the user to adjust the input signal level for optimum performance

Specifications:*	QE3
Operating Frequency:	950-2150 MHz
Configurations:	64x64 (6 RU) up to 1024x1024
Gain Range (Manual Mode):	-12 dB to 18 dB in 0.5 dB Steps
Impedance:	75 Ω, 50 Ω
P1dB:	0 dBm Min. @ Default Gain Setting
OIP3:	10 dBm
RF Input Power:	0 dBm Max.
Frequency Response:	± 1.5 dB ± 0.5 dB Over any 36 MHz Channel
Isolation (input-to-input):	65 dB Min.
Isolation (output-to-output):	60 dB Min.
Isolation (input-to-output):	50 dB Min.
RF Sensing and AGC Range:	-10 dBm to -50 dBm
Input Return Loss:	14 dB
Output Return Loss:	14 dB
Noise Figure:	22 dB @ Default Gain Setting
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω, SMA 50 Ω, or Mixed
AC Input Power:	Autoranging 100-240 VAC, 50/60 Hz
Power Consumption:	650 W
Local Control:	Front Panel Touchscreen Display
PC Remote Control:	RS-232, RS-422/485, SNMP, TELNET or TCP/IP Via Customer Supplied PC
Software:	Basic PC Compatible Software and Command Protocol Web Browser Software
Mechanical:	64x64 in 6 RU: 10.5" H x 19" W x 25.25" D
Weight:	112 lbs Gross (Boxed), 89 lbs Net

*Specifications may vary with connector type. See individual specification sheet for specific performance data and system configurations.
For IF frequencies (50-200 MHz) please contact Quintech.

QRM

16x16 Fan-Out RF Matrix Switch



QRM

General Description:

The **QRM** is a full fan-out RF matrix switch available in 1 RU as 8x8, 8x16, 16x8 and 16x16. The 8x8 can be easily expanded to full 16x16 with purchase of an access code. The **QRM** can be expanded to a maximum system size of 32x32 by adding additional modules. The **QRM** features Quintech's latest **Q-ROUTE™** and **Q-SENSE™** technology, which provides maximum reliability with signal path redundancy and auto reroute capabilities. The **QRMs** operating frequency range covers L-band, IF and broadband. It also offers manual and AGC modes. It is controllable either locally via the front panel keypad or remotely over Ethernet and is compatible with most monitoring and control systems.

Features & Benefits:

- Compact design - 16x16 in 1 RU
- Manual gain and AGC modes with a range of
- -15 dB to +16 dB in 0.5 dB steps
- Remotely controlled via web browser interface, Ethernet or TELNET via customer supplied PC
- **Q-ROUTE™** provides internal signal path redundancy by automatically rerouting around a failed signal path
- **Q-SENSE™** provides external signal path redundancy by automatic switching to a backup input signal, if signal level falls below user defined threshold¹

¹Q-Sense not available on all configurations. Limited to a maximum of 16 inputs.

Specifications:*	QRM L-Band	QRM IF	QRM Broadband
Operating Frequency:	950-2150 MHz	50-200 MHz	5-1200 MHz
Configurations:	8x8 up to 32x32	8x8 up to 32x32	8x8 up to 32x32
Gain Range (Manual Mode):	-15 dB to +16 dB in 0.5 dB Steps	-15 dB to +16 dB in 0.5 dB Steps	-15 dB to +16 dB in 0.5 dB Steps
Impedance:	75 Ω, or 50 Ω	75 Ω, or 50 Ω	75 Ω, or 50 Ω
Input P1dB:	2 dBm	-3 dBm	0 dBm
OIP3:	10 dBm	8 dBm	8 dBm
Frequency Response:	± 1.5 dB ± 0.4 dB Over Any 36 MHz Channel	± 2.25 dB ± 0.6 dB Over Any 36 MHz Channel	± 2.25 dB ± 0.6 dB Over Any 36 MHz Channel
Isolation (input-to-input):	65 dB	65 dB	60 dB
Isolation (output-to-output):	60 dB	60 dB	60 dB
Isolation (input-to-output):	50 dB	55 dB	45 dB
RF Input Power:	-10 dBm to -70 dBm	-10 dBm to -70 dBm	-10 dBm to -70 dBm
RF Sensing and AGC Range:	-10 dBm to -50 dBm	-10 dBm to -50 dBm	-10 dBm to -50 dBm
Input Return Loss:	14 dB	14 dB	14 dB
Output Return Loss:	14 dB	14 dB	14 dB
Noise Figure:	<18 dB @ 0 dB Gain <9.5 dB @ 16 dB Gain	<18 dB @ 0 dB Gain <9.5 dB @ 16 dB Gain	<20 dB @ 0 dB Gain <11 dB @ 16 dB Gain
RF Connectors:	F-Type, BNC 75 Ω, or 50 Ω, SMA		F-Type, BNC 75 Ω, or 50 Ω
AC Input Power:	Autoranging 100-240 VAC, 50/60 Hz		
Power Consumption:	87 W		
Local Control:	Front Panel Keypad with LCD Display		
Remote Control:	RS-232, RS-485, SNMP, TELNET or TCP/IP Via Customer Supplied PC, Web Browser Control		
Software:	Basic PC Compatible Software and Command Protocol Included		
Mechanical:	16x16 in 1 RU: 1.75" H x 19" W x 18.5" D		
Weight:	14.7 lbs Gross (Boxed), 12.2 lbs Net		

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

QFM

16x16 Fan-In RF Matrix Switch



QFM

General Description:

The **QFM** is a full fan-in RF matrix switch available in 1 RU as 8x8, 8x16, 16x8 and 16x16. The **QFM** can be expanded to a maximum system size of 32x32 by adding additional modules. The **QFM** features Quintech's latest **Q-ROUTE™** and **Q-SENSE™** technology, which provides maximum reliability with signal path redundancy and auto reroute capabilities. The **QFM** is dual band with operating frequencies for IF 50 MHz - 200 MHz and 950 MHz - 2150 MHz. It also offers manual gain and AGC modes with a range of -20 dB to +8 dB in 0.5 dB steps with individual port control to support all modulation formats. The front panel LEDs allow monitoring of power supply and alarm status information.

Features & Benefits:

- Compact design - 16x16 in 1 RU
- Manual gain and AGC modes with a range of -20 dB to +8 dB in 0.5 steps
- Remotely controlled via web browser interface, Ethernet or TELNET via customer supplied PC
- **Q-ROUTE™** provides internal signal path redundancy by automatically rerouting around a failed signal path
- **Q-SENSE™** provides external signal path redundancy by automatic switching to a backup input signal, if signal level falls below user defined threshold¹

¹Q-Sense not available on all configurations. Limited to a maximum of 16 inputs.

Specifications:*	QFM L-Band	QFM IF
Operating Frequency:	950-2150 MHz	50-200 MHz
Configurations:	8x8 to 32x32 (with Additional Modules)	8x8 to 32x32 (with Additional Modules)
Gain Range (Manual Mode):	-20 dB to +8 dB in 0.5 dB Steps	-20 dB to +8 dB in 0.5 dB Steps
Impedance:	75 Ω, or 50 Ω	75 Ω, or 50 Ω
Input P1dB:	2 dBm	0 dBm
OIP3:	12 dBm	10 dBm
Frequency Response:	± 1.5 dB ± 0.4 dB Over Any 36 MHz Channel	± 2 dB ± 0.6 dB Over Any 36 MHz Channel
Isolation (input-to-input):	60 dB	65 dB
Isolation (output-to-output):	60 dB	60 dB
Isolation (input-to-output):	45 dB	45 dB
RF Input Power:	-10 dBm to -70 dBm	-10 dBm to -70 dBm
Input Balancing (Manual Mode):	-12 dB to +4 dB in 0.5 dB Steps	-12 dB to +4 dB in 0.5 dB Steps
Output AGC Level:	-10 dBm to -50 dBm	-10 dBm to -50 dBm
Input Return Loss:	13 dB	14 dB
Output Return Loss:	14 dB	13 dB
Noise Figure:	<23 dB @ 0 dB Gain	<20 dB @ 0 dB Gain
RF Connectors:	F-Type, BNC 75 Ω, or 50 Ω, SMA	
AC Input Power:	Autoranging 100-240 VAC, 50/60 Hz	
Power Consumption:	77 W	
Local Control:	Front Panel Keypad with LCD Display	
Remote Control:	RS-232, RS-485, SNMP, TELNET or TCP/IP Via Customer Supplied PC, Web Browser Control	
Software:	Basic PC Compatible Software and Command Protocol Included	
Mechanical:	16x16 in 1 RU: 1.75" H x 19" W x 18.5" D	
Weight:	14.5 lbs Gross (Boxed), 12 lbs Net	

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

RFM

RF Routing Switches



RFM

General Description:

The **RFM** is a routing switch that transparently passes RF signals. Quintech's proprietary design provides lossless switching while minimizing noise figure through the switch. It's compact design fits 16x1 in a 1 RU chassis and the switches can be cascaded to expand to 256x1. The **RFM** is used for centralized test and measurement applications and monitoring large numbers of RF signals.

Features & Benefits:

- 5-1800 MHz continuous frequency range covering all DOCSIS 3.1 to 1200 MHz and to future 1800 MHz frequencies
- L-band 950-2150 MHz frequency range
- Unity gain switching with low noise figure
- Pay as you grow, expandable in the field to 256x1
- Remote control over TCP/IP via open source API
- Web browser interface for easy setup and configuration

Applications:

- Remote testing of CATV headends and monitoring of upstream and downstream paths
- Automate testing of multiple devices under test to shared analyzer

Specifications*	RFM		
Operating Frequency:	5-1800 MHz	950-2500 MHz	5-2500 MHz
Configuration:	16x1 (Up to 256x1 with Additional Modules)		
Impedance:	75 Ω	50 Ω, 75 Ω	50 Ω, 75 Ω
P1dB:	+4 dBm	+5 dBm	+4 dBm
OIP3:	15 dBm		
Insertion Loss:	0 dB @±1.5 dB	0 dB @±1.5 dB	0 dB @±3 dB
Isolation:	50 dB	50 dB	45 dB
Input Return Loss:	13 dB	13 dB	13 dB
Output Return Loss:	14 dB	14 dB	13 dB
Noise Figure:	< 13 dB	<14 dB	<16 dB
RF Connector:	F-Type	F-Type, SMA	F-Type, SMA
Power Requirements:	100-240 VAC, 50/60 Hz		
Power Consumption:	9 W		
Remote Control:	Ethernet Port: TCP/IP, Web Browser Interface or SNMP		
Control Module Connectors:	RJ45, XR Bus		
Expansion Module Connectors:	XR Bus		
Mechanical:	1RU: 1.75" H x 19" W x 18.5" D		

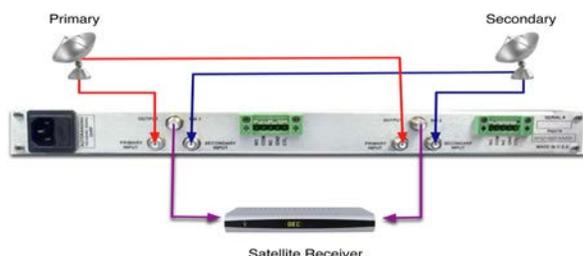
*Specifications may vary with connector type. See individual specification sheet for specific performance data.

RFS Series

RF Sensing Redundancy Switches



RFS



General Description:

The **RFS** redundancy switches with RF sensing detect the presence of primary RF signal and provide the ability to switch to a backup (secondary) signal upon the loss of the primary. These highly reliable RF switches are ideal for redundancy applications and scheduled maintenance projects. They are perfect for unmanned sites and can help to eliminate the need for emergency restoration service. In addition, an optional RS-232 DB-9 port has been included through which the RF sensing switch can be remotely controlled. Standard alarm and remote are available via contact closure.

Features & Benefits:

- Redundancy switches provide automatic backup for signal continuity, thereby maintaining your revenue stream
- Facilitates scheduled maintenance activity with no downtime
- Rear panel mounted barrier strip provides the interface for a contact closure summary alarm and remote override
- RF threshold is adjustable via front panel
- Ideal for redundancy switching applications for failed LNBs, upconverters, downconverters and unmanned facilities
- Ultra-reliable 1:1 redundancy for backup of fiber links
- The **RFS 2150/2** with optional serial control provides the ability to remotely control the RF sensing switches via RS232

Specifications:*	RFS 2150
Operating Frequency:	950-2150 MHz
Impedance:	75 Ω or 50 Ω
Detected Frequency:	950-2150 MHz
Level:	-60 dBm to -20 dBm, Adjustable
Insertion Loss:	2.5 dB ± 1 dB
Frequency Response:	± 1.0 dB
Isolation:	40 dB
Return Loss:	12 dB
Inputs/Outputs:	Dual 2/1
Manual Override:	Front Panel Mounted Slide Switch
Threshold Adjust:	Front Panel Mounted Up/Down Push Buttons
Alarm:	Form 'C' Contact Closure
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω
Power Requirements:	100-240 VAC Autoranging, 60/50 Hz
Power Consumption:	21 W
Mechanical:	1 RU: 1.75" H x 19" W x 14" D
Options:	Single or Dual Configuration, LNB Power (18-24 VDC) and Serial Control

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

Evertz 2400 ODU

Outdoor Integrated RF Fiber Transmission System



2400 ODU



General Description:

The 2400ODU-8 is a compact, weatherproof enclosure that provides a convenient, pre-integrated package for fiber transport of satellite and other signals within the extended L-Band range. The 2400ODU-8 can house up to 8x active fiber transmit (2408LT) or receive (2406LR) modules and an 8-channel power supply (2400PSUA-8).

The 2400ODU comes with mounting brackets to be conveniently mounted directly on or near the antenna structure.

This turnkey solution provides fiber transport of up to 8x RF signals over individual fibers or multiplexed over a single fiber, and power the connected LNBs.

The 2400ODU-8 also features built-in surge protectors for lightning protection and has options for integrated fiber multiplexer, 10MHz reference transport, RF protection switching, splitters, Bias-Tee and more.

Features & Benefits:

- Fiber link provides electrical isolation between antenna and facility, mitigating ground loop and lightning issues
- Weather-sealed enclosure with durable powder coat finish
- Wide operating temperature range
- Lightning protection included on RF inputs/outputs
- LNB current monitoring for advance warning of LNB failure
- Serial and Ethernet data transceivers available for remote antenna control, monitoring and other applications
- All modules are field-replaceable and hot-swappable
- SmartMON™ monitoring without a separate data connection
- Redundant power supply

Chassis Specifications:*	Evertz 2400 ODU
Slots:	8
Channels (max):	8
Power Consumption:	<1 Amp Per Input
Mechanical:	9" D x 16" W x 16" H
Weight (chassis only):	11 lbs
Environment:	-30 to +80°C

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

Evertz 2406LR/ 2408LT

L-Band/Wideband Standalone Fiber Receiver Series



Evertz 2406LR

RX Specifications:*	Evertz 2406LR
Operating Frequency:	88 MHz - 3000 MHz
Output IMD:	< -55 dBc @ -3 dBm Output and 25 dB Gain
P1dB:	+28 dBm
RF Gain:	-6 dB to +24 dB in 2 dB Steps
Return Loss:	> 15 dB 88 MHz – 2300 MHz
Optical Connector:	FC/APC
Optical Wavelength:	1270 to 1610 nm
Max Optical Input Power:	+3 dBm
RF Connector:	F-Type, 50 Ω BNC
Power:	4.8 – 5.2V DC
Mechanical:	5.4”L x 2.4”W x 1.2”H
Environment:	IP65

*Specifications may vary with connector type. See individual specification sheet for specific performance data.



Evertz 2408LT

RX Specifications:*	Evertz 2408LT
Operating Frequency:	88 – 3000 MHz
RF Input Power:	-60 dBm to -10 dBm
Output IMD:	< -55 dBc @ -15 dB Input and Min. Gain
LNB Power:	13 V, Off and 0 Hz, 22 kHz
RF Gain:	+2 to +30 dB in 2 dB Steps
Return Loss:	88 – 500 MHz > 11 dB 500 MHz – 3000 MHz > 15 dB
Optical Connector:	FC/APC
Optical Wavelength:	1310 nm
Optical Power Output:	+2 dBm
Laser Type:	DFB
RF Connector:	F-Type, 50 Ω BNC
Power:	4.8 – 5.2V DC
Mechanical:	5.4”L x 2.4”W x 1.2”H
Environment:	IP65

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

AMP 2150

L-Band Line Amplifier



AMP 2150



AMP 2150 Dual L-Band Line Amplifier



AMP 2150/4 Quad L-Band Line Amplifier



AMP 2150 Inline



General Description:

The **AMP 2150** series of L-band line amplifiers provide high gain as well as optional DC path continuity. These amplifiers are manufactured utilizing highly reliable surface mount technology and advanced microstrip RF circuitry and are typically deployed in satellite telecommunication networks to compensate for L-band signal paths through long coaxial cable runs. Housed in either a standard 1 RU rack mount enclosure or a rugged weatherproof extruded housing, the **AMP 2150** series amplifiers are the optimum choice for any L-band satellite communications application.

Features & Benefits:

- High (adjustable) gain over full bandwidth
- Housed in a rugged, weatherproof extruded aluminum enclosure or in a 1 RU rack mount chassis
- Passes a 10 MHz reference signal
- LNB power available

Specifications:*	AMP 2150	AMP 2150 (Dual Rack Mounted)	AMP 2150 (Quad Rack Mounted)
Operating Frequency:	700-2150 MHz	700-2150 MHz	700-2150 MHz
Gain Range:	0 dB to +24 dB Adjustable by Internal Pot (Factory Preset to 20 dB)	0 dB to +24 dB, Adjustable From the Front Panel (Factory Preset to 20 dB)	0 dB to +24 dB, Adjustable From the Front Panel (Factory Preset to 20 dB)
10 MHz Insertion Loss:	1.5 dB \pm 0.5 dB @ +20 dB Gain	1.5 dB \pm 0.5 dB @ +20 dB Gain	1.5 dB \pm 0.5 dB @ +20 dB Gain
Input P1dB:	-10 dBm	-10 dBm	-10 dBm
OIP3:	+4.5 dBm (with 20 dB Gain and Pin = -30 dBm)	+4.5 dBm (with 20 dB Gain and Pin = -30 dBm)	+4.5 dBm (with 20 dB Gain and Pin = -30 dBm)
Frequency Response:	\pm 1 dB	\pm 1 dB	\pm 1 dB
Group Delay:	0.3 ns	0.3 ns	0.3 ns
Input Return Loss:	12 dB	12 dB	12 dB
Output Return Loss:	12 dB	12 dB	12 dB
RF Connectors:	F-Type or BNC 75 Ω or 50 Ω	F-Type or BNC 75 Ω or 50 Ω	F-Type or BNC 75 Ω or 50 Ω
Power Requirements:	+18 to +24 VDC, 190 mA	+18 to +24 VDC, 190 mA	+18 to +24 VDC, 190 mA
Power Consumption:	4.6 W	4.6 W/ AMP Module	4.6 W/ AMP Module
Noise Figure:	8 dB at +20 dB Gain	8 dB at +20 dB Gain	8 dB at +20 dB Gain
Power Connectors:	Via Output Connector J-hooks	Via Output Connector (AC Optional)	Via Output Connector (AC Optional)
Operating Temperature:	-10° to +60° C	-10° to +60° C	-10° to +60° C
Mechanical:	1.25" H x 3.25" W x 5" L	1 RU: 1.75"H x 19"W x 6.5"D	1 RU: 1.75"H x 19"W x 14"D
Weight:	0.5 lbs	3.6 lbs Gross (Boxed), 2.6 lbs Net	9 lbs Gross (Boxed), 8 lbs Net

*Specifications may vary with connector type. See individual specification sheet for specific performance data. Call for custom configurations.

RPS Series

16-Port Redundant Power Supplies



RPS



RPS Q Series



RPS B Series



RPS F Series

General Description:

The **RPS** series redundant power supplies provide a centralized power source for as many as 16 LNBS, line amplifiers, splitters or combiners. The unit is comprised of two separately fused power supply modules configured for nominal voltage of 18 or 24 VDC and has been designed for international use with an input voltage of 100-240 VAC, 50/60 Hz. The power supply modules are on individual drawers to provide easy replacement of a faulty module. Both supplies are monitored by a summary alarm which employs a serial RS-422 interface. On the rear panel, green LEDs indicate power status for each of the input ports. Each input port is capable of supplying up to 900 mA through an automatically resetting circuit limiter. Loads in excess of 900 mA will 'trip' the overload detection, shutting down the input port until the current demand drops below the reset threshold point.

Features & Benefits:

- Centralized redundant power source for up to 16 active devices including LNBS/LNAs
- Two hot-swappable (shared) PSUs on individual drawers
- Allows scheduled maintenance of receivers without interrupting LNB power
- Power supply status available by control port on panel
- Individual AC for each drawer
- Prevent revenue loss due to LNB power failure during feed
- DC output to LNBS is overload protected requiring no fuses

Specifications:*	RPS 24/6.0	RPS 18/4.5
Operating Frequency:	270-2150 MHz	270-2150 MHz
Insertion Loss:	0.5 ± 0.5 dB	0.5 ± 0.5 dB
Frequency Response:	± 0.5 dB	± 0.5 dB
Return Loss:	14 dB	14 dB
Output Voltage:	+24 VDC	+18 VDC
Output Current:	900 mA on Any Single Port. Total of All Ports Not to Exceed 6.0 A	900 mA on Any Single Port. Total of All Ports Not to Exceed 4.5 A
Power Requirements:	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz
Power Consumption:	50 W No Load 210 W Full Load	46 W No Load 210 W Full Load
Input Connectors:	F-Type, BNC 75 Ω or 50 Ω, 2-pin Quick Connects	F-Type, BNC 75 Ω or 50 Ω, 2-pin Quick Connects
Output Connectors:	F-Type, BNC 75 Ω or 50 Ω, 2-pin	F-Type, BNC 75 Ω or 50 Ω, 2-pin
Mechanical:	2 RU: 3.5" H x 19" W x 20" D	2 RU: 3.5" H x 19" W x 20" D
Weight:	17.8 lbs Gross (Boxed), 13.8 lbs Net	17.8 lbs Gross (Boxed), 13.8 lbs Net

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

NEXUS Wi-5G

6 GHz RF Test Matrix



NEXUS Wi-5G

General Description:

The **NEXUS Wi-5G** is a wideband 600 MHz to 6 GHz bi-directional RF attenuator matrix test system which enables automated testing of 2x2 to 8x8 MIMO connections. 64 sets of integrated fixed attenuators and 0 to 60 dB programmable attenuators provide up to 90 dB of total attenuation per connection. The **NEXUS Wi-5G** can connect any input port to one or all output ports and any output port to one or all input ports using integrated wideband splitters and combiners. Unused connections can be turned off using internally terminated 100 dB isolation switches. The **NEXUS Wi-5G** enables interoperability, coexistence and testing of current and emerging standards. The matrix is used for roaming, handover, beam forming, wireless mesh network test and validation of network equipment. Its frequency range covers 4G/LTE 5G Wireless and WiFi 6. Circuit-switched fallback testing can be conducted in a controlled environment isolated from commercial signals, emulation of mobility scenarios, interband carrier aggregation and WiFi interference tests are easily configured. Regression testing can be completed in reduced time enhancing laboratory ROI.

The **NEXUS Wi-5G** used in conjunction with Quitech's proprietary **Q-LAAMP**[®] software management platform provides a ready-to-use test system with an intuitive GUI and user configurable RF fading applications.

Features & Benefits:

- 600 MHz to 6 GHz continuous frequency range covering all major wireless and technologies
- 64 Total 0 to 60 dB programmable attenuators in 0.5 dB steps
- High power handling up to 30 dBm
- Integrated splitters and combiners support 2x2 up to 8x8 MIMO connection testing

Specifications:*	NEXUS Wi-5G
Operating Frequency:	600-6000 MHz
Configuration:	4x8, 8x8
Matrix Type:	Passive Bi-Directional, Non-Blocking, Full Fan-In/Fan-Out
Switching Technology:	Solid State
Impedance:	50 Ω
IIP3:	>60 dBm
P1dB:	>36 dBm
Fixed Attenuation:	35 dB @ 6 GHz
Variable Attenuation:	0 to 60 dB Attenuation in 0.5 dB Steps
Isolation Port A to Port A:	100 dB Single Connection, 45 dB Multiple Connections
Isolation Port B to Port B:	80 dB Single Connection, 45 dB Multiple Connections
Isolation Port A to Port B:	100 dB
On/ Off Isolation: ¹	100 dB
Return Loss:	13 dB Min.
No Damage Signal Level:	+36 dBm Max.
RF Connectors:	N-type, SMA, QMA, TNC, 4.3-10
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz
Power Consumption:	20 W
Remote Control:	Ethernet, TELNET, SNMP, or TCP/IP Via Customer Supplied Control System, XR Bus for Expansion
Software:	Fast Ethernet API Protocol, Embedded Web Server and API Protocol, Q-LAAMP Option
Mechanical:	3 RU 5.25" H x 19" W x 25.25" D
Weight:	40 lbs. Gross (Boxed), 30 lbs. Net

¹70 dB Min. normalized to insertion loss of path

*All product designs and specifications subject to change without notice. See individual specification sheet for specific performance data.

NEXUS-4

6 GHz Bi-Directional RF Attenuator Matrix Switch



NEXUS-4



General Description:

The **NEXUS-4** is a bi-directional fully non-blocking 32x32 RF matrix switching system that can route any input ports to any output ports in a 6 RU chassis. With the frequency range of 400 MHz to 6 GHz and the capability of expanding to 256x256, it enables large scale wireless testing that involves many MIMO base stations and devices. The built-in programmable attenuators and efficient automation interface provide ease-of-use testing of signal fade and emulation of mobility scenarios. It can dramatically increase lab efficiency by eliminating manual patch panel and cabling as it can be remotely reconfigured for different test setups consistently in seconds. The utilization of **NEXUS-4** RF matrices will expand your testing capabilities, improve ROI of lab instruments, and reduce time to market.

Features & Benefits:

- 400 to 6000 MHz frequency range covering all major wireless technologies
- Support 32x32 RF ports in 6 RU with modular design expandable to 32x128
- Solid state switching and attenuation for consistent, repeatable and glitchless performance; reconfigure any test setup in seconds
- Fully non-blocking splitting and combining that supports MIMO testing
- Emulate free space incremental path loss of 0 to 60 dB
- High power handling of up to 30 dBm
- Management software **Q-LAAMP** enables resource and time allocation for high lab efficiency

Specifications:*	NEXUS-4		
Operating Frequency:	400-700 MHz	700-4000 MHz	4000-6000 MHz
Configuration:	Up to 32 Port A/32 Port B in a Single 6 RU Chassis		
Matrix Type:	Passive Bi-directional, Fully Non-blocking		
Switching Technology:	Solid State		
Impedance:	50 Ω		
OIP3:	60 dBm Min.		
P1dB:	40 dBm Min.		
Fixed Attenuation: ¹	37 dB Typical	45 dB Max.	46 dB Typical
Variable Attenuation (at Each Cross Point):	0 to 60 dB Attenuation in 0.5 dB Steps		
Isolation Port A to Port A:	100 dB Single Connection, 50 dB Multiple Connections		
Isolation Port B to Port B:	80 dB Single Connection, 50 dB Multiple Connections		
Isolation Port A to Port B:	100 dB		
On/ Off Isolation:	70 dB Min.	70 dB Min.	65 dB Min.
Return Loss:	10 dB	14 dB	10 dB
No Damage Signal Level:	+40 dBm Max.		
RF Connectors:	N-type, SMA, QMA, TNC, 4.3-10		
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz		
Power Consumption:	63 W		
Local Control:	Front Panel 2.2" LCD Display with Rotary Switch Joystick		
Remote Control:	Ethernet, TELNET, SNMP, or TCP/IP Via Customer Supplied Control System, XR Bus for Expansion		
Software:	Embedded Web Server and API Protocol, Fast Ethernet Option, Q-LAAMP Option		
Mechanical:	6 RU: 10.5" H x 19" W x 25" D		
Weight:	117 lbs in 32x32 Configuration		
Certifications:	FCC Part 15, CE, NRTL, TUV		

*All product designs and specifications subject to change without notice. See individual specification sheet for specific performance data.

Q-LAAMP

Quintech Lab Automation and Management Package

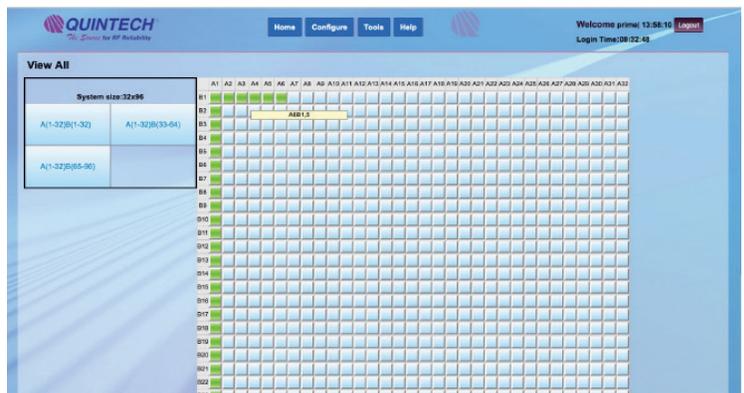
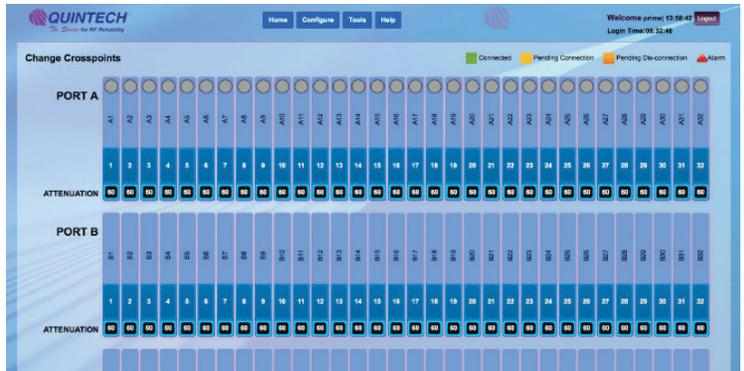
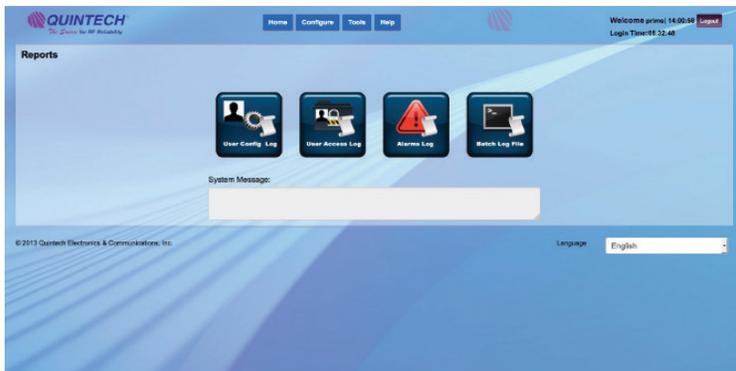
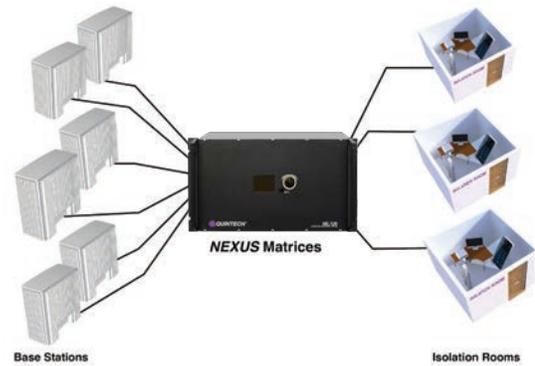
General Description:

Quintech Electronics proprietary Laboratory Automation and Management Package, **Q-LAAMP**, provides lab managers the ability to manage and allocate resources such as base stations and RF instruments among many shared users. Using the **NEXUS** RF Matrix, this software manages resource allocation to labs and users without a patch panel and manual operations. Its web-based user interface provides easy access from any PC or tablet browser. **Q-LAAMP** also includes other intuitive features that facilitate testing, monitoring and troubleshooting.

Q-LAAMP makes lab management and resource sharing easy and significantly increases lab efficiency, reduce test time and save costs.

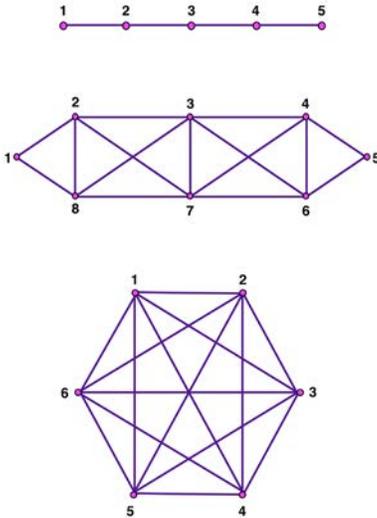
Features & Benefits:

- Schedule and resource management
- Enables multiple users to share the same lab environment
- Shared resources can be independently allocated
- Secure remote control and access to **Q-LAAMP** to avoid unauthorized changes
- Color-coded port level monitoring allows quick troubleshooting
- Port labeling to avoid confusion in a multi-user changing lab environment



NEXUS-M

6 GHz Bi-Directional RF Mesh Attenuator Matrix



NEXUS-M

General Description:

The **NEXUS-M** is a bi-directional 32 port mesh attenuator matrix where any port can connect to any or all remaining ports. With wideband frequency range spanning 400 MHz to 6 GHz, the matrix can be used for automating UHF, LTE, Bluetooth, WiFi, CAT-M, NB-IoT, and GPS component and software application tests. Each connection has an independently controlled variable attenuator, allowing power levels to be controlled between nodes. With millisecond switching speeds, software and firmware regression tests can be performed over many network configurations in a much shorter time compared to manual configuration of a patch panel. Easily configure string and mesh constellation networks for beam hopping latency measurements and network resiliency when adding or dropping nodes in software defined networks. The utilization of **NEXUS-M** RF mesh matrices will help reduce time to market of new hardware and software, and improve firmware compliance tests.

Features & Benefits:

- 400-6000 MHz frequency range covering all major wireless technologies
- Available in 8, 16 or 32 port systems
- Solid state switching and attenuation for consistent and repeatable performance
- Emulate over-the-air incremental path loss
- **Q-LAAMP** management software enables resource and time allocation for lab operation efficiency

Specifications:*	NEXUS-M
Operating Frequency:	400-6000 MHz
Configuration:	8, 16, 32 Port Systems
Matrix Type:	Passive Bi-directional
Switching Technology:	Solid State
Impedance:	50 Ω
P1dB:	43 dBm
Fixed Attenuation (Max):	400-700 MHz: 40 dB, 700-4000 MHz: 45 dB, 4000-6000 MHz: 50 dB
Variable Attenuation:	0 to 60 dB in 0.5 dB Steps (25 dB Dynamic Range Between Connected Ports)
On/Off Isolation:	70 dB Normalized to 0 dB Attenuation State
Return Loss:	400-700 MHz: 10 dB, 700-4000 MHz: 14 dB, 4000-6000 GHz: 10 dB
No Damage Signal Level:	+43 dBm
RF Connectors:	N(f), SMA(f)
Power Requirements:	100-240 VAC, 50/60 Hz
Local Control:	Front Panel 2.2" LCD Display with Rotary Switch Joystick
Remote Control:	Ethernet, TCP/IP Via Customer Supplied Control System
Software:	API Protocol, Q-LAAMP External Web Server w/Scheduler
Certifications:	FCC Part 15, CE, NRTL, TUV

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

NEXUS-R

High Power Bi-Directional RF Blocking Matrix



NEXUS-R

General Description:

The **NEXUS-R** is a passive bi-directional blocking matrix switch that can relay 32 A ports to 32 B ports. It is designed to handle high power up to 50 W for direct connection to base stations. Based on latching relay switching technology, it retains the connections even upon power loss. Quintech's proprietary design minimizes the return signal and insertion loss through the switch while maximizing the isolation between ports. Its low loss and distortion preserves signal integrity for performance testing while the high isolation prevents crosstalk between test equipment. As a result, the **NEXUS-R** has superior RF performance and can be used in highly demanding applications such as base station beam forming testing.

Features & Benefits:

- Latching relays ensure cross points remain connected upon loss of power
- All active components, including RF matrix cards and power supply, are field replaceable
- Multiple modules can be combined to create larger matrices

Specifications:*	NEXUS-R
Operating Frequency:	DC – 2.8 GHz
Matrix Type:	Passive Bi-directional Blocking
Switching Technology:	Miniature RF Relay
Impedance:	50 Ω
Maximum Input RF Power:	50 W (47 dBm) at 2.5 GHz, 20C
Maximum Hot Switch RF Power:	10 W (40 dBm) at 2.5 GHz, 20C
Total RF Power into 32 Channels:	150 W CW, 20C
Amplitude Matched Channel-to-Channel:	±1 dB Max. @ 2.8 GHz
Isolation (Any Configuration):	90 dB Min.
Insertion Loss:	11 dB Max. @ 2.8 GHz
Return Loss:	14 dB Typ., 10 dB Min.
Switching Speed:	<30 Millisecond/Crosspoint
Switch Cycles to EOL:	>10 ⁶ (1 Million)
Connector Type:	N-Type
Power Requirements:	100-240 VAC Autoranging, 50/60 Hz
Power Consumption:	<100 W
Local Control:	Front Panel Keypad with LCD Display
Remote Control:	Ethernet Port; TELNET or TCP/IP Via Customer Supplied Control System, XR Bus for Expansion
Software:	Embedded Web Browser Interface
Mechanical:	12 RU: 21" H x 19" W x 25.25" D Including Rear Handles
Mounting:	Handles and Rack Mounts Attached to Front or Rear of Box
Weight:	190 lbs Gross (Boxed), 107 lbs Net

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

LS 2150P Series Passive L-Band Splitters



LS 2150 Passive Splitter



LS 2150 Passive Splitter

General Description:

The **LS 2150** series of passive L-band (950-2150 MHz) splitters permit simple splitting of RF signals to multiple destinations. Configurations available from 2 to 32 ports, including dual and quad units. A variety of features are available. The passive splitters are power and 10 MHz passing on port 1.

Features & Benefits:

- Convenient, centralized rack mount designs improve cable management
- Microstrip design provides better performance and reliability
- Larger configurations eliminate cascading for better performance
- Greatly improves cable management by allowing for easy access to cable routing and easing identification of cabling
- Reduces cable connector failures by eliminating the need for frequent manual connects/disconnects



Specifications:*	LS02 2150P	LS04 2150P	LS08 2150P	LS12 2150P	LS16 2150P	LS24 2150P	LS32 2150P
Operating Frequency:	950-2150 MHz	950-2150 MHz	950-2150 MHz	950-2150 MHz	950-2150 MHz	950-2150 MHz	950-2150 MHz
Configuration:	1x2	1x4	1x8	1x12	1x16	1x24	1x32
Impedance:	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω
Insertion Loss:	4 dB ± 0.5 dB	8 ± 1 dB	11 ± 1.5 dB	17 ± 2 dB	18 dB ± 2 dB	21 ± 2 dB	22 ± 2 dB
Frequency Response:	± 0.5 dB	± 1 dB	± 1 dB	± 2 dB	± 2 dB	± 2 dB	± 2 dB
Isolation:	18 dB	18 dB	18 dB	20 dB	18 dB	20 dB	20 dB
Input Return Loss:	11 dB	13 dB	12 dB	14 dB	14 dB	10 dB	10 dB
Output Return Loss:	15 dB	14 dB	14 dB	14 dB	14 dB	13 dB	13 dB
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω
Mechanical:	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	2 RU: 3.5" H x 19" W x 14" D	2 RU: 3.5" H x 19" W x 14" D
Weight	3.5 lbs Gross (Boxed), 2.5 lbs Net	3.4 lbs Gross (Boxed), 2.2 lbs Net	3.7 lbs. Gross (Boxed), 2.7 lbs Net	4 lbs Gross (Boxed), 3 lbs Net	4 lbs Gross (Boxed), 3 lbs Net	9.5 lbs Gross (Boxed), 6.5 lbs Net	9.5 lbs Gross (Boxed), 6.5 lbs Net

*Specifications may vary with connector type. See individual specification sheet for specific performance data. Call for other available configurations and options.

¹Adapters sold separately

LS 2150A Series

Active (Amplified-Zero Loss) L-Band Splitters



LS12 2150A 12-way
Active L-Band Splitter



LS32 2150A 32-way
Active L-Band Splitter



LS64 2150A 64-way
Active L-Band Splitter

General Description:

The **LS 2150** series of active (unity gain or loss) L-band (950-2150 MHz) splitters permit simple splitting of RF signals to multiple destinations. Configurations available from 4 to 64 ports, including dual and quad units. A variety of powering options and features are available. Active units will power LNBs. The active splitters are DC blocked on all outputs.

Features & Benefits:

- Convenient, centralized rack mount designs improve cable management
- Microstrip design provides better performance and reliability
- Larger configurations eliminate cascading for better performance
- Active (zero loss) splitters allow for ease in RF design
- Greatly improves cable management by allowing for easy access to cable routing and easing identification of cabling
- Reduces cable connector failures by eliminating the need for frequent manual connects/disconnects

Specifications:*	LS04 2150A	LS08 2150A	LS12 2150A	LS16 2150A	LS24 2150A	LS32 2150A	LS48 2150A	LS64 2150A	
Operating Frequency:	950-2150 MHz								
Configuration:	1x4	1x8	1x12	1x16	1x24	1x32	1x48	1x64	
Impedance:	75 Ω, 50 Ω								
P1dB:	+3 dBm	0 dBm	-5 dBm	0 dBm	-10 dBm	-10 dBm	-10 dBm	-10 dBm	
Insertion Loss:	0 ± 2 dB								
Frequency Response:	± 1 dB	± 1 dB	± 2 dB						
Isolation:	18 dB								
Input Return Loss:	14 dB	13 dB	13 dB	14 dB	12 dB	12 dB	12 dB	12 dB	
Output Return Loss:	15 dB	16 dB	12 dB						
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	F-Type, BNC 75 Ω or 50 Ω	
Power Requirements:	18-24 VDC Via 2-pin Quick Connect 100-240 AC 50/60 Hz								
LNB Power:	18 VDC								
Power Consumption:	3 W	3 W	3 W	3 W	5 W	5 W	6 W	8 W	
Mechanical:	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	2 RU: 3.5" H x 19" W x 14" D	2 RU: 3.5" H x 19" W x 14" D	3 RU: 5.25" H x 19" W x 20" D	3 RU: 5.25" H x 19" W x 20" D	
Weight:	4.5 lbs Gross (Boxed), 2.0 lbs Net	5 lbs Gross (Boxed), 2.7 lbs Net	5 lbs Gross (Boxed), 2.5 lbs Net	5 lbs Gross (Boxed), 2.5 lbs Net	10.5 lbs Gross (Boxed), 7 lbs Net	11 lbs Gross (Boxed), 6.2 lbs Net	15.4 lbs Gross (Boxed), 9.4 lbs Net	15.5 lbs Gross (Boxed), 9.2 lbs Net	

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

LSC 1000P Series

Passive Broadband Combiners



LSC04 1000P 4-way
Passive Broadband Splitter/Combiner



LSC32 1000P 32-way
Passive Broadband Splitter/Combiner

General Description:

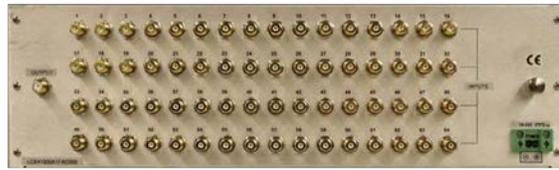
The **LSC 1000P** series are commercial quality passive broadband RF splitters/combiners that meet strict level, match, and loss specifications achieved through the use of Quitech's proprietary microstrip and SMT technology. They operate over the 5-1000 MHz frequency range and enable the splitting or combining of RF signals with repeatable performance over the entire frequency range and across all I/O ports.

Specifications:*	LSC04 1000P	LSC08 1000P	LSC16 1000P	LSC32 1000P	LSC48 1000P	LSC64 1000P
Operating Frequency:	5-1000 MHz	5-1000 MHz	5-1000 MHz	5-1000 MHz	5-1000 MHz	5-1000 MHz
Configuration:	4x1	8x1	16x1	32x1	48x1	64x1
Impedance:	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω
Insertion Loss:	7.5 dB ± 1 dB	11.5 dB ± 2 dB	15 dB ± 2.5 dB	18 dB ± 2.5 dB	21 dB ± 2 dB	23 dB ± 2.5 dB
Frequency Response:	± 2 dB	± 2 dB	± 2.5 dB	± 2.5 dB	± 2 dB	± 2.5 dB
Isolation:	16 dB	16 dB	20 dB	20 dB	16 dB	20 dB
Return Loss:	14 dB	12 dB	14 dB	12 dB	13 dB	12 dB
RF Connectors:	F-Type, (BNC 75 Ω Optional)	F-Type, (BNC 75 Ω Optional)	F-Type, (BNC 75 Ω Optional)	F-Type, (BNC 75 Ω Optional)	F-Type, (BNC 75 Ω Optional)	F-Type, (BNC 75 Ω Optional)
Mechanical:	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	1 RU: 1.75" H x 19" W x 6.5" D	3 RU: 5.25" H x 19" W x 20" D	3 RU: 5.25" H x 19" W x 20" D
Weight:	3.5 lbs Gross (Boxed), 2.5 lbs Net	3.5 lbs Gross (Boxed), 2.5 lbs Net	4 lbs Gross (Boxed), 3 lbs Net	4.5 lbs Gross (Boxed), 3.5 lbs Net	12 lbs Gross (Boxed), 9 lbs Net	14 lbs Gross (Boxed), 9.62 lbs Net

*Specifications may vary with connector type. See individual specification sheet for specific performance data. Call for additional configuration or powering.

LC 1000A Series

Active Broadband Combiners



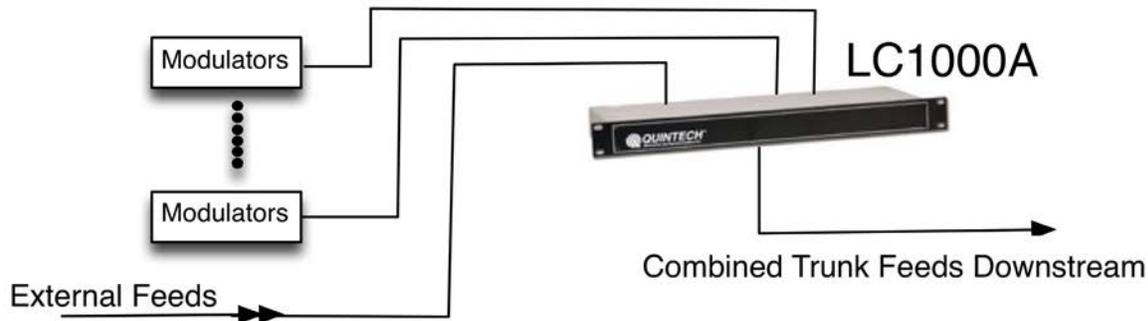
LC64 1000A
64-way Active Broadband Combiner

General Description:

The **LC 1000A** series is a commercial quality line of (5-1000 MHz) active broadband RF combiners that meet strict level, match, and loss specifications achieved through the use of Quitech's proprietary technology. Custom configurations available.

Features & Benefits:

- Convenient, centralized rack mount designs improve cable management
- Microstrip design provides better performance and reliability
- Larger configurations eliminate cascading for better performance
- Active (zero loss) combiners allow for ease in RF design
- Greatly improves cable management by allowing for easy access to cable routing and identification of cables
- Reduces cable connector failures by eliminating the need for frequent manual connects/disconnects



Specifications:*	LC16 1000A	LC32 1000A	LC64 1000A
Operating Frequency:	5-1000 MHz	5-1000 MHz	5-1000 MHz
Configurations:	16x1	32x1	64x1
Impedance:	75 Ω, 50 Ω	75 Ω, 50 Ω	75 Ω, 50 Ω
P1dB:	+8 dBm Each Input	+1 dBm Each Input (Single Carrier Equivalent)	-2.0 dBm Each Input
Insertion Loss:	0 ± 2 dB @ 500 MHz	0 ± 2 dB @ 500 MHz	0 ± 2 dB @ 500 MHz
Frequency Response:	± 2.5 dB	± 2.5 dB	± 2.5 dB
Isolation:	16 dB	16 dB	20 dB
Input Return Loss:	14 dB	12 dB	17 dB
Output Return Loss:	7 dB	12 dB	12 dB
RF Connectors:	F-Type, BNC 75 Ω	F-Type, BNC 75 Ω	F-Type, BNC 75 Ω
Power Requirements:	18-24 VDC Via 2-Pin Quick Connect Barrier Strip	18-24 VDC Via 2-Pin Quick Connect Barrier Strip	18-24 VDC Via 2-Pin Quick Connect Barrier Strip
Power Consumption:	14 W	17 W	24 W
Mechanical:	1 RU: 1.75" H x 19" W x 6.5" D	2 RU: 3.5" H x 19" W x 14" D	3 RU: 5.25" H x 19" W x 20" D

*Specifications may vary with connector type. See individual specification sheet for specific performance data. Call for additional configuration or powering. AC adapter sold separately

LS 1000A Series

Active (Amplified - Zero Loss) Splitters



LS16 1000A
16-way Active Broadband Splitter



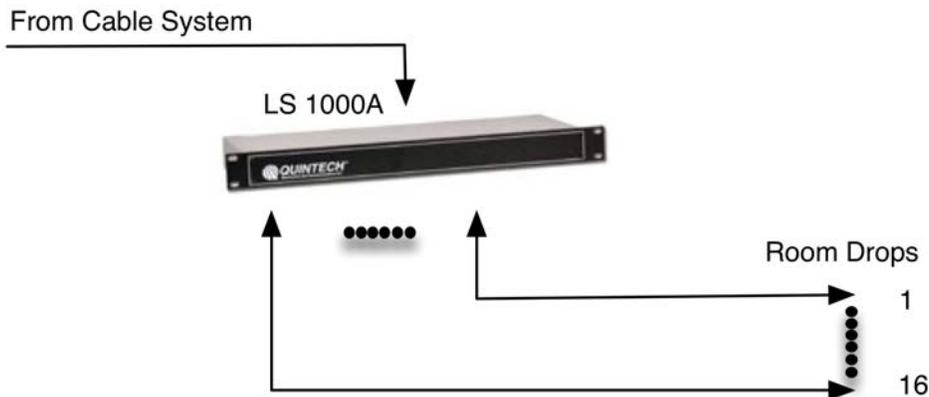
LS32 1000A
32-way Active Broadband Splitter

General Description:

The **LS** series is a commercial quality line of (5-1000 MHz) active broadband RF splitters that meet strict level, match, and loss specifications achieved through the use of Quintech's proprietary technology. Custom configurations available.

Features & Benefits:

- Convenient, centralized rack mount designs improve cable management
- Microstrip design provides better performance and reliability
- Larger configurations eliminate cascading for better performance
- Active (zero loss) splitters allow for ease in RF design
- Greatly improves cable management by allowing for easy access to cable routing and identification of cables
- Reduces cable connector failures by eliminating the need for frequent manual connects/disconnects



For distribution of cable feed to individual drops - downstream only

Specifications:*	LS16 1000A	LS32 1000A	LS48 1000A	LS64 1000A
Operating Frequency:	5-1000 MHz	5-1000 MHz	5-1000 MHz	5-1000 MHz
Configurations:	1x16	1x32	1x48	1x64
P1dB:	+6 dBm	+6 dBm	+3 dBm	+3 dBm
Insertion Loss:	0 + 2 dB @ 500 MHz	0 ± 2 dB @ 500 MHz	0 ± 2 dB @ 500 MHz	0 ± 2 dB @ 500 MHz
Frequency Response:	± 2.5 dB	± 2 dB	± 2 dB	± 2 dB
Isolation:	16 dB	18 dB	16 dB	18 dB
Input Return Loss:	13 dB	14 dB	14 dB	14 dB
Output Return Loss:	14 dB	15 dB	15 dB	15 dB
RF Connectors:	F-Type, BNC 75 Ω			
Power Requirements:	18-24 VDC Via 2-Pin Quick Connect 100-240 VAC, 50/60 Hz	18-24 VDC Via 2-Pin Quick Connect 100-240 VAC, 50/60 Hz	18-24 VDC Via 2-Pin Quick Connect 100-240 VAC, 50/60 Hz	18-24 VDC Via 2-Pin Quick Connect 100-240 VAC, 50/60 Hz
Power Consumption:	13 W	17 W	20 W	25 W
Mechanical:	1 RU: 1.75" H x 19" W x 6.5" D	2 RU: 3.5" H x 19" W x 14" D	3 RU: 5.25" H x 19" W x 20" D	3 RU: 5.25" H x 19" W x 20" D

*Specifications may vary with connector type. See individual specification sheet for specific performance data.

Power Adapters

DCP/DCB Bias Tee Power Inserters & Autoranging Power Adapters

General Description:

The **DCP** and **DCB** are designed to permit independent power supply operation for LNBS, LNAs and line amplifiers by providing a method for breaking the DC continuity and reinserting DC power. It functions as a conventional Bias Tee, providing power on the input port and DC isolation on the output port. Voltages between 5 and 24 vdc can be applied to the solder "J" hooks of the **DCB** to facilitate varying powering requirements.



DCP2150 DC Block/Power Inserter

Specifications:*	DCP21501FK000
Operating Frequency:	270-2150 MHz
Insertion Loss:	1.0 dB \pm 1.0 dB
Frequency Response:	0.6 dB
Return Loss:	14 dB
Input Voltage:	100–240 VAC @ 50-60 Hz
Output Voltage:	18 V @ 1 A
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω
DC Connectors:	Terminal Block
Mechanical:	3.25" H x 3.25" W x 1.25" D
Weight:	2.0 lb Gross (Boxed) 1.6 lbs Net
Certifications:	CE

*Specifications may vary with connector type. See individual specification sheet for specific performance data.



DCB2150 DC Block/Power Inserter

Specifications:*	DCB21501FK000
Operating Frequency:	270-2150 MHz
Insertion Loss:	1.0 dB \pm 1.0 dB
Frequency Response:	\pm 1.0 dB
Return Loss:	14 dB
DC Current:	1 A
RF Connectors:	F-Type, BNC 75 Ω or 50 Ω
DC Connectors:	Terminal Block (Feed Through Terminal)
Mechanical:	3.25" H x 3.25" W x 1.25" D
Weight:	.9 lb Gross (Boxed) .4 lbs Net
Certifications:	CE

*Specifications may vary with connector type. See individual specification sheet for specific performance data.



RPSUF Autorange Power Adapter

Specifications:	RPSUFAUTORANGE
Input Voltage:	100-240 VAC @ 50-60 Hz
Output Voltage:	18.0 VDC (Regulated)
Output Current:	3.0 A Max. Load
Output Wattage:	40 W
Color:	Black
Dimensions:	1.3" H x 2.6" W x 4.2" L
Cord Length:	5 ft.
Weight:	.75 lbs
Agency Approvals:	UL, CUL, CE, ROHS

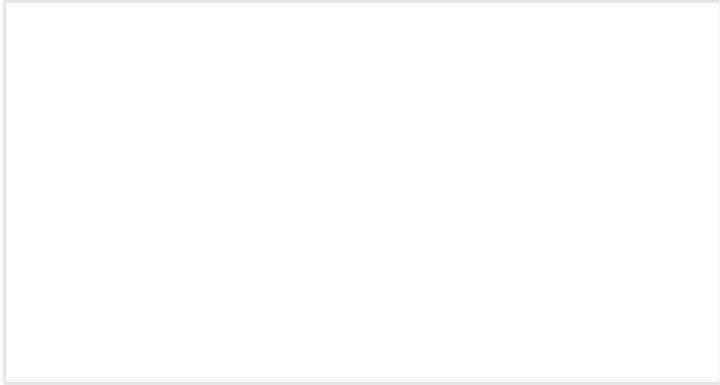


18VDC 1-Amp Wall Adapter

Specifications:	RPSUFBK181A57D181
Input Voltage:	100-240 VAC @ 50-60 Hz
Output Voltage:	18.0 VDC
Output Current:	1 A
Output Wattage:	30 W
Power Indicator:	No
Color:	Black
Dimensions:	1.2" H x 2.2" W 3.2" L
Cord Length:	6 ft.
Weight:	0.3 lbs
Agency Approvals:	UL, CUL, CE

VSWR

RETURN LOSS	VSWR	RETURN LOSS	VSWR	RETURN LOSS	VSWR	RETURN LOSS	VSWR
60.00	1.002	21.66	1.18	14.50	1.464	8.00	2.323
55.00	1.004	21.25	1.19	14.41	1.47	7.89	2.35
50.00	1.006	21.00	1.196	14.26	1.48	7.71	2.40
46.06	1.01	20.83	1.20	14.12	1.49	7.53	2.45
45.00	1.011	20.44	1.21	14.00	1.499	7.50	2.458
40.09	1.02	20.08	1.22	13.98	1.50	7.36	2.50
40.00	1.021	20.00	1.222	13.84	1.51	7.20	2.55
39.00	1.023	19.73	1.23	13.71	1.52	7.04	2.60
38.00	1.025	19.50	1.237	13.58	1.53	7.00	2.615
37.00	1.029	19.40	1.24	13.50	1.536	6.90	2.65
36.61	1.03	19.08	1.25	13.45	1.54	6.76	2.70
36.00	1.032	19.00	1.253	13.32	1.55	6.62	2.75
35.00	1.036	18.78	1.26	13.20	1.56	6.50	2.796
34.15	1.04	18.50	1.27	13.08	1.57	6.49	2.80
34.00	1.041	18.22	1.28	13.00	1.577	6.37	2.85
33.00	1.046	18.00	1.288	12.96	1.58	6.25	2.90
32.26	1.05	17.95	1.29	12.85	1.59	6.13	2.95
32.00	1.052	17.69	1.30	12.74	1.60	6.02	3.00
31.00	1.058	17.50	1.308	12.50	1.622	6.00	3.10
30.71	1.06	17.45	1.31	12.21	1.65	5.50	3.263
30.00	1.065	17.21	1.32	12.00	1.671	5.11	3.50
29.42	1.07	17.00	1.329	11.73	1.70	5.00	3.57
29.00	1.074	16.98	1.33	11.50	1.725	4.50	3.946
28.30	1.08	16.75	1.34	11.29	1.75	4.44	4.00
28.00	1.083	16.54	1.35	11.00	1.785	4.00	4.419
27.32	1.09	16.50	1.352	10.88	1.80	3.93	4.50
27.00	1.094	16.33	1.36	10.51	1.85	3.52	5.50
26.44	1.10	16.13	1.37	10.50	1.851	3.50	5.030
26.00	1.106	16.00	1.377	10.16	1.90	3.19	5.55
25.66	1.11	15.94	1.38	10.00	1.925	3.00	5.848
25.00	1.119	15.75	1.39	9.84	1.95	2.92	6.00
24.94	1.12	15.58	1.40	9.54	2.00	2.69	6.50
24.29	1.13	15.50	1.404	9.50	2.007	2.50	7.00
24.00	1.135	15.38	1.41	9.26	2.05	2.25	7.764
23.69	1.14	15.21	1.42	9.00	2.10	2.00	8.724
23.13	1.15	15.04	1.43	8.75	2.15	1.75	9.960
23.00	1.152	15.00	1.433	8.52	2.20	1.50	11.610
22.61	1.16	14.88	1.44	8.50	2.204	1.25	13.921
22.12	1.17	14.72	1.45	8.30	2.25	1.00	17.391
22.00	1.173	14.56	1.46	8.09	2.30	0.50	34.753



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