# **ARCHIMEDES**

## 64x64 L-Band RF Matrix Switch



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#### General Description:

The **ARCHIMEDES** RF matrix switch features up to 64 inputs and 64 outputs in a compact 4 RU chassis. It is available in sizes starting at 24X24 and can be easily expanded by increments of 8 inputs or outputs. Designed for high reliability and uptime, the matrix features redundant power supplies and control cards. The RF active cards and power supplies can be easily replaced from the front panel without any special tools or disconnecting any cables. Manual gain and tilt control allow the user to adjust power levels for optimum signal performance. RF sensing with optional signal level recording help diagnose signal quality.

**ARCHIMEDES** provides optional features for various customer applications, which include: input channel redundancy; integrated fiber optic receivers; selectable 13/18 V LNB power and 22 KHz tone generation; full color multi touch display with an integrated television receiver; and integrated spectrum analyzer.

### Features & Benefits:

- Compact modular design 64x64 in 4 RU
- Up to 35 dB variable gain and 8 dB of tilt control
- · Redundant hot-swap power supplies and control cards
- · Input RF sensing and signal recording
- · Optional fiber optic receivers
- Input channel redundancy
- LNB power 13/18 VDC and 22 kHz tone
- Optional integrated spectrum analyzer

Specifications:*	ARCHIMEDES
Operating Frequency:	950-2150 MHz
Configuration:	24x24 to 64x64 (4 RU) up to 64x128 in Steps of 8 Inputs and/ or 8 Outputs
Gain Range:	0 to +35 dB in 1 dB Steps
Impedance:	75 Ω and/or 50 Ω
P1dB:	0 dBm
OIP3:	< -40 dBc Two Tones @-8 dBm
Max RF Input Power, No Damage:	+25 dBm Max.
Frequency Response:	± 3.0 dB Over Entire Band ± 0.4 dB Over any 36 MHz Interval
Isolation (input-to-input):	60 dB Typ.
Isolation (output-to-output):	60 dB Typ.
Isolation (input-to-output):	60 dB Typ.
Return Loss:	>14 dB
Noise Figure:	<14 dB
RF Connectors:	F-Type, BNC 75 Ω, SMA, or Mixed
Optical Input Connectors:	Groups of 4
Fiber Type:	SMF
Optical Connector Type:	LC/APC
Wavelength Range:	1100 to 1650 nm
AC Input Power:	Autoranging 100 to 240 VAC
Power Consumption:	<130 W
Local Control:	Front Panel Color Multi-touch Display
PC Remote Control:	TCP/IP SNMP, Web Browser GUI
Mechanical:	64x64 in 4 RU: 7" H x 19" W x 25" D
Weight:	75 lbs (64x64 fully populated) Gross (boxed)

<sup>\*</sup>Specifications may vary with connector type. See individual specification sheet for specific performance data.

