

## General

Critical communication installations demand high performance, high reliability, and expandable core equipment. Our SLM32 modular L-Band matrix unit provides the system engineer with an uncompromising combination of these features in a cost effective 6RU package. The unit delivers a modular 850-2450MHz high performance L-Band switching array that can be configured up to a 32x32 matrix. Wideband 20-3000MHz versions are also available (see SLM32W).

Standard redundant hot-swap power supplies are included, plus our optional redundant system control interfaces (C3-Lite CPU) deliver the ultimate in system reliability for critical applications. Also, if a rare failure occurs, it will only affect a single channel. The SLM32X is the same but has a 10.1" display (**Option-X**) and additional front panel features.

Compact (6RU) and high performance, the unit provides a cost effective, flexible switching capacity for smaller installations. The unit can be configured from a small 4x4 and field expanded up to a 32x32 in single-channel increments while delivering a non-blocking (Fan-OUT) switch array, or a combiner type (Fan-IN) array. Configurations can be symmetrical (16x16) or asymmetrical (10x24, 9x32). Fixed reduced sized versions (not expandable) are also available to reduce overall cost (consult factory).

Complete control and status of the unit is available at either the lockable touchscreen, or the 10/100 interface(s) with web browser, or our RoutwarePRO software package. All input and output blades are hot-swappable for simple repair or system expansion.

## Applications

- Communication installations
- Airborne surveillance systems
- Teleport and last mile installations
- Ground station and infrastructure facilities
- Receiver routing for transmit or receive

## Features

- High reliability GaAs switch technology
- SMA, BNC, and F-Type signal connector types
- Impedance 50 or 75 ohm
- Expandable in the field
- Redundant hot-swap power supplies
- Option "L" adds LNB redundant power & features
- Single or dual controllers (and 10/100 ports)
- Available with **Option-X** display (SLM32X)
- Choose between Fan-OUT or Fan-IN versions
- Menu driven touchscreen display & web browser
- Available with either single or dual CPUs (C3-Lite)
- Hinged front and rear access (illuminated)
- 10/100 Ethernet control port(s)
- Includes TCP/IP, SNTP, SNMP v1/v2, IPv4 & IPv6
- Removable microSD card for secure environments
- Built-in continuous diagnostics
- Available in wideband version (see SLM32W)
- Variable (programmable) gain
- International AC power input
- LabVIEW drivers and control software available



System SLM32X  
 Shown with Option X 10.1" display  
 (6RU)



System SLM32  
 Shown with standard 4.3" display

SLM32-001



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## Fan-OUT Number Assignment

The following format is used to define a standard Fan-OUT (signal distributive type) system configuration:

### SLM32-ii00xzc(L)

The SLM32 (SLM32X) is the base model number for the Fan-OUT version of the system followed by "ii" defining the number of inputs (04 to 32) followed by "00" defining the number of outputs (04 to 32). The final suffix is defined where "x" defines 1 or 2 controllers (single or dual), "z" is the system impedance (5=50 ohms, or 7=75 ohms) and "c" defines the I/O connectors (A=SMA, C=BNC, or F=F-Type). Optional "L" suffix adds redundant LNB supply, LNB current monitor, and control of 22kHz tone & 0/13/18V.



Installing an output expansion switch blade

**Maintenance Tools**  
Cable & expansion tool storage behind access panels

**Built-in Rack Mount**  
6RU removable flanges and chassis slide mounting

**Signal Connectors**  
BNC, SMA or F-Type available (SMA shown)

**C3-lite Hot-Swap CPUs**  
Single or Dual  
10/100 and uSD

**Hot-Swap Redundant Supplies**  
Dual supplies are standard (fiber supply pull straps shown)

**Option "L" Adds Auxillary Redundant Supply**  
For LNB power or FiberSTIK capability

**Forced Cooling**  
Redundant monitored cooling fans

**Individual Blades**  
Up to 32 input blades (behind hinged panel)



## System SLM32 Specifications

Array size .....Up to 32in x 32out array  
Switching technology .....Solid-state GaAs elements  
Type of system .....Non-blocking full fan-out (or combiner)  
Architecture .....Modular (single card per In/Out)

### I/O Characteristics

Frequency range .....850 - 2450MHz  
Impedance .....50 ohm (75 optional)  
Coupling .....AC  
Gain .....Unity (0dB +/-1dB nominal)  
Gain adjust .....+/-10dB min  
Flatness .....<+/-2dB typ (<0.5dB per 40MHz segment)  
Isolation .....>60dB (I/I, O/O, I/O)  
Input return loss .....>14dB typ  
Output return loss .....>14dB typ  
-1dB compression .....+10dBm min  
Noise Figure .....<20dB  
Output IP3 .....>13dBm  
Signal connector .....SMA, BNC or F-Type female  
Option "L" .....Adds redundant LNB supply & features

### General Specifications

Switching speed .....<10mS  
Power supply section .....Hot-Swap redundant supplies  
Auxillary supply .....Optional redundant LNB supply (Fan-OUT)  
Power supply monitoring .....Included  
Ethernet port .....10/100BaseT, SNMP, SNMP v1/v2 & TCP/IP  
Redundant controllers .....Optional (hot swap)  
Input and output cards .....Hot swap  
Front panel display .....Touchscreen (4.3" or optional 10.1")  
Configuration memory .....FLASH  
High security .....microSD slot for removable memory  
Cooling .....Redundant fan assisted (monitored)  
AC power requirements .....90-264VAC, 47-440Hz, <220 Watts  
Line protection .....Fuses @ power inputs (spares included)  
Weight .....<40 lbs  
Size .....10.47H x 15.50D x 19.00W (6RU)  
Operating temp .....0 to +60C  
Non-operating temp .....-20 to +85C  
Humidity .....0 to 95% (NC @ +25C)  
MTBF .....>85,000 hours (estimated)  
Warranty .....2 years, up to 7-Years extended  
Certifications .....CE EN61010

\*\* NOTE 1: If special or unique performance or features are required, the base model number is used plus a unique 5-digit factory assigned suffix.

Universal Switching's policy is one of continuous development. Consequently, the company reserves the right to vary from the descriptions and specifications shown in this publication.