

## General

Critical communication installations demand high performance, high reliability, and expandable core equipment. Our SIM32 modular IF-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 30-250MHz high performance switching array (30-500MHz extended version) that can be configured up to a 32x32 matrix. Wideband 20-3000MHz versions are also available (SWM32).

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 failure occurs, it will only affect a single channel. The SIM32X 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 costs.

Complete control and status of the unit is available at either the lockable touchscreen, or the 10/100 interface(s). 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 or BNC signal connector types
- Impedance 50 or 75 ohm
- Expandable in the field
- Redundant hot-swap power supplies
- Single or dual controllers (and control ports)
- Available with **Option X** display (SIM32X)
- Choose between Fan-Out or Fan-In versions
- Menu driven touchscreen display & web browser
- Available with either single or dual CPUs (C3-Lite)
- 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 optional wideband versions
- Variable (programmable) gain
- International AC power input
- LabVIEW drivers and control software available



System SIM32X  
 Shown with **Option X** 10.1" display  
 (6RU)



Download our Monitor & Control software **RouteWarePRO** for a FREE 30-day trial today!



System SIM32  
 Shown with standard 4.3" display

SIM32-001

## Fan-Out Number Assignment

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

### SIM32-ii00-xzc

The SIM32 (SIM32X) 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" is 1 or 2 controllers (single or redundant), "z" is the system impedance (5 for 50 ohms, or 7 for 75 ohms) and "c" defines the I/O connectors (A for SMA or C for BNC).



Installing an output expansion switch blade

**Signal Connectors**  
BNC or SMA available  
(SMA shown)

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

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

## Fan-In Number Assignment

The following format is used to define a standard Fan-IN (combining) switching system:

### SIM32i-ii00-xzc

The SIM32i (SIM32Xi) is the base model number for the FAN-IN (combiner) 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" is 1 or 2 controllers (single or redundant), "z" is the system impedance (5 for 50 ohms, or 7 for 75 ohms) and "c" defines the I/O connectors (A for SMA or C for BNC).



### System SIM32 Specifications

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

#### I/O Characteristics

Frequency range .....30 - 250MHz (30-500MHz extended)  
Impedance .....50 or 75 ohm (specify)  
Coupling .....AC  
Gain .....Unity (0dB +/-1dB nominal)  
Flatness .....<+/-2dB  
Crosstalk isolation .....>65dB  
Input return loss .....>20dB typ  
Output return loss .....>20dB typ  
-1dB compression .....+5dBm min  
Noise Figure .....<17dB  
Output IP3 .....15dBm typ  
Signal connector .....BNC or SMA female

#### General Specifications

Switching speed .....<10mS  
Power supply section .....Hot-Swap redundant supplies  
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  
Cooling .....Fan assisted (monitored)  
AC power requirements .....90-264VAC, 47-440Hz, <220 Watts  
Line protection .....Fuses @ power inputs  
Weight .....<65 lbs  
Size .....10.47H x 16.50D x 19.00W (6RU)  
Operating temp .....0 to +50C  
Non-operating temp .....-20 to +85C  
Humidity .....0 to 95% (NC @ +25C)  
MTBF .....>65,000 hours (estimated)  
Warranty .....2 years  
Certifications .....CE EN61010

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