Specification Sheet SIM32-001

High Performance 30-250MHz IF-Band Matrix
Up to 32-in, 32-out Switching Array
System SIM32(X) - Fan-Out and Fan-In Versions

March 2017

General

Critical communication installations demand dependable State-of-the-Art equipment. The SIM32 modular IF-Band matrix unit provides the systems engineer with an uncompromising combination of high performance and high reliability switching. This is coupled together for 30-250MHz performance (30-500MHz extended version) and can be configured up to a 32x32 matrix. Other frequency versions are available as well (contact the factory).

Standard redundant hot-swap power supplies plus optional redundant system control interfaces (C3-Lite CPU) deliver the ultimate in system reliability for critical applications. The SIM32**X** 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 4x4 and field expanded up to a 32x32 in single-channel increments delivering a non-blocking (fan out) switch array, or a combiner (fan in) switch 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 both the touchscreen or the 10/100 interface(s). All input and output cards 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 with modules
- Redundant hot-swap power supplies
- Single or dual controllers (and control ports)
- Available with **Option X** display (SIM32X)
- Available in Fan-Out or Fan-In (combiner) versions
- Menu driven color 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 optional
- 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

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Fan-Out Number Assignment

The following format is used to define a standard Fan-Out switching system (simplified diagram below):

SIM32-iioo-xzc

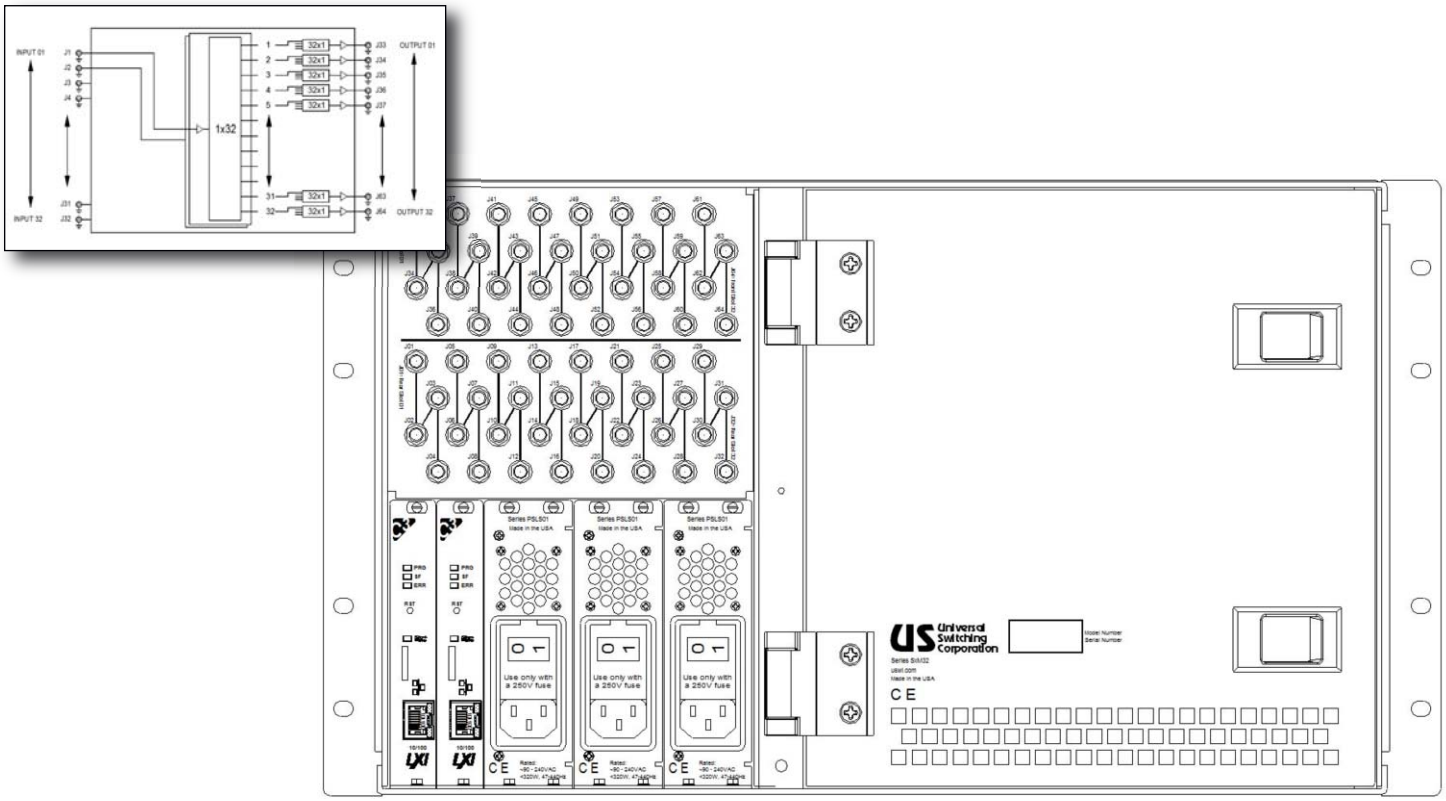
The SIM32 (SIM32X) is the base model number for the FAN-OUT version of the system followed by "ii" defining the number of inputs (04 to 32) followed by "oo" defining the number of outputs (04 to 32). The final suffix is defined where "x" is 1 or 2 controllers (single or redundant), "z" is the system impedance (5 for 50 ohms, or 7 for 75 ohms) and "c" defines the I/O connectors (A for SMA, or C for BNC).

Fan-In Number Assignment

The following format is used to define a standard Fan-In switching system:

SIM32i-iioo-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 "oo" 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)
Signal connector location . . .Rear panel

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 . . . . . .>60dB
Input return loss . . . . . .>14dB typ
Output return loss . . . . . .>14dB typ
-1dB compression . . . . . .+10dBm min
Noise Figure . . . . . .<17dB
Output IP3 . . . . . .>20dBm
Signal connector . . . . . .BNC or SMA female

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.

General Specifications

Switching speed . . . . . .<10mS
Power supply section . . . . . .Hot-Swap redundant supplies
Auxillary supply . . . . . .Optional redundant LNB supply
Power supply monitoring . . . .Included
Ethernet port . . . . . .10/100BaseT, SNTP, 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 . . . . . .>45,000 hours (estimated)
Warranty . . . . . .2 years
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 suffix.

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