Specification Sheet SIM32-001
High Performance 30-250MHz IF-Band Matrix
Up to 32-in, 32-out Switching Array
System SIM32 - Fan-Out and Fan-In Versions

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General

Critical communication installations demand dependable State-of-the-Art equipment. The SIM32 modular IF-Band matrix unit provides the systems professional with an uncompromising combination of high performance and high reliability switching coupled together for 30-250MHz performance (30-500MHz extended version). Standard redundant hot-swap power supplies plus optional redundant system control interfaces (Series C3) deliver the ultimate in system reliability for critical applications.

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. 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 front panel controls or the remote 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
- Redundant hot-swap power supplies
- Single or dual controllers (and control ports)
- Available in Fan-Out or Fan-In (combiner) versions
- Ethernet, USB and Serial control ports
- SNMP v2, TCP/IP, and Web browser monitoring
- Built-in continuous diagnostics
- Variable (programmable) gain optional
- Field configurable serial port (RS-232C/422A/485)
- International AC power input
- LabVIEW drivers and control software available
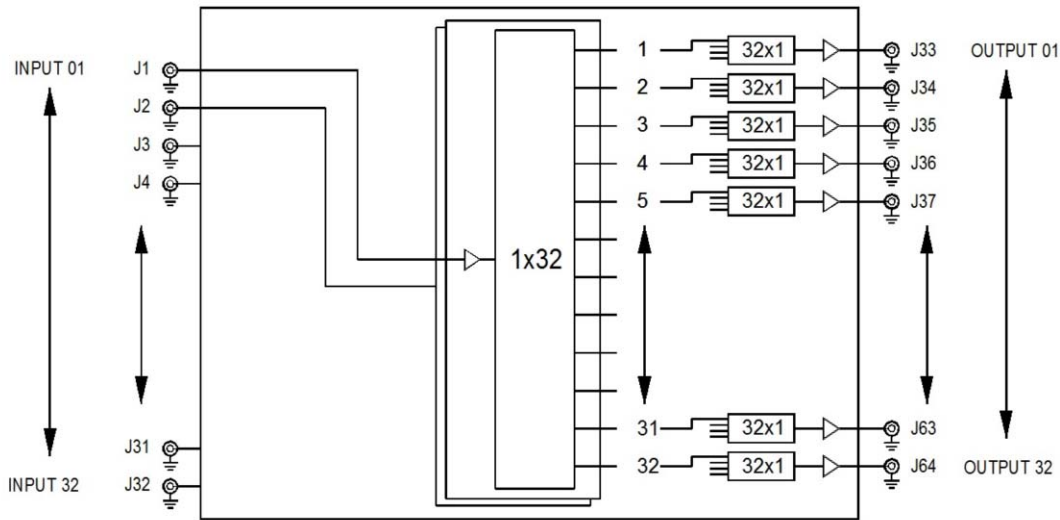

Front View - 6RU

Advanced C3 Controller
Single or Dual

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 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 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 fanout
Architecture . . . . .Modular (single card per I or O)
Signal connector location . . .Rear panel

I/O Characteristics

Frequency range . . . . .30 - 250MHz (30-500MHz extended)
Impedance . . . . .50 ohm (75 optional)
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 . . . .<15dB
Output IP3 . . . .>20dBm
Signal connector . . . . .BNC female, SMA optional

** NOTE: GPIB is also available using a USB adapter.
     NOTE: If special or unique performance or features are required, the base model number is used plus a unique 5-digit suffix.

General Specifications

Switching speed . . . .<10mS
Power supply section . . . . .Hot-Swap redundant supplies
Power supply monitoring . . . .Included
Serial control port . . . . .Serial (RS-232C, 422A or 485 multi-drop)
Ethernet port . . . . .10/100BaseT, SNMP v2 and TCP/IP
Serial port connector . . . . . . .DE-9S (D-Type female)
USB Port . . . . .2.0 **
Redundant controllers . . . . . . .Optional (hot swap)
Input and output cards . . . . .Hot swap
Status LED's . . . . .Front panel
Front panel display . . . . .Touchscreen
Configuration memory . . . . . .FLASH
Cooling . . . . .Fan assisted
AC power requirements . . . . .90-264VAC, 47-440Hz, <220 Watts
Line protection . . . . .Resettable circuit protectors
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

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.