

## General



Critical communication installations demand high performance, high reliability, and expandable core equipment. Our SFM32 modular L-Band FIFO matrix unit delivers an uncompromising combination of these features in a cost effective 6RU package. This unit delivers a modular 850-2450MHz high performance extended L-Band FIFO switching array that can be configured up to a 32x32 matrix, and further expanded with additional hardware to 64x64.

Compact (6RU) and high performance, it provides a cost effective, flexible switching capacity for smaller installations. The FIFO design means that the unit has the capability to combine inputs to a given output (Fan-IN), and also distribute inputs to multiple outputs (Fan-OUT). It can be configured from a small 4x4 and field expandable to a 32x32 in single-port increments. Configurations can be symmetrical (16x16) or asymmetrical (10x24, 9x32). For wideband applications (20-3000MHz), see System SWM32.

Redundant hot-swap monitored power supplies are standard, plus our optional redundant system control interfaces (C3-Lite CPU) deliver the ultimate in system reliability for critical applications. Should an input or output blade be damaged causing a failure, it will only affect a single channel. The SFM32X is the same but has a 10.1" display (**Option-X**) and additional front panel features.

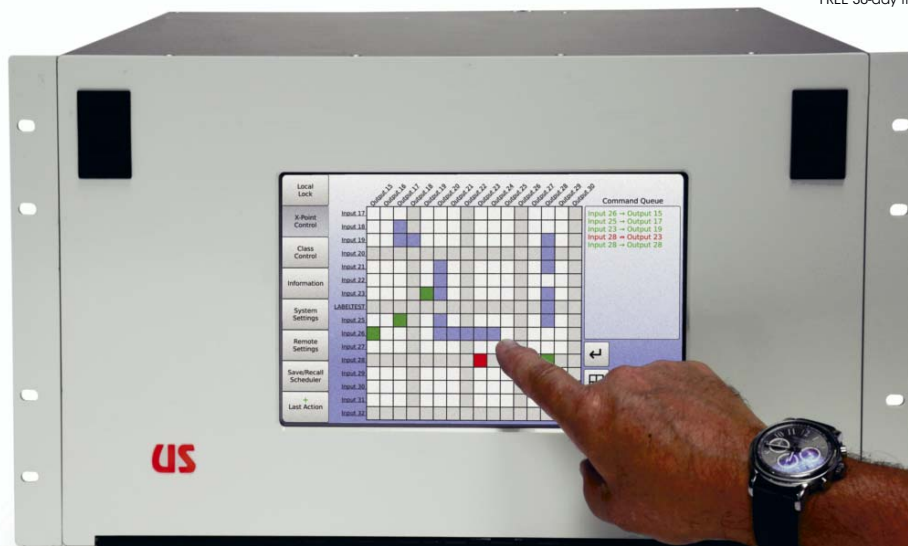
Comprehensive control and status of the unit is accessible at either the lockable touchscreen, the 10/100 interface(s) with web browser, or our RoutewarePRO software package. All input and output blades are hot-swappable for simple repair or system expansion.

## Applications

- Communication installations
- Airborne surveillance systems
- Teleport and last mile installations
- Ground station and infrastructure facilities
- Receiver routing for Tx and Rx, TVRO & IPTV headend

## Features

- High reliability GaAs switch technology
- SMA, BNC, and F-Type signal connector types
- Impedance 50 or 75 ohm
- Expandable in the field to 32x32
- 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 (SFM32X)
- FIFO configuration with Fan-OUT and Fan-IN
- Menu driven touchscreen display & web browser
- Hinged front and rear access (illuminated)
- 10/100 Ethernet control port(s)
- Includes TCP/IP, SNTP, SNMP v1/2, IPv4/6
- Removable microSD card for secure environments
- Supports expansion to 64x64 with additional hardware
- Built-in continuous diagnostics
- Available in wideband version (see SWM32)
- Variable input gain
- International AC power input
- LabVIEW drivers and control software available



**System SFM32X**  
 Shown with **Option X** 10.1" display  
 (6RU)



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



**Compatible**  
**FiberSTIK™**  
 Micro Fiber Optic Receiver  
 Requires LNB Option & BNC

**System SFM32**  
 Shown with standard 4.3" display



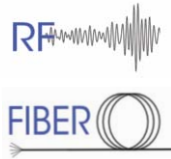
SFM32-001

# Model Number Assignment \*\*

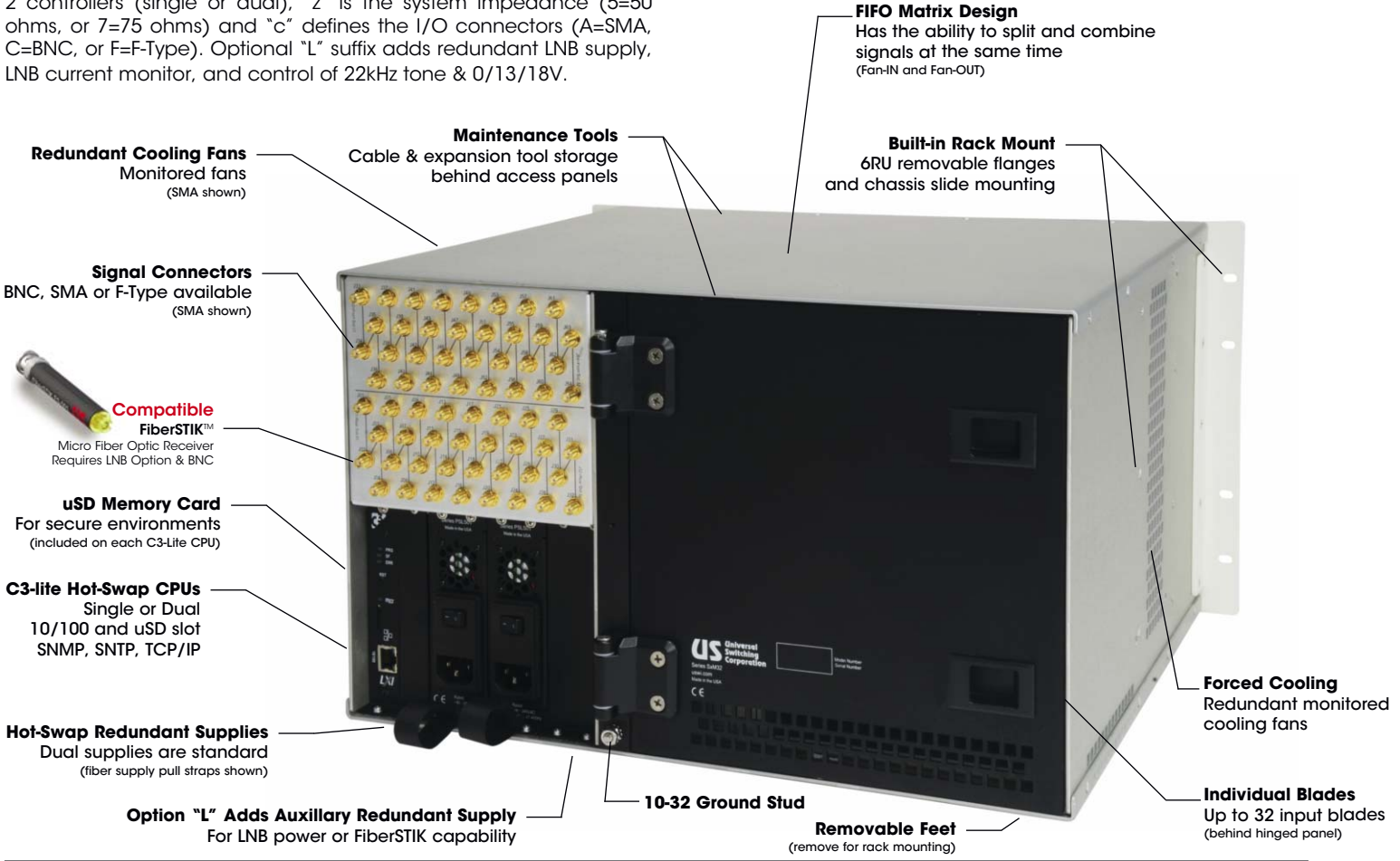
The following definition is used to define a standard FIFO system configuration (Fan-IN & Fan-OUT capability at the same time):

## SFM32-ii00xzc(L)

The SFM32 (SFM32X for 10.1" screen **Option-X**) 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



**Redundant Cooling Fans**  
Monitored fans  
(SMA shown)

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

**FIFO Matrix Design**  
Has the ability to split and combine  
signals at the same time  
(Fan-IN and Fan-OUT)

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

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

**Compatible FiberSTIK™**  
Micro Fiber Optic Receiver  
Requires LNB Option & BNC

**uSD Memory Card**  
For secure environments  
(included on each C3-Lite CPU)

**C3-lite Hot-Swap CPUs**  
Single or Dual  
10/100 and uSD slot  
SNMP, SNTIP, TCP/IP

**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

**10-32 Ground Stud**

**Removable Feet**  
(remove for rack mounting)

**Forced Cooling**  
Redundant monitored  
cooling fans

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

### System SFM32 Specifications

Array size	Up to 32in x 32out array
Switching technology	Solid-state GaAs elements
Type of system	FIFO (Fan-IN & Fan-OUT)
Architecture	Modular (single blade per In/Out)

#### I/O Characteristics \*\*

Frequency range	.850 - 2450MHz
Impedance	.50 ohm (75 optional)
Signal coupling	.AC
Gain	.Unity (0dB +/-1dB nominal)
Gain adjust (input)	-.3dB to +10dB in 0.25dB steps
Flatness	.-<+/-2.0dB typ (<0.5dB per 40MHz segment)
Isolation	.>70dB typ (I/I, O/O, I/O)
Input return loss	.>18dB typ
Output return loss	.>14dB typ
-1 dB compression	.>+3dBm
Noise Figure	.<20dB @ unity typ, <15dB @ max gain
Output IP3	.>16dBm
Signal connector	..SMA, BNC or F-Type female options
Option "L"	..Adds redundant LNB supply & features

#### General Specifications

Switching speed	.<10mS
Power supply section	..Hot-Swap redundant supplies
LNB supply	..Optional redundant LNB supply (Option "L")
Power supply monitoring	..Included
Ethernet port	..10/100, SNTIP, SNMP v1/2 & TCP/IP, IPV4/6
Redundant controllers	..Optional (hot swap)
Input & output blades	..Hot swap
Front panel display	..Touchscreen (4.3" or optional 10.1")
Configuration memory	..FLASH
High security feature	..microSD slot for removable memory
Cooling	..Redundant fan assisted (monitored)
AC power requirements	..90-264VAC, 50-60Hz, <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	..>115,000 hours (estimated)
Warranty	..2 years, up to 7-Years extended
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.

\*\* 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.

