Applications
- Telemetry TTL or PCM streams
- Clock and Data routing
- Differential 422 native I/O
- Production studios
- Imaging and animation production facilities
- Production studios

Features
- High reliability differential (422) digital design
- Optional 1RU adapter panels for TTL or PCM
- Redundant digital signal paths (Tri-Stage)
- Designed specifically for digital switching
- Flexible configuration: 32x32 up to 256x256, or larger
- Multiple units can be grouped to configure 1024x1024
- Ultra-high density, over 65,500 crosspoint in 5RU
- DC to 50Mbps throughput
- Input activity monitoring included
- Hot-swap module technology
- Menu driven color touchscreen display (4.3” or 10.1”)
- Available with either single or dual CPUs
- 10/100 Ethernet, USB and Serial control ports
- Includes TCP/IP, SNMP, IPv4 & IPv6 & web browser
- Removable microSD card for secure environments
- Rugged 5RU high aluminum chassis (8.75”)
- International AC power range
- Self-monitoring hot-swap plug-in supplies with PFC
- Integrated rack mount design (19 inch)
- Chassis slide mounting hardware (slides not included)
- Certified CE EN61010 (LVD)
- Compatible with RouteWarePRO control software
Model Number Assignment

S 2 5 6 0 F X   -   I O - 2 X

Series Number
(add “X” for 10.1” display)
Input Modules
(1 to 8)
Output Modules
(1 to 8)
Optional (factory assigned)
1 = Single CPU
2 = Dual CPU (redundant)

Defining a System

How to choose your features

The S2560F is a modular digital switching system comprised of plug-in modules installed into a 5RU mainframe. Plug-in modules provide a flexible architecture for configurations as small as 32 inputs, 32 outputs and can be expanded to a fully populated system providing 256 inputs and 256 outputs. Larger systems up to 1024x1024 can be realized by interconnecting multiple units.

The system model number and basic features can be specified by observing the definition above. First, choose how many input modules you will need, then the number of output remembering that each module provides 32 channels. When specifying a system, factory supplied filler plates cover unpopulated slots for proper system cooling.

Each input or output module provides 32 ports (16 differential ports per connector). The high density design of the system incorporates 50 position SCSI-II connectors. Each connector provides 16 differential ports.

Due to the compact size of the S2560F and unique Tri-Stage™ design, path-to-path skew is very small allowing the possibility to route both clock and data in the same unit, up to 128x128. If larger clock/data configurations are needed, then two S2560F units can be used to configure a dual 256x256 where clock signals would be routed by one unit and data signals routed by the other. Control of the system can be ganged so that both signals switch together under one command.

Adapter Panels

Optional adapter panels provide other connection schemes (grouping two pairs for clock/data), various connector types, and even signal conversion (PCM or TTL).

The use of the optional I/O connector adapter panel assemblies provides a host of additional unique features such as individual connectors for each channel, grouping of signals for clock/data, or the simple ability to locate the system I/O connectors on the front of the equipment rack (or mixed, some on the front and some on the rear). The connector panel assemblies also allow the I/O to be located in a different rack from the actual switching system.
Adapter Panel Assemblies
(for details, see individual data sheets)

Series AP16D9S

Series AP16D9P

Series AP32R

Series AP32RS

Series AP32BF

Series AP32TF

Series AP32Tx
**System S2560F Specifications**

- **Minimum array size**: 32 input, 32 output
- **Maximum array size**: 256 input, 256 output
- **Expansion increment**: 32 ports per module
- **Design capacity**: 1024 inputs, 1024 outputs **
- **Switching technology**: Digital
- **Type of system**: Non-blocking with full fanout
- **Architecture**: Tri-Stage redundant, uni-directional
- **Status LED’s**: Front panel

**Input Characteristics**
- **Signal connector**: 50 position SCSI-II
- **Coupling**: DC
- **Impedance**: 100 ohm
- **Input type**: High-speed 422 receivers
- **Common mode**: -7V to +12V

**Output Characteristics**
- **Signal connector**: 50 position SCSI-II
- **Coupling**: DC
- **Impedance**: 100 ohm
- **Output type**: High-speed, low skew differential drivers

**Signal Characteristics with 50 or 75 ohm TTL Adapter Panels**
- **Frequency response**: DC-50Mbps
- **Input VSWR**: <1.3:1

**General Specifications**
- **Module technology**: Hot-Swappable
- **Power supply section**: Redundant hot-swap standard
- **Controller CPU**: Single or Dual (redundant)
- **Remote interface**: 10/100 Ethernet, USB & Serial (232/422/485)
- **Local control**: Color touchscreen (4.3” or 10.1”)
- **Configuration routing**: Auto-Route or manual
- **Configuration memory**: Flash
- **Cooling**: Forced cooling with RPM monitoring
- **AC power requirements**: 90-264VAC, 47-440Hz, 400Watts
- **Power cords**: Dual inputs (USA 15A)
- **Weight**: 50lbs
- **Size**: 8.75H x 22.00D x 19.00W (5RU)
- **Operating temp**: 0 to +50°C
- **Non-operating temp**: -20 to +85°C
- **Humidity**: 0 to 95% (NC @ +25°C)
- **MTBF**: >15,000 hours (per MIL-HDBK-217F N1, ground benign @ +25°C) estimated

**Factory Spares**
- **In-module (32 input)**: VDI2560F-DD12A
- **Mid-module**: VDM2560F-D01
- **Out-module (32 output)**: VDO2560F-DD12A
- **Power supply element**: PS2560XF-200

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

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**Example 422 Clock/Data System: Dual 256x256**

256 input, 256 output with RJ-45 adapter panels

Shown below is an example of two fully populated S2560F units (one for clock and one for data) with optional RJ-45 passive I/O adapter panels. These are individual 1RU high (1.75”) rack mounted units (Series AP32RS) and serve the following functions:

- Provides individual standard RJ-45 connectors for the user
- Contains two channels on each RJ-45 (clock and data)
- Allows signal connectors to be located on front or rear of rack
- Ability to remotely locate user signal connectors
- Deliver high performance differential 100 ohm data switching

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