

Applications

- Audio, Data or Video routing
- E1 audio switching
- Production studios
- Imaging and animation production facilities
- Production studios
- Telemetry TTL or PCM (clock and data streams)
- NTSC, PAL or SECAM routing

Features

- High reliability solid-state relay elements
- Redundant signal paths (Tri-Stage)
- Flexible configuration: 32x32 up to 256x256, or larger
- Capable of analog or digital switching
- DC to 125MHz bandpass
- Ultra-high density, over 65,500 crosspoint in 5RU
- Hot-Swap module technology
- Front panel LED back-lit keypad controls
- High contrast vacuum-fluorescent display
- Various remote interface choices
- Dual remote interface capability
- Includes Ethernet with TCP/IP
- Command set is 488.2 compliant
- Rugged 5RU high aluminum chassis (8.75")
- International AC power range
- Self-monitoring hot-swap plug-in power supplies with PFC
- Built-in rack mount design (19 inch)
- Built-in chassis slide mounting (slides not included)
- Certified CE EN61010 (LVD)
- LabVIEW VISA drivers downloadable for FREE
- Compatible with RouteWarePRO control GUI

General

Designed specifically for high performance PCM or TTL data, analog telemetry, audio or video signal routing in an expandable and compact 5RU format. No other switching system on the market delivers higher density or flexibility.

The system is field configurable from a small 32x32 and expandable to a full 256x256. The S2561E provides solid-state single-ended switching of signals to beyond 125MHz. Redundant hot-swap power supplies are a standard feature as well as a number of remote control interface choices. Up to two of our innovative plug-in CPUs can be installed for redundant control, plus they have a field program FLASH port for easy firmware updates.

The unique fully non-blocking Tri-Stage™ design delivers high signal performance, small package size and redundant signal paths for the ultimate in reliability. A departure from standard switching system technology, the System S2561E provides over 13,000 crosspoints per vertical rack unit (RU).



S2561E with front panel open (showing mid-stage modules)

Optional I/O connector adapter panels are available to allow the system to be multi-purpose for PCM, audio, video, or a combination of both, plus they allow the user to remotely locate the inputs or outputs from the actual switching system chassis. This allows a new higher level of flexibility for the system integrator.



Rear view of System S2561E shown with dual CPU's

Defining a System

How to choose your features

The S2561E is a modular switching system comprised of various plug-in switching modules. Due to the high density of the system, it is delivered with sixty-two position multi-pin connectors. The user can connect directly to these for low level audio and analog data applications. Each connector provides 16 single-ended channels. Optional adapter panels provide other connection schemes, impedance and signal levels (see back page).

The system model number and basic features can be specified by observing the definition below. First, choose how many input modules you will need, then the number of output remembering that each provides 32 channels. Filler plates cover unpopulated slots.

The balance of the system model number specifies the power supply configuration, the type of CPU and remote interface module(s), and finally the I/O impedance for the

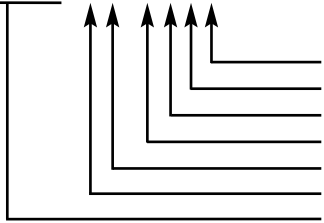
system. The S2561E uses our Series C710 plug-in CPU and interface modules, and the new Series C820 due for release in 3Q2009.

New Feature Available (2/2009)

USC has a new input and output card type for audio applications. The input card has an E1 input port that is internally demuxed into 30 audio channels. The output card internally time multiplexes 30 audio signals to an E1 output port. Contact the factory for additional information.

NOTE: For higher frequency single-ended applications like video signals, telemetry signals, TTL and other similar types, it is recommended that the appropriate adapter panel assembly be chosen to preserve the high performance characteristics of the S2561E. Consult the factory or individual data sheets.

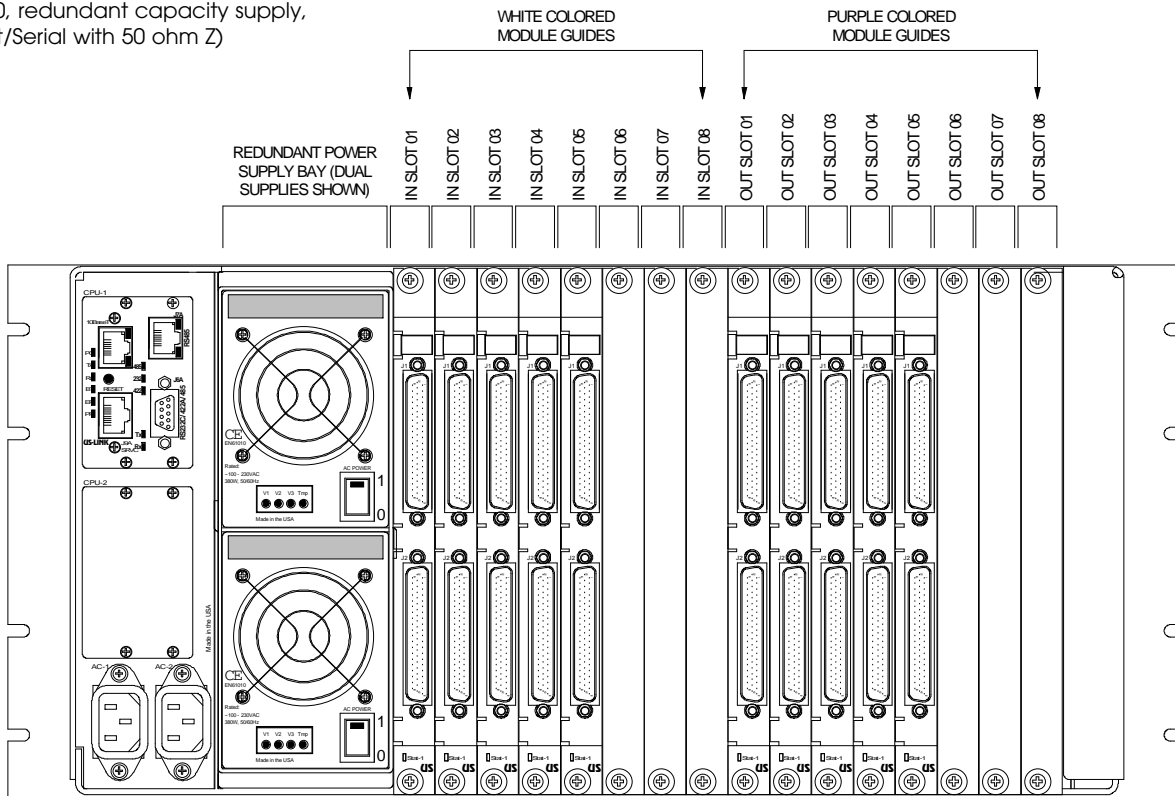
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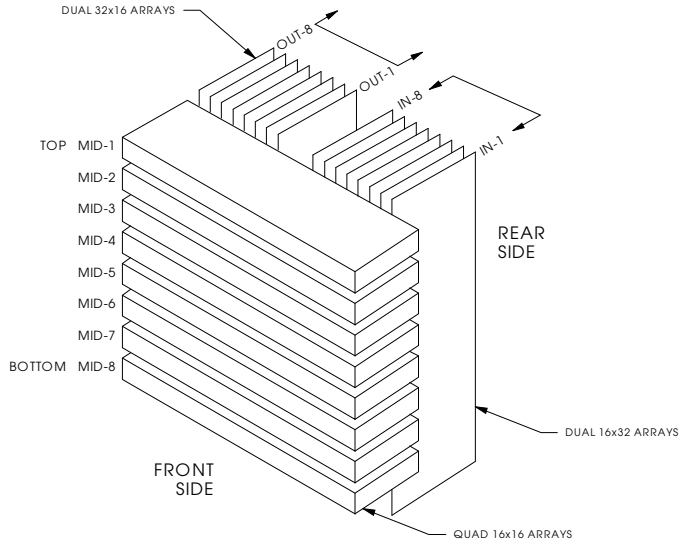
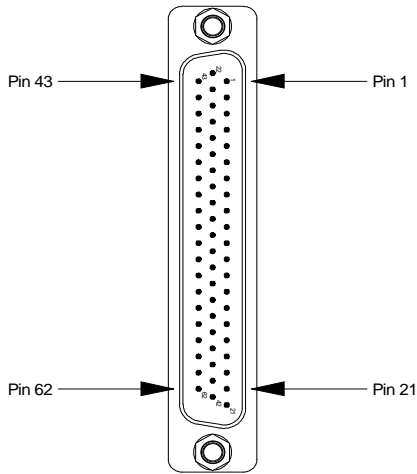
- I/O impedance: 5 = 50 ohm
- CPU Slot #2: 0 = None, 5 = C710-E10, 6 = C710-S3, 7 = C710-488, A = C820, B = C820-GS
- CPU Slot #1: 0 = None, 5 = C710-E10, 6 = C710-S3, 7 = C710-488, A = C820, B = C820-GS
- D = Redundant hot-swap power supplies (standard)
- Number of output modules (1 - 8)
- Number of input modules (1 - 8)
- Base model number

Example: S2561E-55-D605

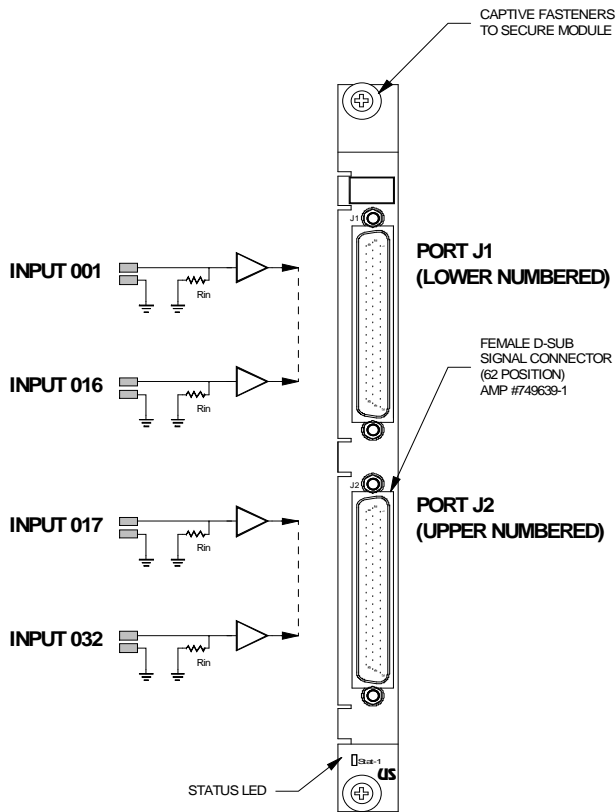
(160x160, redundant capacity supply, Ethernet/Serial with 50 ohm Z)



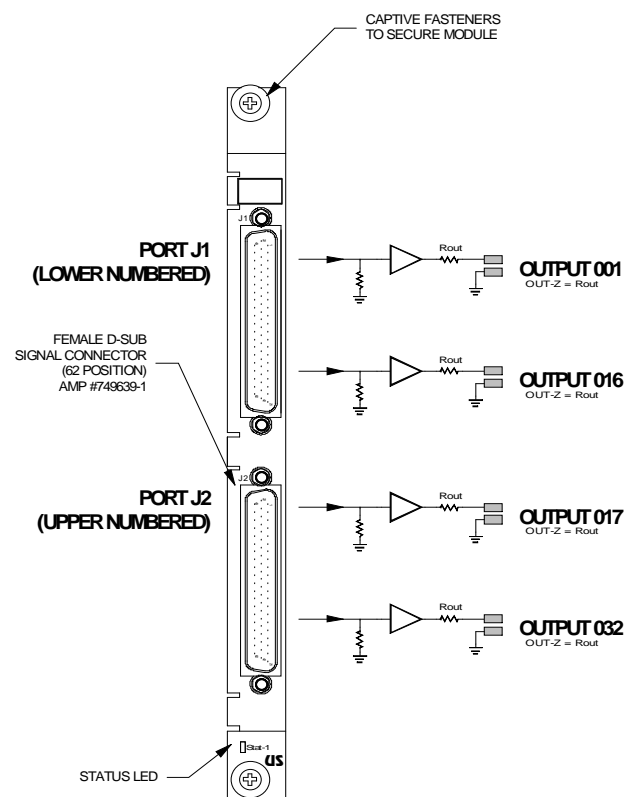
SYSTEM MODULE MAP



Input Module
VSI2561D-S25



Output Module
VSO2561D-S25



Video Switching

32x32 up to 256x256: System S2561E

One major feature of the S2561E is that the system can be configured for routing PCM, video signals, clock/data telemetry or other similar analog or digital signals within the DC-125MHz frequency range. This is accomplished by utilizing the companion passive and active adapter panels (Series AP32x). These panels in combination with the S2561E provide a high performance flexible routing system with some unique features (AP32x example below).

The S2561E offers high performance in a compact 5RU package (8.75" high). 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 1024x024 can be configured by combining multiple units.**

Both the input and output can be expanded independently by plugging in additional input or output modules. Each plug-in module provides 32 channels and hot-swap plug-in solid-state technology.

All signal I/O is single-ended via high density 62-position DSUB multi-pin connectors. The Series AP32x adapter panels allow the user to connect with standard BNC connectors rather than the multipin DSUB. The adapter panels allow for the unit to switch higher level signals. This is achieved by the fact that most of the input panels types are passive and attenuate the input signals, and the output panels are active with gain sufficient to match the input attenuation providing a unity gain solution.

The use of the Series AP32x connector adapter panel assemblies also provide the 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 chassis.

High Resolution RGB Switching

Depending upon the size of system needed, one or more S2561E units can be cascaded together to provide additional functions. One application may be the switching of RGB video signals. This type of application requires three levels of switching, one for each video color (red, green and blue). RGBHV switching can be done by adding more levels.

For smaller configurations (like an RGB 64x64) a single S2561E unit can be used. A total of six input and six output modules are needed (2 for red, 2 for green and 2 for blue, both input and output). The control of the array is configured for RGB where connecting an input automatically closes crosspoints for all three levels.

For larger applications, multiple S2561E units are used, one for each color and again the control is ganged together. Individual adapter panels or specific RGB panels can be ordered. Consult the factory or the individual adapter panel data sheets.

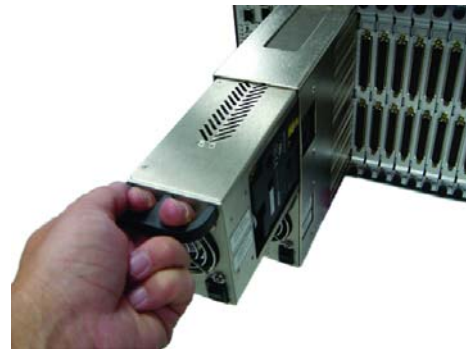
NOTE: For 75 ohm applications, the adapter is where the user specifies the I/O impedance. The S2561E unit is standard as a 50 ohm unit. The adapter panels provide an impedance change to 75 ohm for the user signal connectivity.

Custom Configurations

Many applications can be met by specifying standard modules and options. To meet unique applications or combinations of equipment, the factory can easily tailor modules, systems and software to meet many specialized needs. Contact the factory or your Universal Switching representative.



Adapter Panel Series AP32B



Hot-swap power supplies are standard



S2561E with front panel open (showing mid-stage modules)

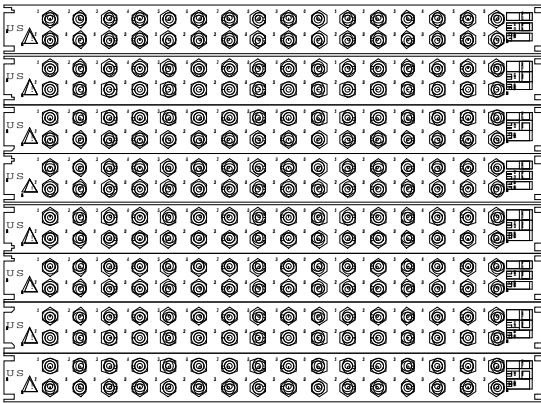
Example Video System

256 input, 256 output, includes I/O adapter panels

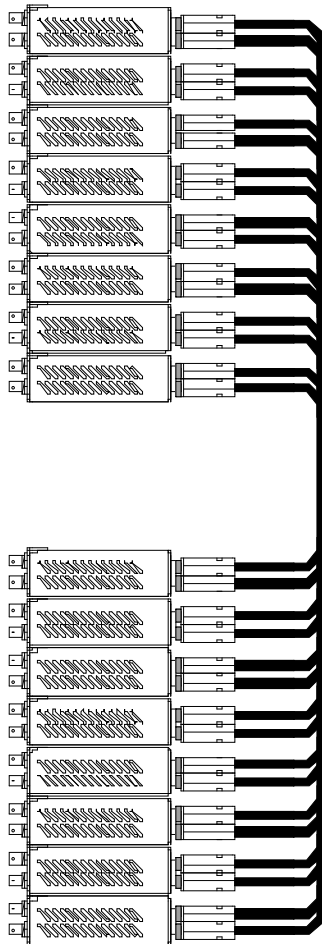
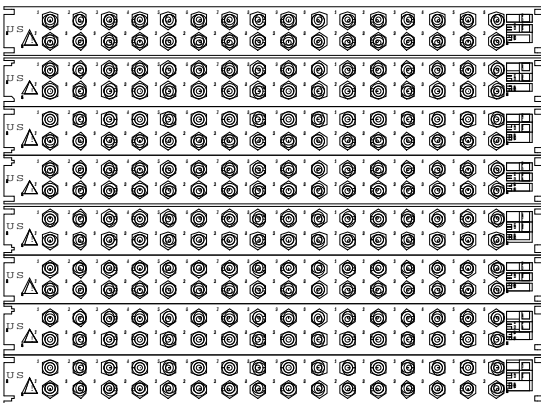
Shown below is an example of a fully populated S2561E unit with the optional active I/O adapter panels. These are individual 1RU high (1.75") rack mounted units (Series AP32Bx) serve the following functions:

- Provides BNC connectors for the user
- Impedance change from 75 to 50 ohm, or opposite (I or O suffix)
- Allows signal connectors to be located on front or rear of rack
- Ability to remotely locate signal connectors
- Deliver high performance 75 ohm video

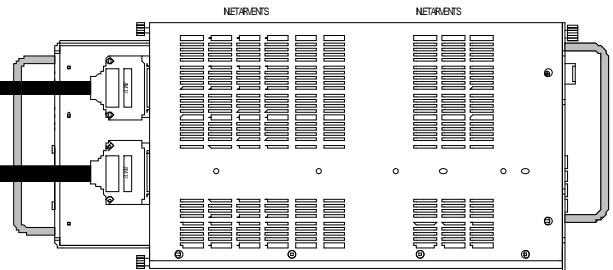
Eight Model AP32BI-S76 Units
(includes 6 foot cables)



Eight Model AP32BO-S76 Units
(includes 6 foot cables)

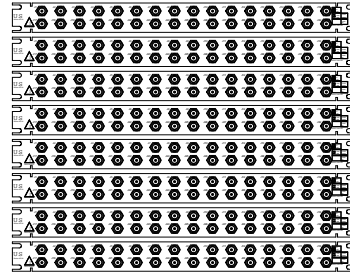
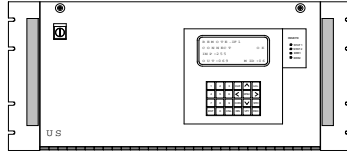
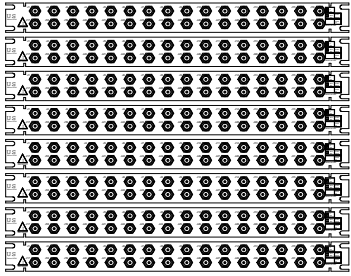


One Model S2561E-88-Dxx5 Unit
(side view)



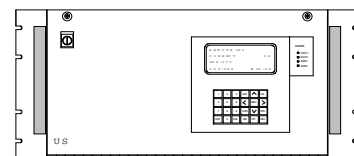
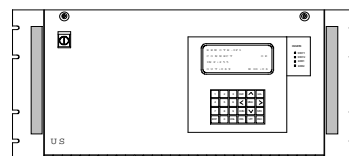
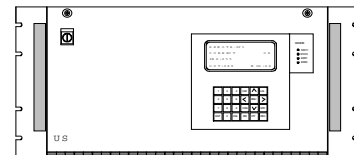
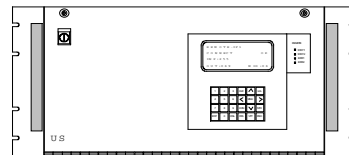
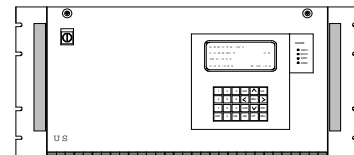
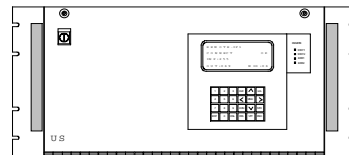
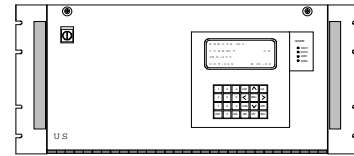
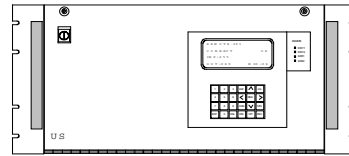
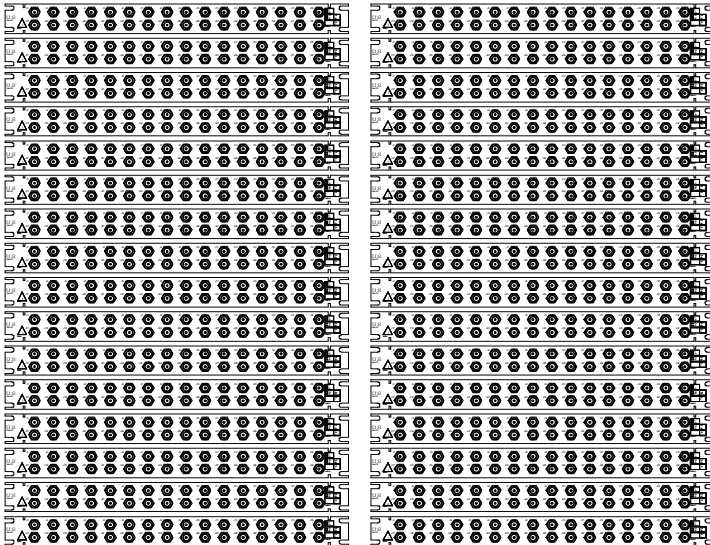
Example System: 256x256 with Adapter Panels

- 1ea S2561E-88-Dxx5 Switching System 256x256
- 8ea AP32BI-S76 Input adapter panel (passive), 75 ohm
- 8ea AP32BO-S76 Output adapter panel (active), 75 ohm



Example System: 1024x1024 with Adapter Panels

- 16ea S2561E-88-Dxx5 Switching System 256x256
- 32ea AP32BI-4E-S76 Input adapter panel (passive), 75 ohm
- 32ea AP32BO-4E-S76 Output adapter panel (active), 75 ohm



Example System: 512x512 with Adapter Panels

- 4ea S2561E-88-Dxx5 Switching System 256x256
- 16ea AP32BI-E-S76 Input adapter panel (passive), 75 ohm
- 16ea AP32BO-E-S76 Output adapter panel (active), 75 ohm

