Specification Sheet S2565F-001
Modular Hybrid 64x64 Digital/Analog Switching Array
System S2565F & S2565FX
125MHz Baseband, 60Mbps TTL, 50Mbps `422

February 2019

Universal Switching Corporation

General

Automating "patch panels" is a proven & effective method to reduce facility operating costs by increasing efficiency, productivity and reliability. Our S2565F(X) unit is a modular high density 5RU automated patch unit that can be configured in symmetric or asymmetric configurations from 8x8 to 64x64 in the same chassis.

Designed specifically to provide hybrid analog/digital capability, it can be populated with both analog modules and digital modules at the same time (analog baseband video, and high performance digital TTL, or 422). In addition, it's completely self-contained with signal connectors located at the rear installed I/O modules on the unit (no external adapter panels needed).

Providing routing/distributing/conversion of digital data in either synchronous or asynchronous modes, the System S2565F helps eliminate the use of manual patch bays, convertors and patch cords. Digital data can be input TTL, and come out 422 (or the opposite). It is a high-density array designed to switch in either synchronous or asynchronous modes routing single-ended and differential (422) digital signals such as RS-422, PCM, TTL, clock & data, or other similar signals.

Fully populated, this 5RU unit contains a total of 64 inputs and 64 outputs where a given input can be connected to one, many, or all 64 outputs (full fan-out non-blocking). The S2565F**X** is the same but has a 10.1″ display (**Option X**) and additional front panel features.

The unit comes standard with redundant hot-swap power supplies, and is available with either single or dual (redundant) hot-swap C3 controllers installed. The C3 controller features 10/100 Ethernet (LXI certified), USB 2.0 and multi-serial (RS-232C/422A/485) control ports. Contact your local sales representative or the factory for assistance.
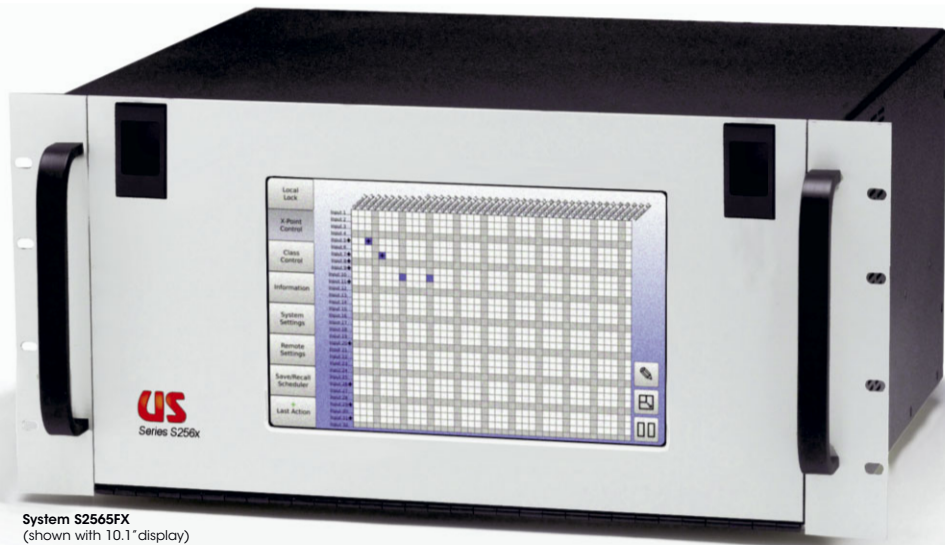
Applications

- Telemetry data TTL or PCM streams
- Clock and Data routing
- Differential 422 to TTL conversion, or TTL to 422
- Data recorder data management
- Imaging and animation production facilities
- Production studios

Features

- High reliability 64x64 redundant Tri-Stage design
- Hybrid analog and digital switch core
- LED indicators adjacent to each port
- Designed for hybrid digital & analog switching
- Flexible configuration: 8x8 up to 64x64 (or larger)
- Multiple units can be grouped to configure 256x256
- Ultra-high density, 4,096 crosspoints in 5RU
- DC to 60Mbps throughput for TTL I/O paths
- Digital 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, SNTP, IPv4 & IPv6 & 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

* New C3+ control CPU in Q3 2018 includes 1GB Ethernet and SNMP v1/v2/v3.

DIGITAL
ANALOG
SNMP
C3 Powered
LXI
IPV6
Reliability Resiliency

System S2565F
(shown with 4.3″ display)

ROUTEWARE PRO 5.0

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

Made in the USA

System S2565FX
(shown with 10.1″ display)

S2565F-201902

Model Number Assignment

@US_Corp

S 2 5 6 5 F X - A a D d - X Z

Series Number
(add "X" for 10.1" display)

Analog Input Modules
(0, or 1 to 8)

Analog Output Modules
(0, or 1 to 8)

Digital Input Modules
(0, or 1 to 8 for TTL/BNC, A to H for 422/Triax)

Digital Output Modules
(0, or 1 to 8 for TTL/BNC, A to H for 422/Triax)

1 = Single CPU
2 = Dual CPU (redundant)

5 = 50 ohm, 7 = 75 ohm, 0 = N/A (applies to analog & TTL modules only)

Forced Cooling
Redundant monitored cooling fans

C3 Hot-Swap CPUs
Single or Dual (LXI)
10/100 and uSD slot

Hot-Swap Supplies
Dual supplies standard
(AC power switch on each supply)

Modular I/O Elements
Eight channels
(TTL, 422 or Analog)

Built-in Rack Mount
6RU flanges & chassis slide mounting
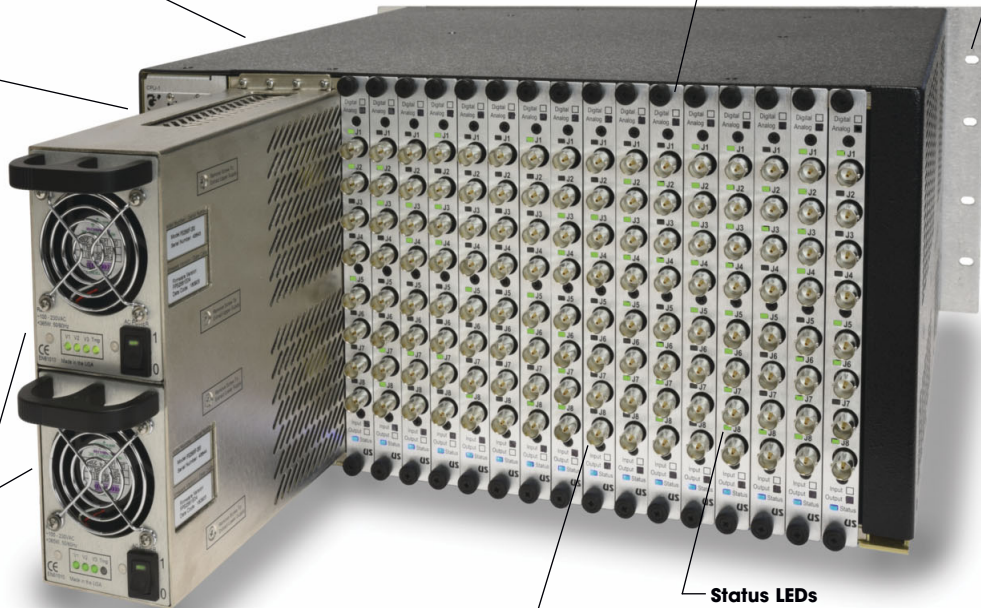
Signal Connectors
BNC (Analog & TTL), Triax (422)

Status LEDs
Shows connected ports
(port activity on digital elements)

System S2565F Specifications

Minimum array size	.8 input, 8 output
Maximum array size	.64 input, 64 output
Expansion increment	.8 ports per module
Design capacity	.256 inputs, 256 outputs **
Switching technology	.Analog / Digital Hybrid
Type of system	.Non-blocking with full fanout
Architecture	.Tri-Stage redundant, uni-directional

** Systems comprised of multiple units are individually controlled unless you add the MAC1 or MAC4 master array controllers.

Input Characteristics

Analog
Impedance	.75 ohm
Input type	.Analog, DC-125MHz (min)
Max input	.+/-10VDC (75 ohm)
Connector	.BNC

Digital TTL
Impedance	.75 ohm
Input type	.Standard TTL Levels, >60Mbps
Connector	.BNC

Digital 422
Impedance	.100 ohm (differential 422)
Input type	.High-speed 422 receivers, >50Mbps
Common mode	.-7V to +12V
Connector	.Triax (BJ77)

Output Characteristics

Analog
Impedance	.75 ohm
Output type	.Analog, DC-125MHz
Max output	.+/-5 into 75 ohm load (30MHz)
Connector	.BNC

Digital TTL
Impedance	.75 ohm
Output type	.Standard TTL Levels, >60Mbps
Connector	.BNC

Digital 422
Output type	.High-speed differential 422, >50Mbps
Connector	.Triax (BJ77)

General Specifications

Module technology	.Hot-Swappable
Power supply section	.Redundant hot-swap
Controller CPU	.Single or Dual (redundant)
Remote interface	.10/100 Ethernet, USB & Serial (232/422/485) *
Protocol	.TCP/IP, SNMP v1/v2, SNTP, IPV4, IPV6 *
Local control	.Color touchscreen (4.3" or 10.1")
Configuration routing	.AutoRoute or manual
Configuration memory	.Flash
Cooling	.Forced cooling with RPM monitoring
AC power requirements	.90-264VAC, 47-63Hz, <400Watts
Power cords	.Dual inputs (USA 15A)
Weight	.50lbs
Size	.8.73H x 22.00D x 19.00W (5RU)
Operating temp	.0 to +60C
Non-operating temp	.-20 to +85C
Humidity	.0 to 95% (NC @ +25C)
MTBF	>135,000 hours (per MIL-HDBK-217F N1, ground benign @ +25C) estimated

* New C3+ control CPU in Q3 2019 includes 1GB Ethernet and SNMP v1/v2/v3.

Factory Spares

Analog In-module	.VI2565F-A1-5C (50 ohm, BNC)
Digital TTL In-module	.VI2565F-DT-5C (50 ohm, BNC)
Analog In-module	.VI2565F-A1-7C (75 ohm, BNC)
Digital TTL In-module	.VI2565F-DT-7C (75 ohm, BNC)
Digital '422 In-module	.VI2565F-D4-1T (100 ohm, Triax)
Mid-module	.VSM2561D-D02
Analog Out-module	.VO2565F-A1-5C (50 ohm, BNC)
Digital TTL Out-module	.VO2565F-DT-5C (50 ohm, BNC)
Analog Out-module	.VO2565F-A1-7C (75 ohm, BNC)
Digital TTL Out-module	.VO2565F-DT-7C (75 ohm, BNC)
Digital '422 Out-module	.VO2565F-D4-0T (Low Z, Triax)
Power supply element	.PS256XF-200

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