USB MATRIX SWITCH SSW2101

USB Matrix

USB Matrix

The USB switch allows any combination of USB inputs to be connected to any combination of USB outputs at any given time. The USB Matrix uses NVIS Class B LEDs to make it compatible with NVG.

Built to take a beating

The USB Matrix is built to withstand the harshest conditions over the long haul. It features aluminum casing, rugged MIL connectors for easy integration and will operate down to -40 C.

Mounting

The 19”/2 standard enables flexible mounting with customized brackets. The unit can be mounted in a 19” rack, half racks, directly to a surface and in any angle.

Guaranteed performance

Our products always come with a lifetime support to ensure your equipment maintains peak performance for many missions to come. We also serve units and stock spare parts for 5 years end-of-life.

Features

- 10-32 VDC
- Passively cooled

SSW2101 Issue 04, 2019-12-17.

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Connector Interfaces

SERVICE (back)	• 1x RS232 Service
X1-X4 (front)	4 connectors which each has: • 1x USB 2.0
X5 (front)	• 1x Remote RS422
X7-X10 (back)	4 connectors which each has: • 1x USB 2.0
X6 DC IN (front)	• 1x Power

Other Interfaces

1x Status indicator (front)

Technical Specification

Matrix functionality	Connecting any combination of USB inputs to any combination of USB outputs at any given time
MIL-STD-1275D	5.3.2.2 5.3.2.3 5.3.2.4
Power consumption	56W @ 28V
Power input	10-32 VDC
Coating and color	Dupont AE0305-6603120 (RAL6031)
Cooling	Passively cooled
Dimensions	220x199x44 mm (WxDxH)
Earth point	M6 12mm
Surface treatment chassis	Chromit-Al
Weight	1.8 kg (4 lbs)
MTBF	Greater than 25000 h

Environmental Specification (*designed to meet)

Functional Shock - Operating*	MIL-STD-810G. Method 516.6, Procedure I - Functional Shock. Table 516.6-II, Terminal peak sawtooth pulse, Ground equipment 40g 11 ms
Fungus*	MIL-STD-810G, Method 508.6, Fungus 90 days
High temperature - Operating*	MIL-STD-810G, Method 501.5, Procedure II - Operation 55 °C (131 °F)
High temperature - Operating*	MIL-STD-810G, method 501.5, Procedure II - Operation 60 °C (140 °F)
High temperature - Storage*	MIL-STD-810G, Method 501.5, Procedure I - Storage 71 °C (160 °F)
Humidity*	MIL-STD-810G, Method 507.5, Procedure II - Aggravated 95 ± 4 %rh Ten 24-hour cycles
IP Class (Solid Particle Protection)*	IP Class 6X
IP Class (Water)*	IP Class X5
Low air pressure - Rapid Decompression*	MIL-STD-810G, Method 500.5, Procedure III - Rapid Decompression 75.2kPa, corresponding to 2,438m (8.000 ft) 17kPa, corresponding to 12192m (40.000 ft)
Low temperature - Operating*	MIL-STD-810G, method 502.5, Procedure II - Operation -40 °C (-40 °F)
Low temperature - Storage*	MIL-STD-810G, method 502.5, Procedure I - Storage -40 C (-40 °F)
Noise level*	Maximum noise level of 40dB SPL A-weighting @ 1m (3,3 ft) distance
Salt fog*	MIL-STD-810G Method: 509.5 5% +- 1% (by weight) Two cycles, 24h wet + 24h dry /cycle
Temperature Shock - Operating*	MIL-STD 810G, method 503.5 procedures I - C, - Multi-cycle shocks from constant extreme temperature 55 °C (131 °F) - 40 °C (-40 °F)
Transit drop, in shipping package*	MIL-STD-810G, method 516.6, Procedure IV - Transit Drop. Table 516.6-VI, Transit drop test, < 45.4 kg (100 lbs), < 91 cm (36 inch), Manpacked or man-portable
Vibration - Helicopter*	MIL-STD-810G. Method 514.6, Procedure I - General vibration, Category 14 - Rotary wing aircraft - helicopter
Vibration - Loose Cargo*	MIL-STD-810G. Method 514.6, Procedure II - Loose cargo transportation, Category 5 - Truck/ trailer - loose cargo
Vibration - Tracked Vehicles*	MIL-STD-810G. Method: 514.6 , Procedure 1 - General Vibration, Category 20 - Ground vehicles - ground mobile, tracked vehicles
Vibration - Wheeled Vehicle*	MIL-STD-810G. Method: 514.6 , Procedure 1 - General Vibration, Category 20 - Ground vehicles - ground mobile, wheeled vehicles

EMC Specification (*designed to meet)

CE EMI*	EN61000-6-3:2007
CE EMS*	EN55032:2015

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EMI conducted CE102*	MIL-STD-461F, Method CE102 BASIC CURVE 10kHz to 10MHz
EMI radiated RE102*	MIL-STD-461F 2MHz – 18Ghz Navy Mobile & Army
EMS conducted CS101*	MIL-STD-461F, Method CS101, conducted suceptibility, power leads CURVE #1 30Hz to 150kHz
EMS conducted CS114*	MIL-STD-461F 10kHz - 200MHz Army, Ground
EMS conducted CS115*	MIL-STD-461F Conducted susceptibility, bulk cable injection, impulse excitation
EMS conducted CS116*	MIL-STD-461F 10 kHz to 100 MHz
EMS radiated RS103*	MIL-STD-461F 2MHz to 1GHz Army
ESD*	EN61000-4-2:2009 Level 3 EN50024:1998 Performance criteria B + A1:2001 + A2:2003

Connector Pinout

SERVICE - Binder 09-0408-00-03 + 08-0352-000-001 (back)

Pin #	Signal
1	RS232 Service - TX
2	RS232 Service - RX
3	RS232 Service - GND

X1-X4 - D38999 24ZA35SN (front)

Pin #	Signal
1	USB 2.0 1 - GND
2	NC
3	NC
4	USB 2.0 1 - D-
5	USB 2.0 1 - D+
6	USB 2.0 1 - VBUS

X5 - D38999 24ZA35SB (front)

Pin #	Signal
1	NC
2	Remote RS422 - TX+
3	Remote RS422 - TX-
4	Remote RS422 - RX+
5	Remote RS422 - RX-
6	NC

X7-X10 - D38999 24ZA35SA (back)

Pin #	Signal
1	USB 2.0 1 - GND
2	NC
3	NC
4	USB 2.0 1 - D-
5	USB 2.0 1 - D+
6	USB 2.0 1 - VBUS

X6 DC IN - D38999 24ZB98PN (front)

Pin #	Signal
A	Power - DC IN
B	Power - RETURN
C	Power - DC IN
D	Power - RETURN
E	Power - DC IN
F	Power - RETURN

Additional Info

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