19"/2 Storage Computer
ST1121

Storage Computer in a 19inch2 form factor

The ST1100 series provides a powerful Network storage solution. It support up to five 2.5" SATA disk, software RAID and a wide range of interfaces and options. It is optimized for low size, weight and power (SWaP) to meet industry requirements without sacrificing reliability, ruggedness or performance. You can install your own NAS software or you can use the MilDef provided Linux bases NAS software.

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.

Built to take a beating

The Computer is built to withstand the harshest conditions over the long haul. It features aluminum casing and IP65 rated disk caddies to enable the unit to work in demanding environments.

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 after end-of-life.

Concept

A MilDef concept describes a possible implementation of customer specific requirements. Realization might involve NRE cost.

Features

- Up to 32 GB RAM
- Intel Xeon E3-1505L V5 processor
- Replaceable CMOS battery
- Passively cooled

ST1121 Issue 05, 2019-09-05.

19"/2 Storage Computer ST1121

Connector Interfaces

DC IN (back)	• 1x Power
CONSOLE (front)	• 1x RS232 Console
ETH1 1G (front)	• 1x ETH 1000BASE-T
ETH2 10G (front)	• 1x ETH 10GBASE-T
ETH3 1G (back)	• 1x ETH 1000BASE-LX
SERVICE (back)	• 1x RS232 Service
USB1/2 (back)	• 2x USB 3.0

Other Interfaces

5x MilDef Disk Slot (front)

1x LAN indicator (front)

1x System Button (front)

Technical Specification

Computer Memory	Up to 32 GB RAM
Computer Processor	Intel Xeon E3-1505L V5 processor
Disk support	2.5" SATAIII SSD
LAN 1000BASE-LX	1000BASE LX standard with SM 1310nm fiber
Product type	Storage Computer
CMOS Battery	Replaceable CMOS battery, located behind a cover for easy access.
WMI Support	Yes
MIL-STD-1275D	5.3.2.2 5.3.2.3 5.3.2.4
Power input	16-32 VDC
Coating and color	Dupont AE0305-6603120 (RAL6031)
Cooling	Passively cooled
Dimensions Width and Height	220x88mm (8,7x3,5 inch) (WxH)
Earth point	M6 12mm
Rack Mounting depth	400mm (17,4 inch)
Surface treatment chassis	Chromit-Al
Weight	7.5 kg (16.5 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
High temperature - Operating*	MIL-STD-810G, Method 501.5, Procedure II - Operation 55C (131F)
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 air pressure - Operating*	MIL-STD-810G, method 500.5, Procedure II - Operation/Air Carriage 4572m (15.000 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
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