AV600X-CH

Military IP66 Mission Computer

MIL-STD 810 MIL-STD 461/1275

- MIL-STD 810 Thermal, shock, vibration, Humidity / EMI / EMC
- IP66 Chassis with D38999 connectors
- Intel® 9th Gen. Coffee Lake (H) Xeon® E-2276ML processor
- Up to 128GB DDR4 SO-DIMM, non-ECC and ECC
- NVIDIA RTX™ A1000, 2048 CUDA® cores, 4GB GDDR6 memory
- NVMe 3.0 512GB.(MB/sec, Max.) 3,400/3,200 MB
- MIL-STD-461 18V~36V DC-Input (Options for MIL-704/1275)
- Extreme Temperature : -40 ~+55 Degree
- Optional with External GPU Turbo Kit
- Dimensions : 250(L) x 313.5 (W) x 100 (H) mm

Special Request :

- Frame Grabber : 4xCH HD-SDI
- Discrete IO : 4xDI 4Xdo
- Dual Redundant MIL-STD-1553 connections
- Dual ARINC 429 input connections

Specifications

System	
CPU	Xeon E-2276ML (6 Cores/12 Threads, 12M Cache, up to 4.20 GHz), 25W
Memory type	4 x 260 Pin DDR4 2400MHz SO-DIMM (up to 128GB, XEON®SKU support ECC)
CHIPSET	CM246
GPU (optional)	NVIDIA RTX™ A1000 embedded graphics - Standard MXM 3.1 Type A (82 x 70 mm) - 2048 CUDA® cores, 16 RT Cores, and 64 Tensor Cores - 6.66TFLOPS peak FP32 performance - 4GB GDDR6 memory, 128-bit
On Board Storage	NVMe 3.0 512GB.(MB/sec, Max.) 3,400/3,200 MB
Expansion Slot	1 x M.2(M-key,Type: 2280 , SATA/PCIe 3.0 x 4 NVMe) 2 x Mini PCIe Full size (USB / PCIe and 1 x micro SIM Card) 1 x PCIe/104, 1 x FPE
TPM	TPM 2.0 (SLB9665)
VIDEO INPUT (optional)	4 Channel capture module for 4 x SMA male connectors (optional)
Storage	
SATA	2 x 2.5” SSD
M.2	1 x M.2(M-key,Type: 2280 , SATA/PCIe 3.0 x 4 NVMe)
Ethernet	
Ethernet (Internal)	2 x 10/100/1000 Ethernet Ports
Front I/O	
DC-in	1 x DC-in , with D38999 connector
X1	1 x DVI , with D38999 connector
X2	1 x DVI , with D38999 connector
X3	2 x GLAN + 3 x USB 2.0, with D38999 connector
X4	1 x RS232/422/485 + 1 x RS232 + 4 BIT DIO, with D38999 connector
LED	1 x SSD/HDD LED indicator
switch	1 x IP65 power button , with LED indicator
Power	
Power input	MIL-STD -461 18V~36V DC-Input

Operating System

OS	Windows® 10 64-bit / Linux (support by request)

Physical

Dimension	246(L) x 313.5 (W) x 100 (H)mm
Weight	(TBD)
Chassis	SECC
Heatsink	Heatsink Aluminum Alloy, Corrosion Resistant

Environmental

Green Product	RoHS, WEEE compliance
Operating Temp.	-40 to 55°C
Storage Temp.	-40 to 85°C
Relative Humidity	5% to 95%, non-condensing

MIL-STD-810 Specifications (Operating)

Method 502.5 Procedure 2	Low Temperature	-20°C, 4 hours, ±3°C
Method 501.5 Procedure 2	High Temperature	+55°C, 4 hours, ±3°C
Method 507.5	Humidity	85%-95% RH without condensation, 24 hours/ cycle, conduct 10 cycles.
Method 514.6	Vibration	5-500Hz, Vertical 2.20Grms, 40mins x 3axis.
Method 516.6	Shock	20 Grms, 11ms, 3 axes.

MIL-STD-810 Specifications (None-Operating)

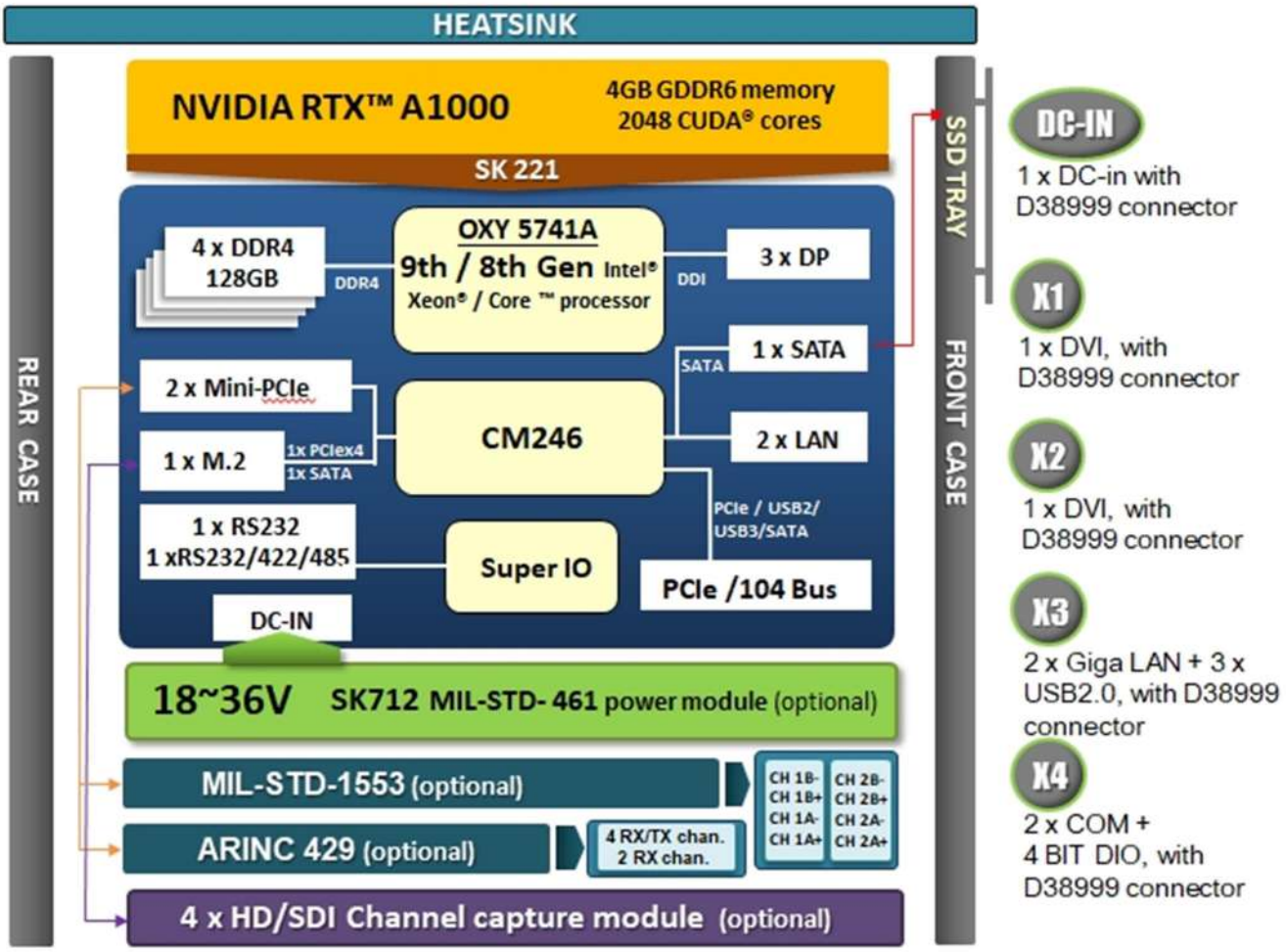
Method 502.5 Procedure 1	Low Temperature Storage	-33°C, 4 hours, change rate: ≦20°C/ Hour -15°C, 72hours (By request)
Method 501.5 Procedure 1	High Temperature Storage	+71°C, 4 hours, change rate: ≦20°C/ Hour. +63°C, 240 hours (By request)
Method 514.6	Vibration	5-500Hz, Vertical 2.20Grms, 40mins x 3axis.
Method 516.6	Shock	20 Grms, 11ms, 3 axes.

MIL-STD-461

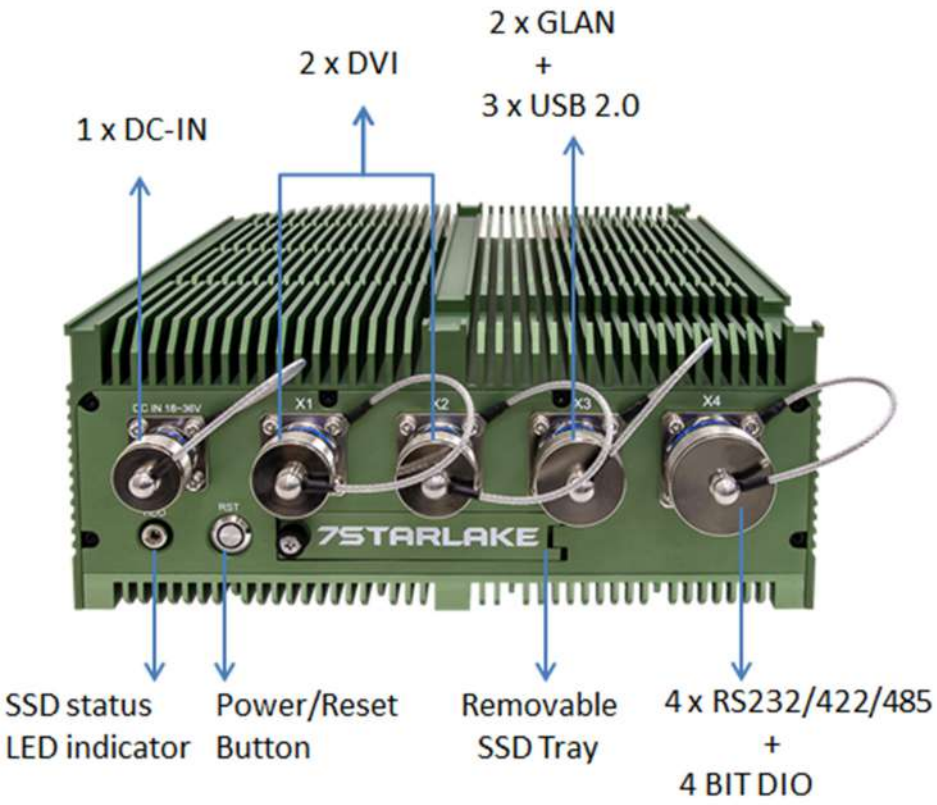
Conducted Emissions Power Leads	CE102 basic curve	10kHz – 30MHz
Radiated Susceptibility	RS103	1.5 MHz – 3GHz, 50 V/m equal for all frequencies
		2MHz – 80MHz, 50 V/m equal for all frequencies
Electric Field		80MHz – 3GHz, 50 V/m equal for all frequencies

		3GHz – 5GHz, 50 V/m equal for all frequencies
Electrostatic Discharge	EN 61000-4-2	Air DISCHARGE: 8 Kv, Contact discharge : 6kV
Electromagnetic compatibility	EN61000-4-4	Signal and DC Net: 1 kV
Electromagnetic compatibility	EN61000-4-5	Lead vs. ground potential 1Kv, ignal und DC Net: 1 kV
Radio disturbance	EN55022	Class A
Electromagnetic compatibility	EN61000-4-3	10V/m
Electromagnetic compatibility	EN 61000-4-5	Lead vs. ground potential 1Kv, ignal und DC Net: 0.5 kV
MIL-STD-1275 (Options)		
Steady State	20V-33V	
Surge Low	18V/500ms	
Surge High	100V/500ms	

Block Diagram



Appearance


2 x GLAN
+
3 x USB 2.0
2 x DVI
1 x DC-IN
DC IN 18~36V
X1
X2
X3
X4
RST
7STARLAKE
SSD status
LED indicator
Power/Reset
Button
Removable
SSD Tray
4 x RS232/422/485
+
4 BIT DIO