



LAND



SEA



AIR

AV600-TH

Military IP66 Mission GPU Computer



MIL-STD
461/1275

MIL-STD
810

- MIL-STD 810 Thermal, shock, vibration, Humidity / EMI / EMC conditions
- IP65 Chassis with D38999 connectors
- Intel® Tiger Lake-H Processors, up to 8 cores
- Up to 96GB DDR4 SO-DIMM, non-ECC and ECC
- NVIDIA RTX™ A4500 8GB/16GB GDDR6 memory 5888 CUDA cores
- IP65 2x 2.5" SATA SSD Easy Swap Tray
- MIL-STD-461 18V~36V DC-Input
- Extreme Temperature : -40°C to +60°C degree

Special Request:

- Frame Grabber : 4x CH HD-SDI
- Discrete IO : 4x DI 4x DO
- Conformal coating on electronics

Specifications

System

CPU	Intel® 11 gen. Tiger Lake-H Processors, up to 8 cores, integrated Intel® UHD Graphics (Xe architecture) Intel® Xeon® W-11865MRE, 45W Tiger Lake 11th Gen, 8C, Freq. 2.6/4.7 GHz, 24MB cache
Memory type	Up to 96GB DDR4 SO-DIMM, non-ECC and ECC
CHIPSET	Intel® RM590E (support ECC, with Xeon CPU) /QM580E
GPU	NVIDIA RTX™ A4500 GA104-955 GPU 8GB/16GB GDDR6 memory, 5888 CUDA cores
On Board Storage	Soldered 64 GB NVMe
Expansion Slot	2x Full-size mini PCIe (1 with mSATA supported) -1 with mSATA/USB2.0/PCIeX1 support -1 with SIM/USB2.0/PCIeX1 support 1 x 2280 M key (SATA only)

Storage

SATA	2x 2.5" SSD, Hot Swappable SSD/HDD slot
M.2	1x 2280 M key (SATA only)

Ethernet

Ethernet (Internal)	2x 10/100/1000 Ethernet Ports
---------------------	-------------------------------

Front I/O

X1	2x GbE LAN + 2x USB2.0 + 1x COM(RS232) with D38999 connector
X2	1x VGA + 4x DI/4x DO + 3x RS422 with D38999 connector
X3	1x USB3.0 , with D38999 connector
X4	1x USB3.0 , with D38999 connector
X5	1x DC-in , with D38999 connector
LED	1x SSD/HDD LED indicator
switch	1x IP65 power button , with LED indicator
SSD	2x 2.5" Easy swap SSD Tray

Power

Power input	MIL-STD-461 18V~36V DC-Input
-------------	------------------------------

Operating System

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

Physical

Dimension	250(W) x 325 (L) x 100 (H)mm
-----------	------------------------------

Weight	(TBD)
--------	-------

Chassis	Aluminum Ally
---------	---------------

Heatsink	Heatsink Aluminum Alloy, Corrosion Resistant
----------	--

Environmental

Green Product	RoHS, WEEE compliance
---------------	-----------------------

Operating Temp.	-20°C to +60°C
-----------------	----------------

Storage Temp.	-40°C 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.
--------------	-------	------------------------

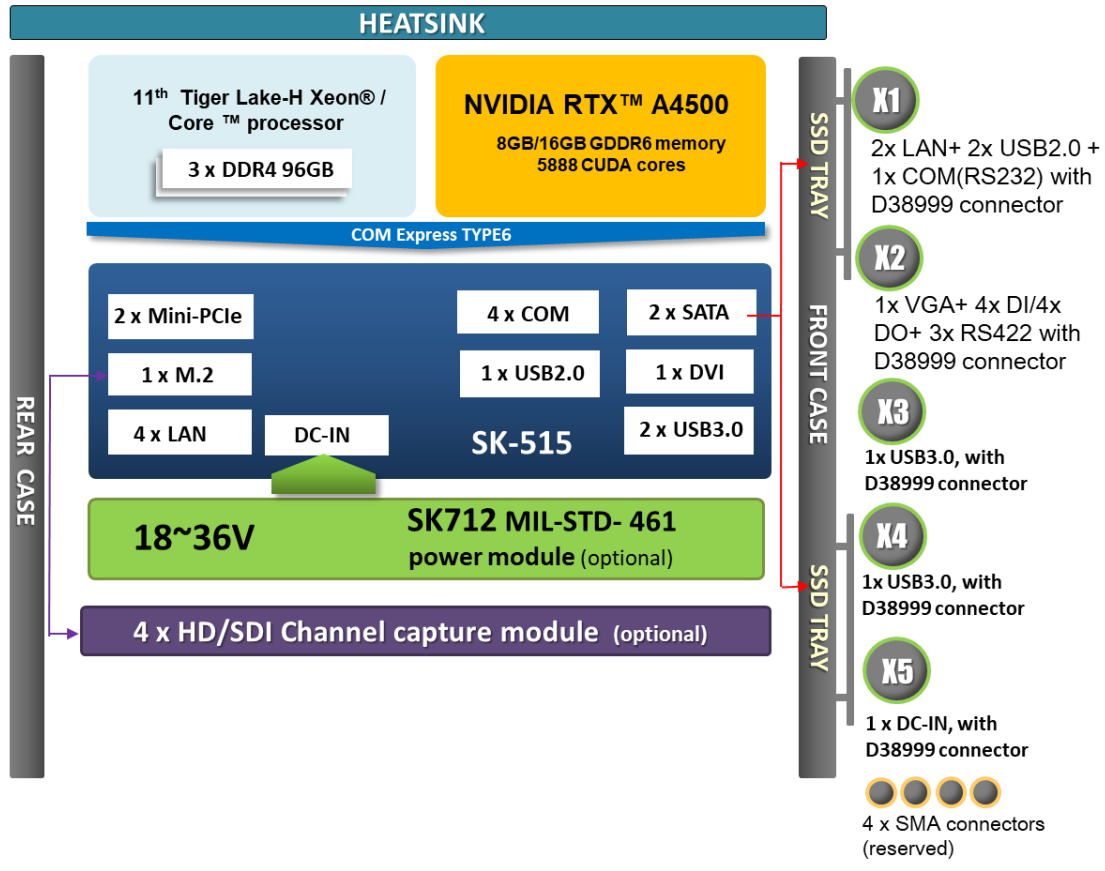
MIL-STD-461

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

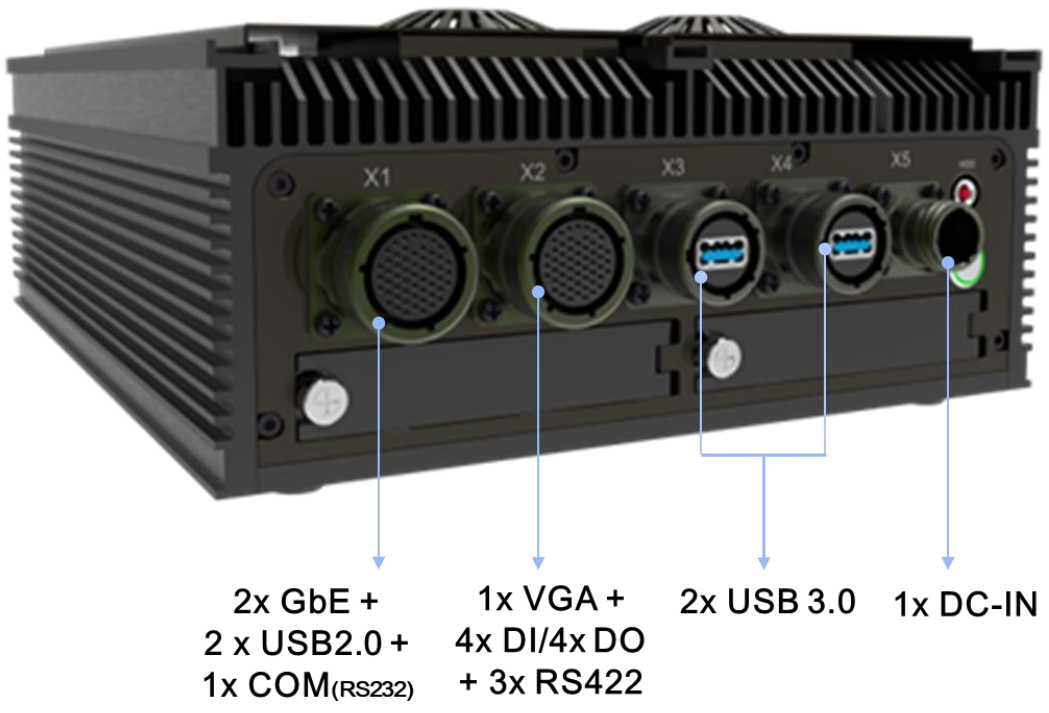
MIL-STD-1275 (Options)

Steady State	20V-33V
Surge Low	18V/500ms
Surge High	100V/500ms

Block Diagram



Appearance



Dimension

