



LAND



SEA



AIR

# AV600X-CH

**Military Mission Computer, Data Recorder**



- MIL-STD 810 Thermal, shock, vibration, Humidity / EMI / EMC conditions
- Data Recorder up to 32TB storage with RAID 0/1/5
- 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(W) X 325(L) 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
- Data Recorder: Up to 32TB SATA III SSD

# 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	4x 2.5" 8TB SSD, Up to 32TB
M.2	1x M.2(M-key,Type: 2280 , SATA/PCIe 3.0 x 4 NVMe)

## Ethernet

Ethernet (Internal)	2x 10/100/1000 Ethernet Ports
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## Front I/O

DC-in	1x DC-in , with D38999 connector
X1	1x DVI , with D38999 connector
X2	1x DVI , with D38999 connector
X3	2x GLAN + 3x USB 2.0, with D38999 connector
X4	1x RS232/422/485 + 1 x RS232 + 4 BIT DIO, with D38999 connector
LED	1x SSD/HDD LED indicator
switch	1x IP65 power button , with LED indicator

## Power

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

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

Dimension	250(W) x 325(L) x 100 (H)mm , (L=395mm for Data recorder, Options)
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Weight	10.5kg
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Chassis	Aluminum Alloy
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Heatsink	Heatsink Aluminum Alloy, Corrosion Resistant
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## Environmental

Green Product	RoHS, WEEE compliance
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Operating Temp.	-40°C to +60°C
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Storage Temp.	-40°C to +85°C
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Relative Humidity	5% to 95%, non-condensing
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## MIL-STD-810 Specifications (Operating )

Method 507.5, Procedure II ( Temperature & Humidity )
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Method 516.6 Shock-Procedure V Non-Operating ( Mechanical Shock )
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Method 516.6 Shock-Procedure I Operating ( Mechanical Shock )
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Method 514.6 Vibration Category 24/Non-Operating ( Category 20 & 24, Vibration )
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Method 514.6 Vibration Category 20/Operating ( Category 20 & 24, Vibration )
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Method 501.5, Procedure I ( Storage/High Temperature )
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Method 501.5, Procedure II ( Operation/High Temperature )
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Method 502.5, Procedure I ( Storage/Low Temperature )
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Method 502.5, Procedure II ( Operation/Low Temperature )
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Method 503.5, Procedure I ( Temperature shock )
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## Reliability

No Moving Parts; Passive Cooling.

Designed & Manufactured using ISO 9001 / 2000 Certified Quality Program.

## MIL-STD-461

Conducted Emissions	CE102 basic curve	10kHz – 10MHz
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Power Leads

Radiated Susceptibility	RS103	1.5 MHz – 3GHz, 50 V/m equal for all frequencies
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		2MHz – 80MHz, 50 V/m equal for all frequencies
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Electric Field		80MHz – 3GHz, 50 V/m equal for all frequencies
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		3GHz – 5GHz, 50 V/m equal for all frequencies
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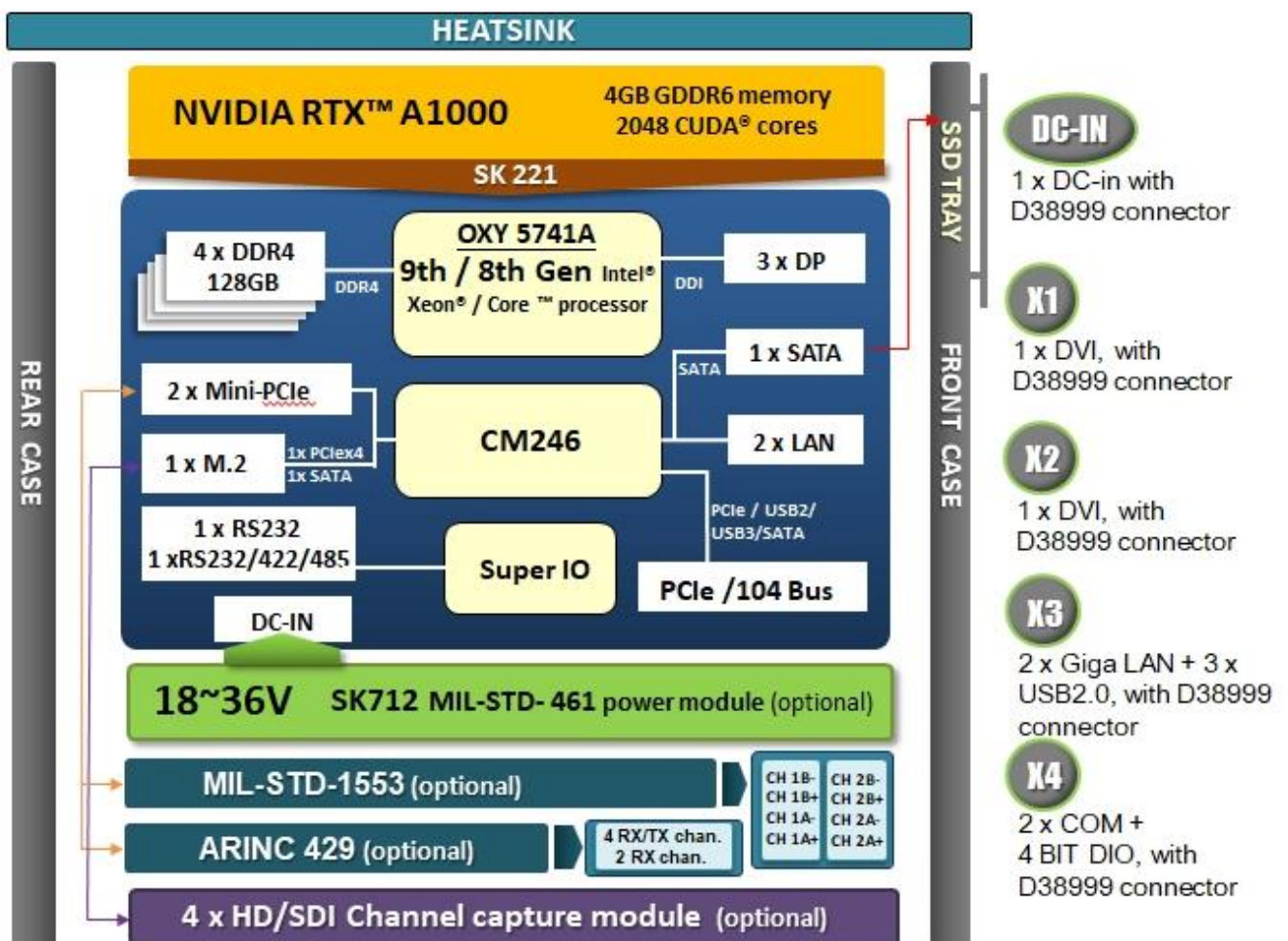
	RE102-4	1.5 MHz -30 MHz - 5 GHz
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Designed to Meet Items ( Options )

MIL-STD-1275 (Options)

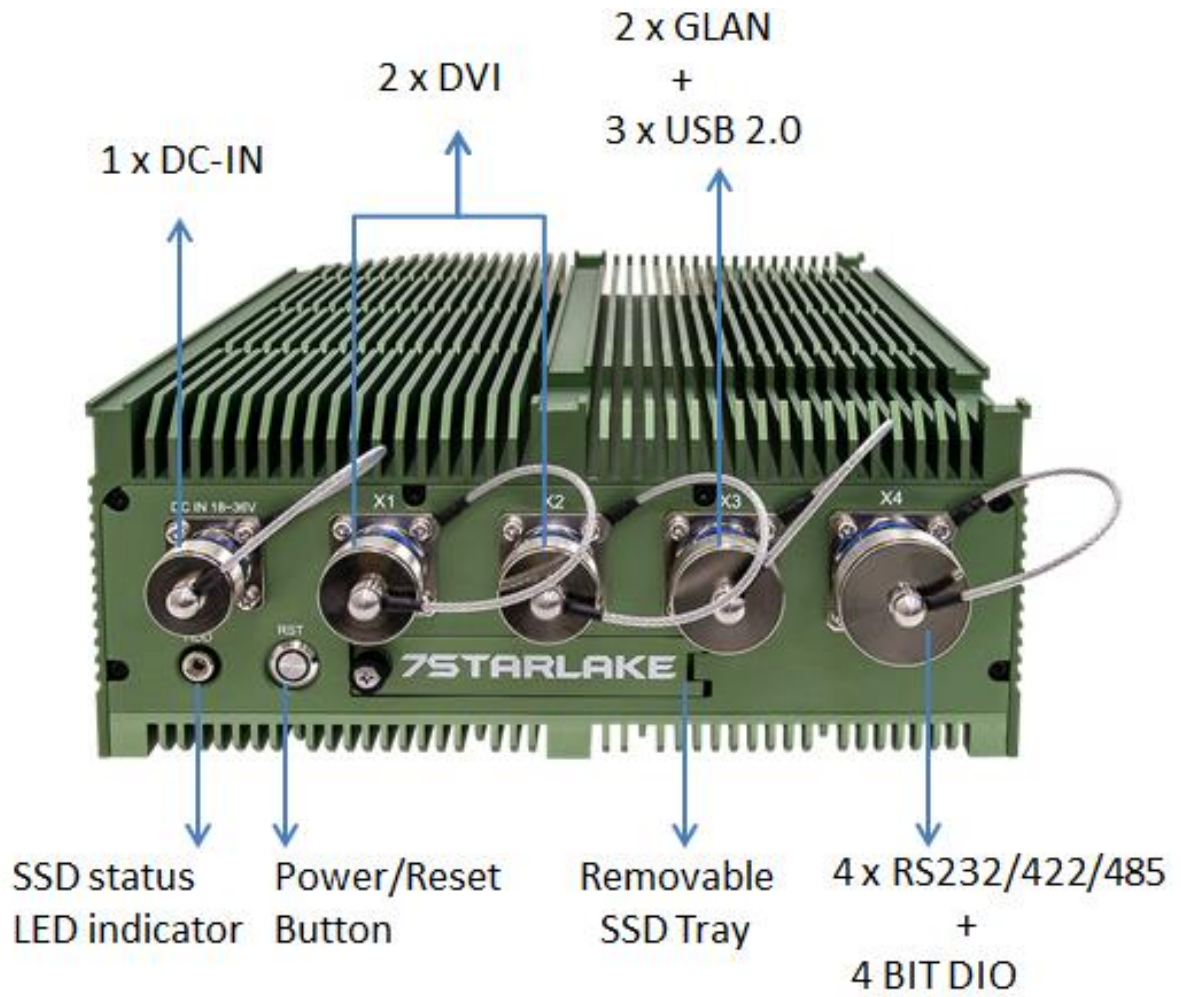
Steady State	20V-33V
Surge Low	18V/500ms
Surge High	100V/500ms

Block Diagram





## Appearance



## Ordering Information

Ordering information					
<b>Model no.</b>	AV600X-CHA10	AV600X-CHA10P	AV600X-CHA20	AV600X-CHA20P	AV600X-CHA20R32
<b>CPU</b>	Xeon E-2276ML				
<b>GPU</b>	Nvidia Quadro MXM A1000		Nvidia Quadro MXM A2000		
<b>RAM</b>	DDR4 , up to 128GB				
<b>AES key</b>	Optional				
<b>Swap CMOS</b>	Optional				
<b>Storage 1</b>	Optional to M.2 NVMe , up to 4TB				
<b>Storage 2</b>	Swap SATA SSD , up to 2TB				STAT III 8TB
<b>Storage 3</b>	NA				STAT III 8TB
<b>Storage 4</b>	NA				STAT III 8TB
<b>Storage 5</b>	NA				STAT III 8TB
<b>I/O</b>					
<b>DC-IN</b>	DC-IN , with DTL38999 connector				
<b>X1</b>	1 x DVI , with DTL38999 connector				
<b>X2</b>	1 x DVI , with DTL38999 connector				
<b>X3</b>	2 x GLAN + 3 x USB2.0 , with DTL38999 connector				
<b>X4</b>	4 x RS232/422/485 + 4 BIT DIO , with DTL38999 connector				
	1 x SSD/HDD LED indicator				
	1 x IP65 power button , with LED indicator				
<b>Power</b>	18V~36Vdc, MIL-STD-461/ 1275	10V~40Vdc, MIL-STD-461/ 1275/704	18V~36Vdc, MIL-STD-461/ 1275	10V~40Vdc, MIL-STD-461/ 1275/704	18V~36Vdc, MIL-STD-461/ 1275