



LAND



SEA



AIR

AV710-VM-E

12 CH VIDEO MANAGEMENT FPGA-GPU



- 12 Video Input Includes 4x 3G-SD and 8x Composite (PAL)
- Support up to 4 video output channels.
- Support Output channel a Bird's-Eye-View
- 360 Stitching View from 4 Digital Video Channel
- Picture-In-Picture (PIP) up to 2 video on top screen
- IP65 Sealed with External Cooling Blade
- MIL-STD-810G Thermal, Shock, Vibration, Humidity
- Power: 18V~36V EMI Filter DC Input

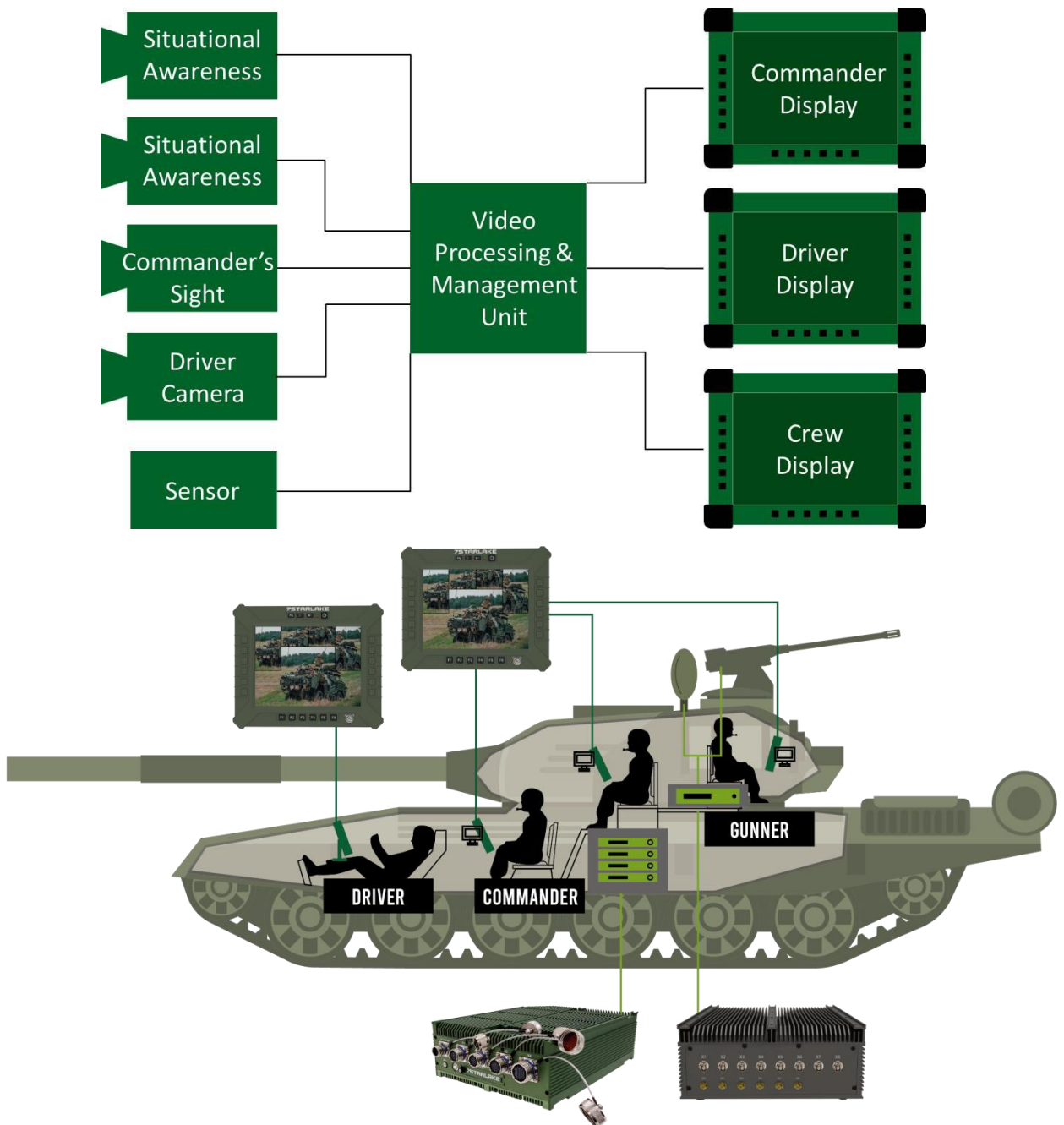


INDEX

- 1. INTRODUCTION**
- 2. MAIN FEATURE 1**
- 3. MAIN FEATURE 2**
- 4. SYSTEM SPEC.**
- 5. System Diagram**
- 6. SYSTEM I/O**
- 7. Ordering Information**

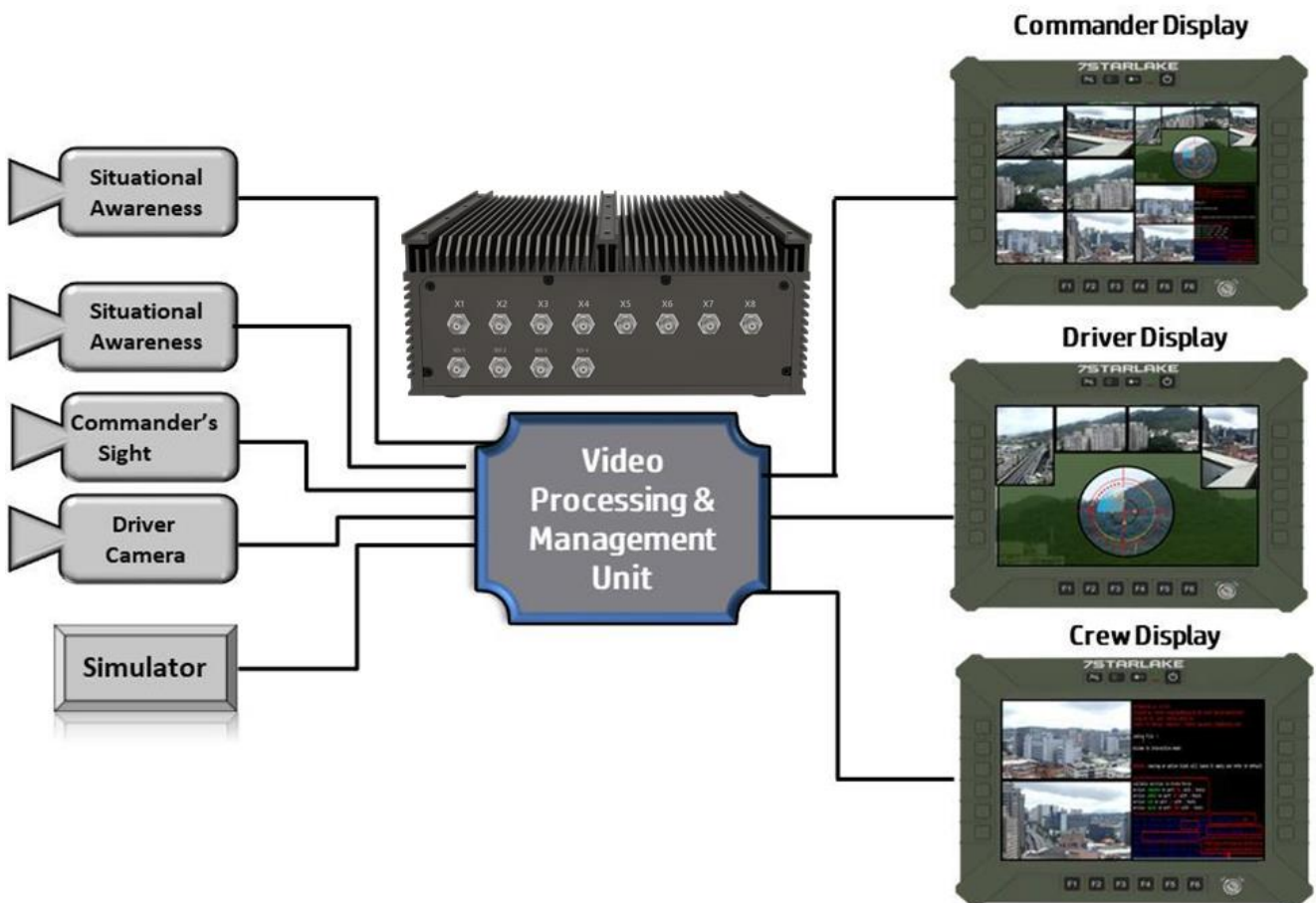
1. INTRODUCTION

Artificial intelligence is quickly becoming one of the most crucial elements of business success. Today, deploying powerful computing platforms to accelerate and scale AI-based products and services while adapting them to harsh environments has become vital in many successful military applications. 7Starlake is innovating to address the emerging high-throughput inference market driven by IoT edge devices which are generating huge amounts of data. The combination of FPGA and NVIDIA QUADRO A2000 (MXM) is a powerful solution for demanding and latency-sensitive workloads.



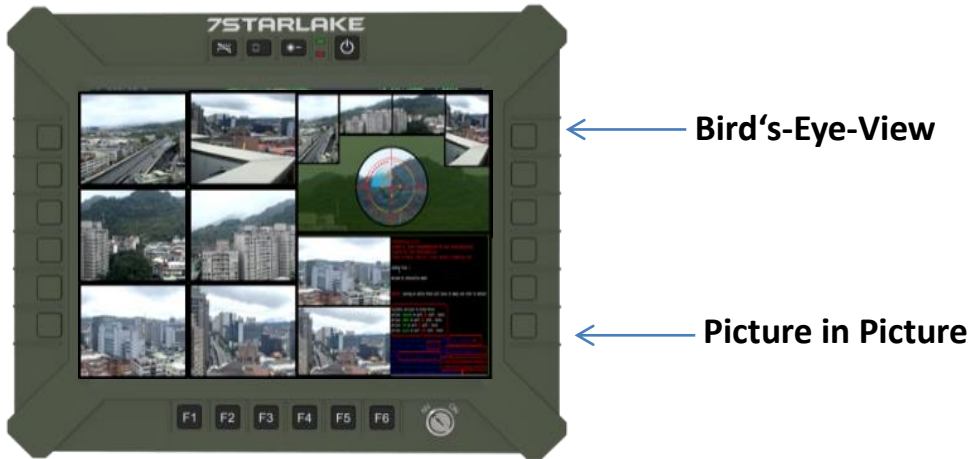
2. MAIN FEATURE 1

- Connection to 12 Video channels, including 4 HD-SDI video channels and 8 composite (PAL) Channels.
- Generate from 2 up to 4 video output channels.
- Keep Low Latency between input video channels and generated output video channels.
- Generated Output channel a Bird's-Eye-View created from 4 SDI input/output channels.
- Each output channel can be selected into one main channel
- Up to 2 videos inserted on top screen - Picture-In-Picture (PIP).

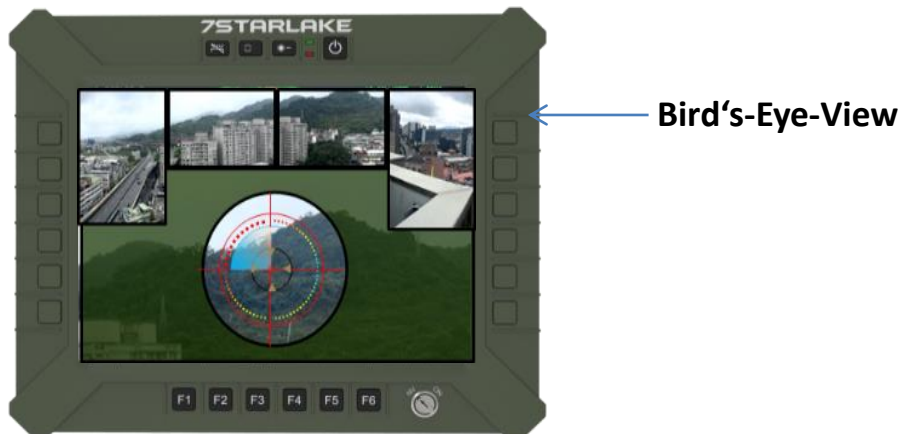


3. MAIN FEATURE 2

Commander Display



Driver Display



Crew Display



4. SYSTEM SPEC

SYSTEM

CPU	Intel® Xeon® W-11865MRE, 8 Cores, 24M Cache, 2.6GHz (4.7GHz), 45W (RM590E) Intel® Xeon® W-11865MLE, 8 Cores, 24M Cache, 1.5GHz (4.5GHz), 25W (RM590E)
Memory type	96GB SO-DIMM DDR4-3200 MHz, in 3 DIMM Slot, 4th DIMM by request. Dual Channel DDR4 3200MHz ECC support
Chipset	Intel® RM590E/QM580E/HM570E Chipset
GPU	NVidia® RTX A2000,4G/8G 2560 CUDA Cores ,PCIe Gen3.0 x16
Ethernet Controller	Intel® I210 & I219LM GbE LAN(10/100/1000 Mbps supported)
LAN	2 x 1GBase-T(option)
Storage	2 x 2.5" SATA SSD hot-swap
Power Type	18V~36V EMI DC Input
Dimension	250 x350 x 100mm (W x D x H)

FRONT I/O

COM	2 x RS232/485
USB3.0	1
USB2.0	2
LAN	2 x GbE(option)
Power	1 x DC-IN 18V~36V
LED	1 x SSD LED
PW Button	Power Switch with LED indicator
SSD	2 x SSD swap tray

REAR I/O

PAL Input	8
SDI Input	2
SDI Output	2

ENVIRONMENTAL

MIL-STD-810 Test	Method 500.5, Procedures I and II (Altitude, Operation): 12,192M, (40,000 ft) for the initial cabin altitude (18.8Kpa or 2.73 Psia)
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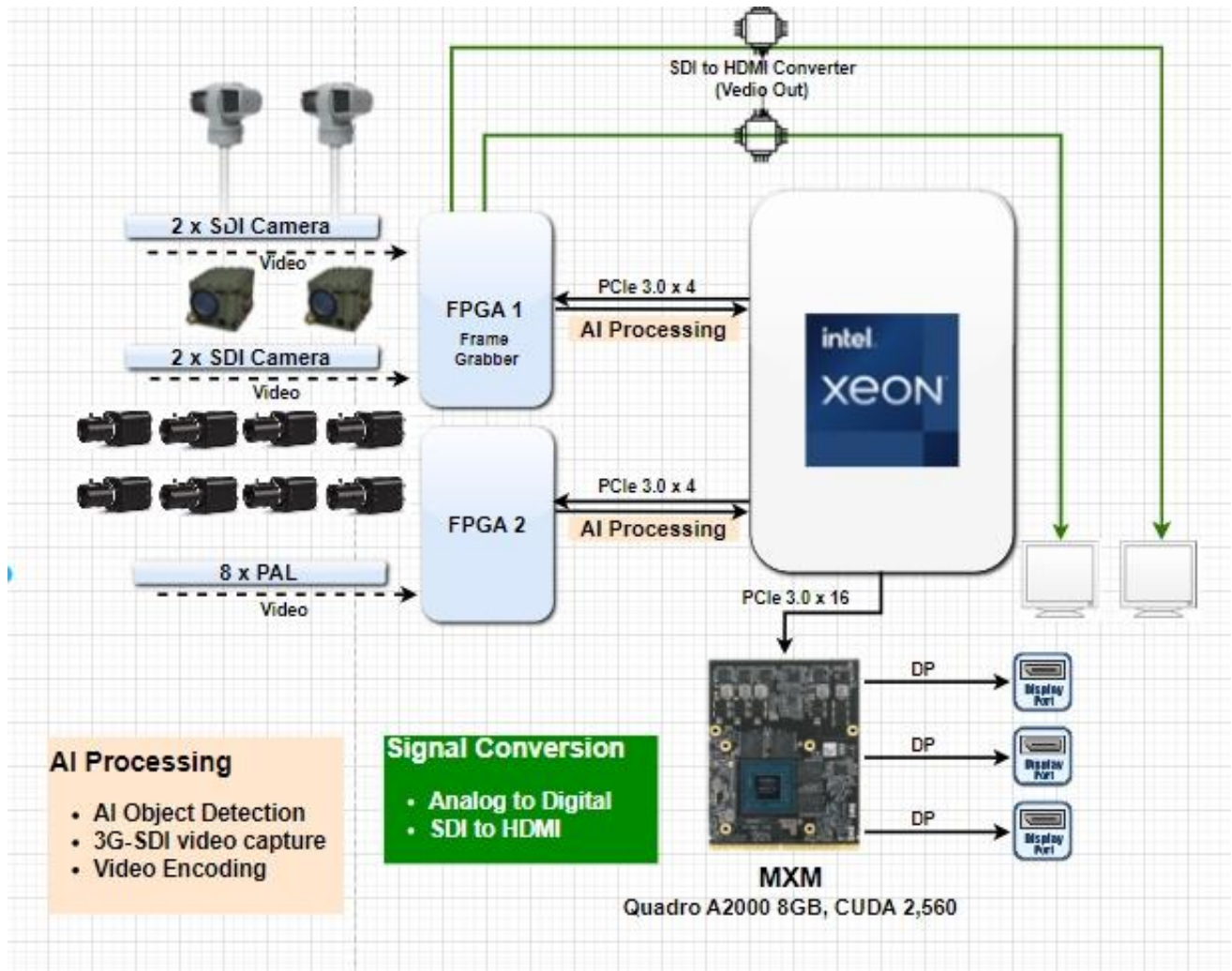
	Method 500.5, Procedures III and IV (Altitude, Non-Operation): 15,240, (50,000 ft) for the initial cabin altitude (14.9Kpa or 2.16 Psia) Method 501.5, Procedure I (Storage/High Temperature) Method 501.5, Procedure II (Operation/High Temperature) Method 502.5, Procedure I (Storage/Low Temperature) Method 502.5, Procedure II (Operation/Low Temperature) Method 503.5, Procedure I (Temperature shock) Method 507.5, Procedure II (Temperature & Humidity) Method 509.7 Salt Spray (50±5)g/L Method 514.6, Vibration Category 24/Non-Operating (Category 20 & 24,Vibration) Method 514.6, Vibration Category 20/Operating (Category 20 & 24,Vibration) Method 516.6, Shock-Procedure V Non-Operating (Mechanical Shock) Method 516.6, Shock-Procedure I Operating (Mechanical Shock)
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Reliability	Conduction Cooling Designed & Manufactured using ISO 9001 Certified Quality Program.
Operating Temp.	0 to +50°C
Storage Temp.	-40 to +85°C
Relative Humidity	5% to 95%, non-condensing.

OPERATING SYSTEM

Operating System	Windows 10 64Bit, Linux by option
RoHS	RoHS compliant

5. System Diagram

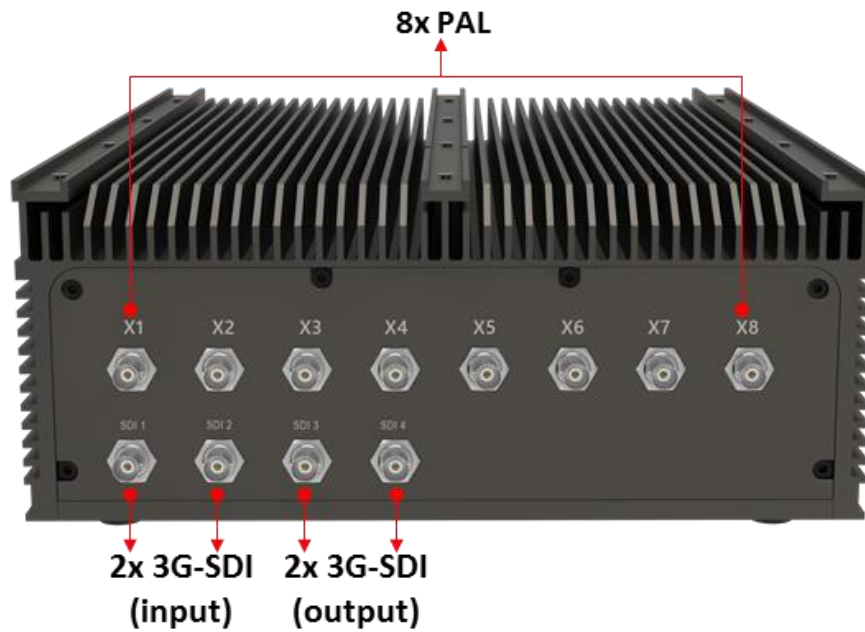


6. System I/O

Front I/O



Rear I/O



7. Ordering Information

Model	AV710-VM-E8MRE	AV710-VM-E8MLE
CPU	Xeon W-11865MRE (8C)	XEON W-11865MLE (8C)
Memory	96GB DDR4-3200 MHz	96GB DDR4-3200MHz
GPU	Quadro A2000 4GB (2560 CUDA)	Quadro A2000 8GB (2560 CUDA)
Video Input	8x PAL + 2x 3G-SDI	8x PAL + 2x 3G-SDI
Video Output	2x 3G-SDI	2x 3G-SDI
Storage	2 x SATA III SATA SSD	2 x SATA III SATA SSD
I/O	2x RS232/485 2x USB 2.0 2x GbE (Option) 1x USB 3.0 1x DC 1x Power Button 1x HDD/SSD LED	2x RS232/485 2x USB 2.0 2x GbE (Option) 1x USB 3.0 1x DC 1x Power Button 1x HDD/SSD LED
Power	18V~36V EMI DC-DC	
Dimension	250 x 350 x 100mm (W x D x H)	