



# AV710-VM-E

## 12CH VideoManagement FPGA-GPU BasedSystem



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



LAND



SEA



AIR



# INDEX

**1. INTRODUCTION**

**2. MAIN FEATURE**

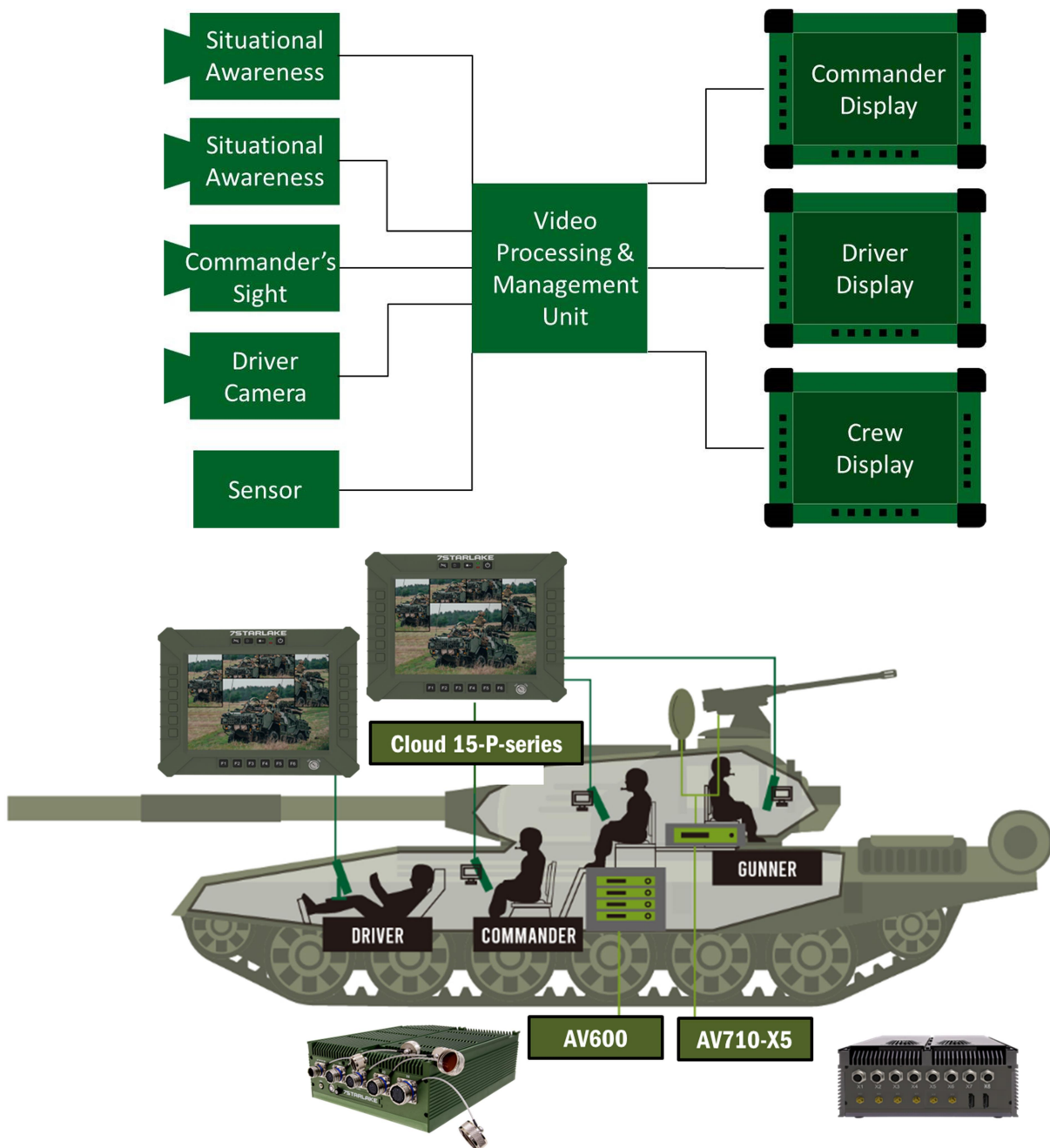
**3. System Diagram**

**4. SYSTEM SPEC.**

**5. SYSTEM I/O**

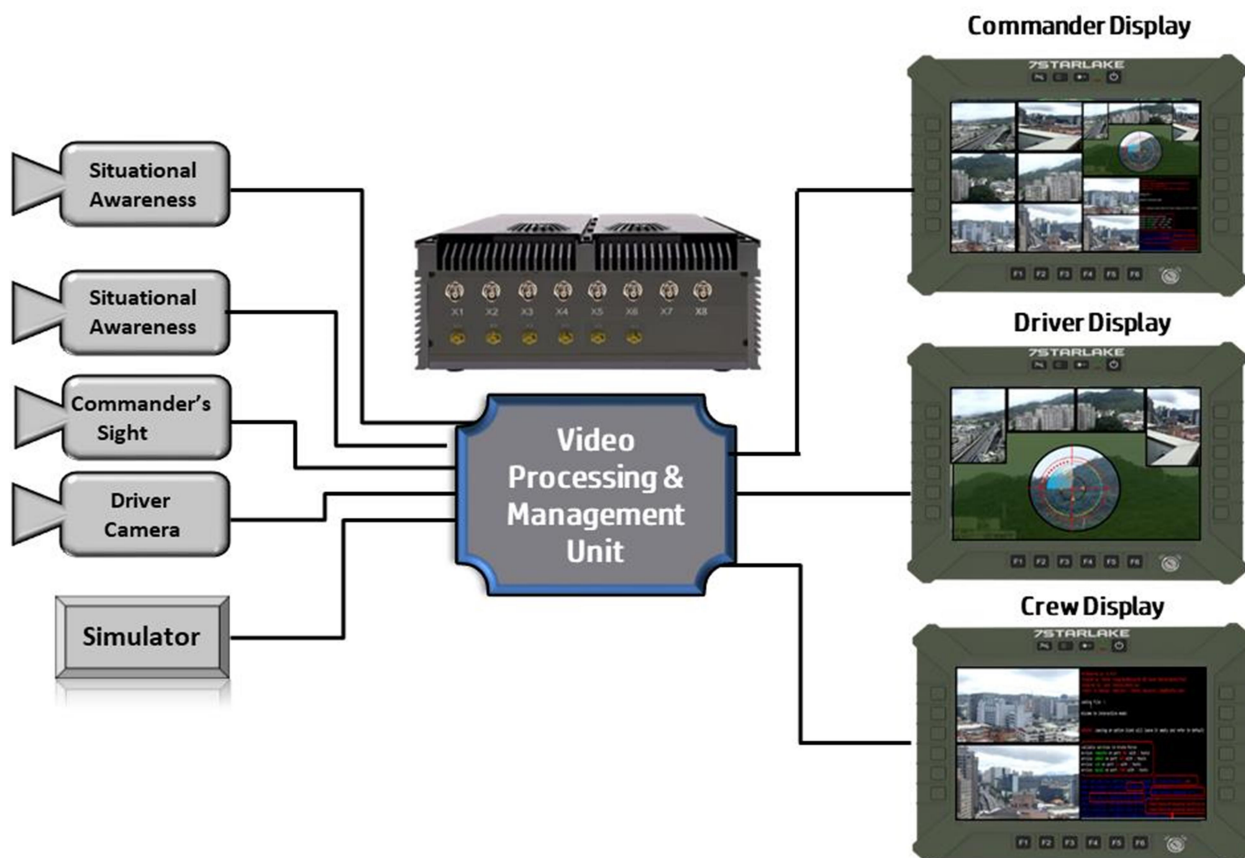
# 1. INTRODUCTION

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 Jetson AGX is a powerful solution for demanding and latency-sensitive workloads.



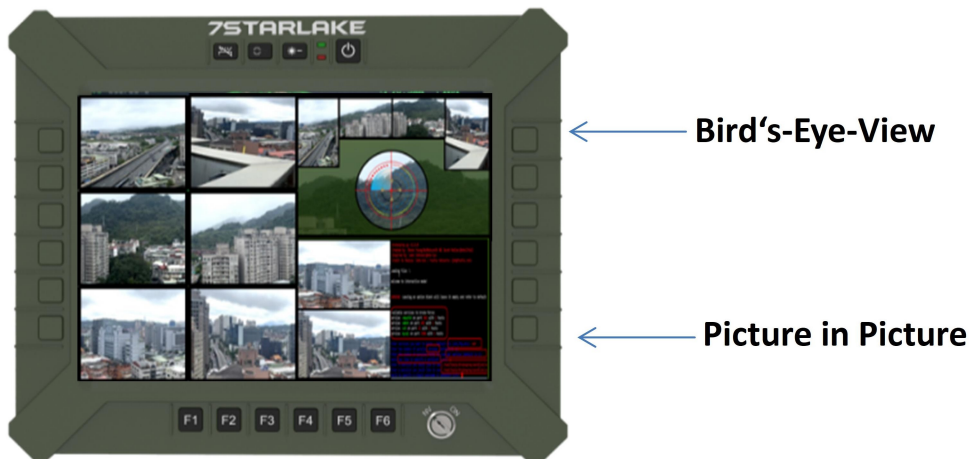
## 2. MAIN FEATURE

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

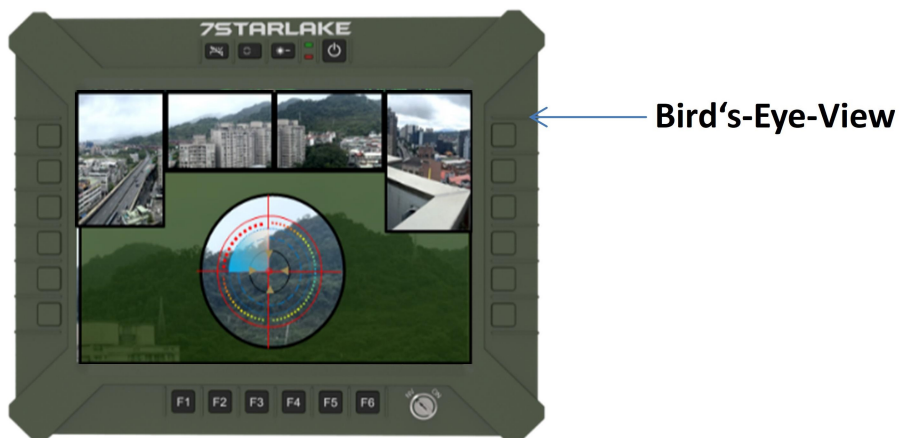


# 2-1 MAIN FEATURE

## Commander Display



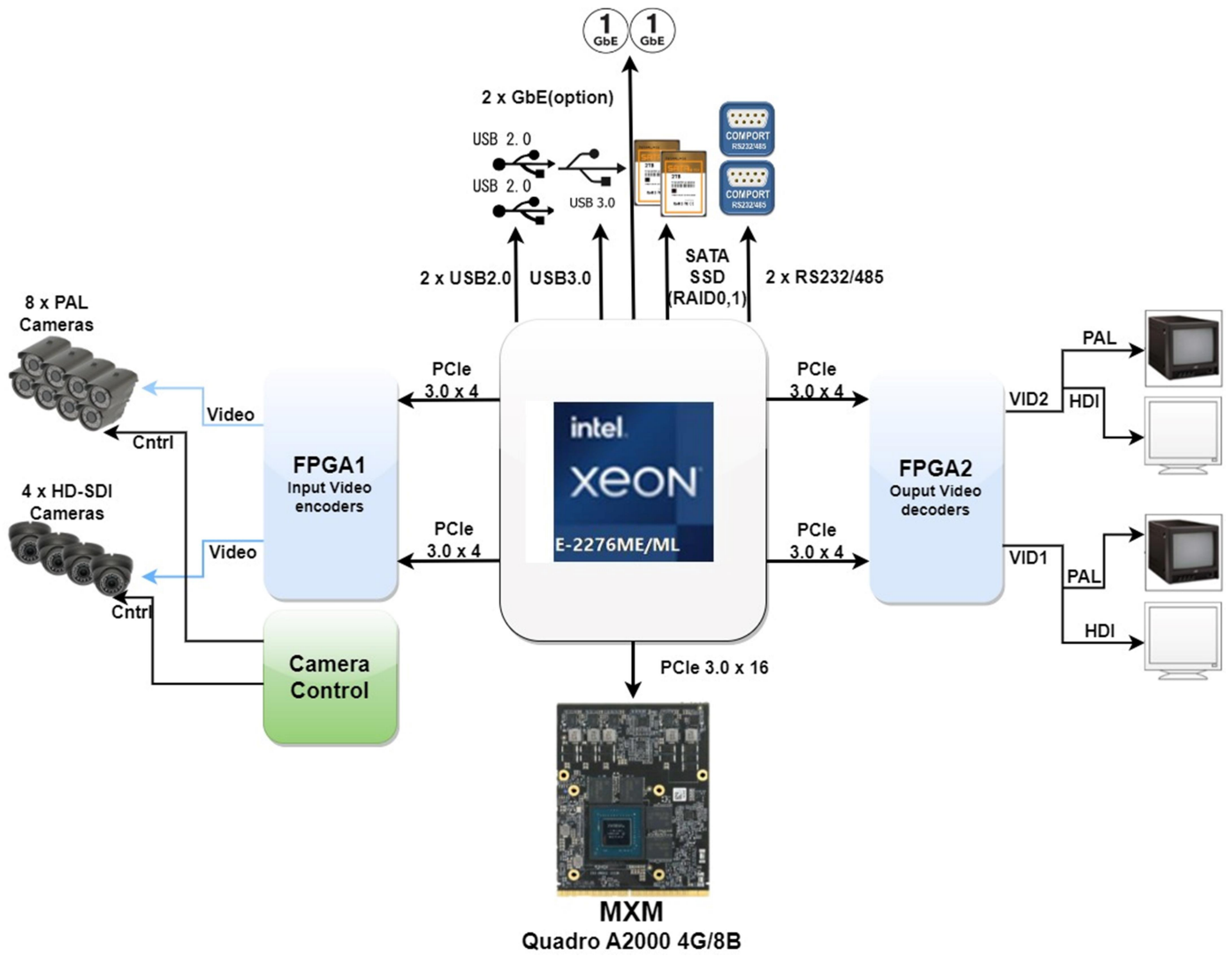
## Driver Display



## Crew Display



# 3 System Diagram



# 3.SYSTEM SPEC

## System

CPU	Intel® Xeon® E-2276ME, 6 core, 12 thread, 12MB Cache, 2.8GHz Max Turbo up to 4.5GHz., up to 45W TDP Intel® Xeon® E-2276ML, 6 core, 12 thread, 12MB Cache, 2.0GHz Max Turbo up to 4.2GHz., up to 25W TDP
Memory type	128GB SO-DIMM DDR4-2400 MHz, in 4 DIMM Slot
Chipset	CM246
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 2TB 2.5" SSD hot-swap, with AES function
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 9~36V
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	4
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) Method 500.5, Procedures III and IV (Altitude, Non-Operation):
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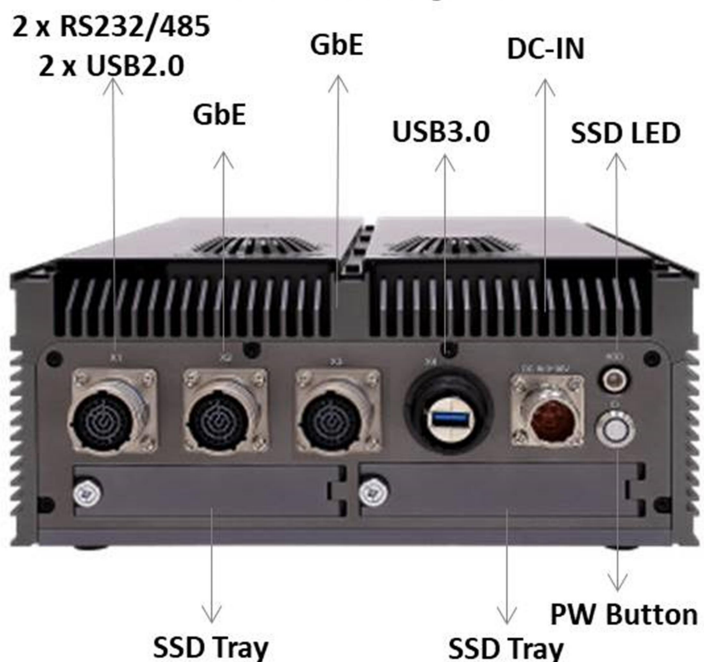
15,240, (50,000 ft) for the initial cabin altitude (14.9Kpa or 2.16 Psia)  
 Method 501.5, Procedure I (Storage/High Temperature)  
 Method 501.5, Procedure II (Operation/High Temperature)  
 Method 502.5, Procedure I (Storage/Low Temperature)  
 Method 502.5, Procedure II (Operation/Low Temperature)  
 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)

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.
<b>Operating System</b>	
Operating System	Windows 10 64Bit, Linux by option
RoHS	RoHS compliant

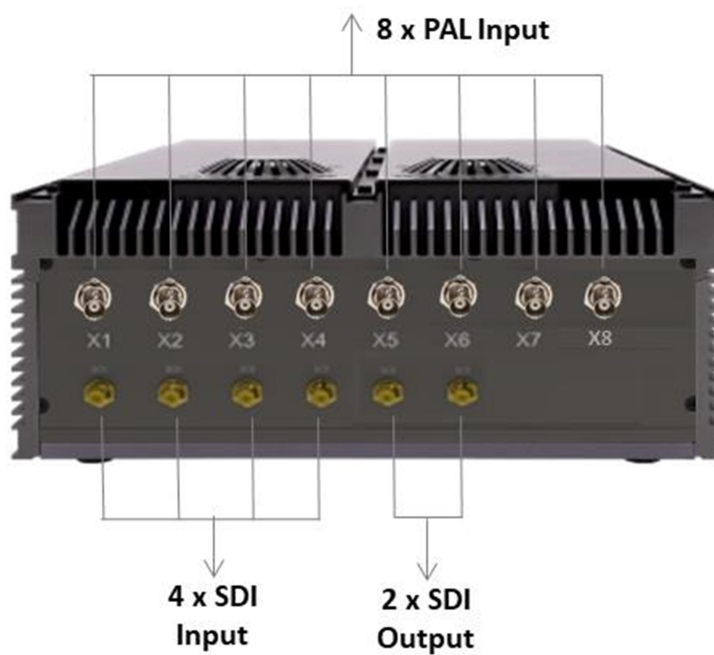


# 4. System I/O

## Front I/O



## Rear I/O



## 6. Ordering Information

Model	AV710-VM-E6ME	AV710-VM-E6ML
<b>CPU</b>	XEONE-2276ML (6C)	XEONE-2276ME (6C)
<b>Memory</b>	64GB DDR4-2400 MHz	128GB DDR4-2400 MHz
<b>GPU</b>	Quadro A2000 4GB (2560 CUDA)	Quadro A2000 8GB (2560 CUDA)
<b>Video Input</b>	8 PAL + 4 HD-SDI	8 PAL + 4 HD-SDI
<b>Video Output</b>	2 x SDI	2 x SDI
<b>Storage</b>	2 x SATA III SATASSD	2 x SATA III SATASSD
<b>I/O</b>	2 x RS232/485 2 x USB 2.0 <b>2 x GbE(Optional)</b> 1 x USB 3.0 1x DC	2 x RS232/485 2 x USB 2.0 <b>2 x GbE(Optional)</b> 1 x USB 3.0 1x DC
<b>Power</b>	18V~36V EMI DC-DC	
<b>Dimension</b>	250 x350 x 100mm (W x D x H)	

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