



LAND



SEA



AIR



F1-201

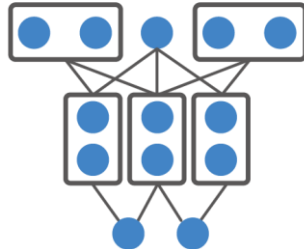
ATR RUGGED MXM GPU SERVER WITH
INTEL XEON 2276ME, NVIDIA QUADRO
RTX5000 GPU



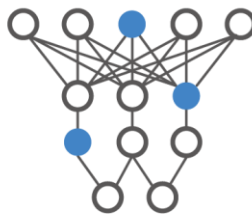
- Intel 9th Gen. XEON 2276ME (6 cores, 4.5GHz)
- High Memory Capacity DDR4- 128GB
- NVIDIA MXM QUADRO RTX5000
- MIL-STD-810 Anti-Vibration, Shock
- IP65 Rating with M12 Connectors
- Extreme Temperature -40~+60 degree
- 18V~36V DC-DC 300W
- MIL-STD-810 500.6 Low Pressure Altitude

1. Features

1-1 CPU GPU Platform – AI Training / Inference



Artificial Intelligence (AI) is accelerating the tactical capability of the military more than ever before. Many new combat and weapons systems utilize embedded AI, making them more efficient and less dependent on human operation.



Furthermore, SWaP (Reduced Size, Weight, and Power) requirements are also impacting artificial intelligence design. Now and in the future, many military systems will be susceptible to SWaP-constraints, which challenge the assumptions of today's AI solutions.

7Starlake excels in designing unparalleled military computers for harsh environments. From Polar Regions to the desert, from jungle environments to high altitude, 7Starlake's rugged computers have the capability to withstand the operational environment. Comply with MIL-STD exacting levels of conformity, 7Starlake products can operate at full capacity in extreme conditions. 7Starlake believes in meeting 100% of our customers' expectations for the design, quality of build, and customer service levels in the supply of rugged and custom-built computer systems.

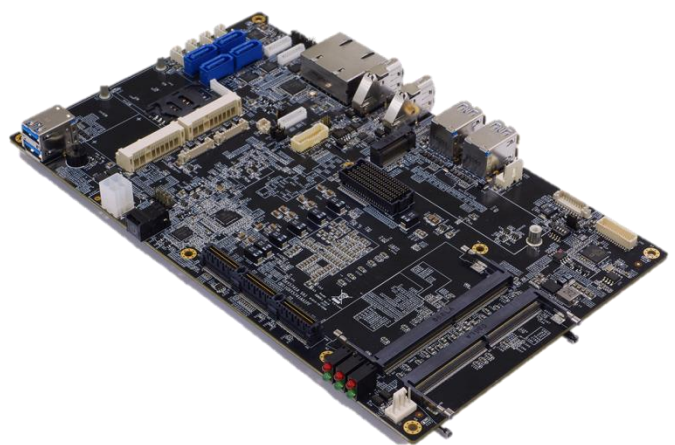
1-2 MIL-STD-810 & Full IP65 protection

F1-20L is designed to meet strict SWaP requirements and to withstand harsh environments, including extreme temperature, shock/vibration, sand/dust, and salt/fog. With ruggedized design and high functionality, the IP65 and MIL-STD-810 resistance F1-20L is the ideal tactical vehicle on the battlefield.



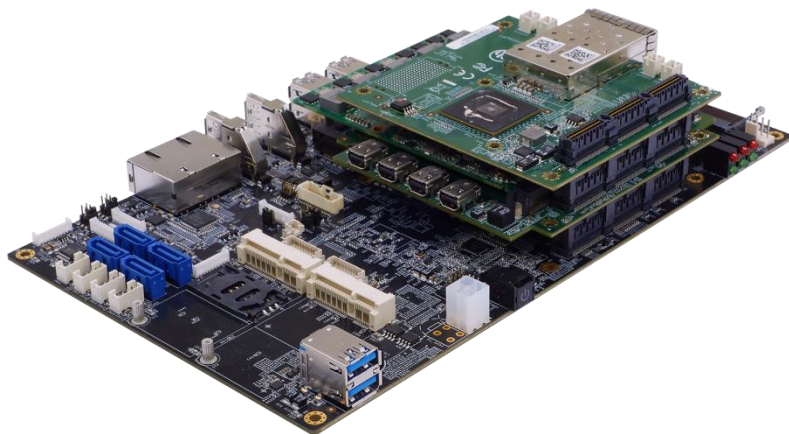
1-3 System main board : EBX SBC-OXY5741A

The EBX SBC OXY5741A provides extraordinary computing performance under extreme environment. It is powered by 9th / 8th Gen Intel® Xeon® / Core™. Featuring Intel's Xeon E-2276ME and ruggedized open-standard EBX architecture, 7Starlake EBX series is built tentatively and triumphs on environmental testing. It still operates effectively under harsh environments ranging from -40 to 85°C so that it is a perfect solution for defense, transportation, and automation applications. More key functions such as



stackable PCIe/104 expansion ability, flexible I/O, and NVMe Gen 3.0 PCIe4 for fast and large capacity storage, all contribute to this versatile architecture that can meet clients' needs.

Choosing an embedded architecture for computer systems can be a formidable task. This kind of stackable and mezzanine architecture often results in tradeoffs that include off-the-shelf or custom design requirements. PCIe/104 compact, ruggedized, easily expandable traits support a lot of expansion flexibility in



systems. This architecture evolved to address these resulting issues by keeping the common background while eliminating limitations. OXY5741 employs PCIe/104 technology to reduce constraints and create flexibility of expansion. Its M.2 extension offers M-key (M-Key 2280 optional), and PCIe 3.0 x 4 NVMe. Additionally, OXY5741 provides 3.0 ports for data redundancy by supporting RAID 0/1.

1-4 NVIDIA QUADRO MXM RTX5000

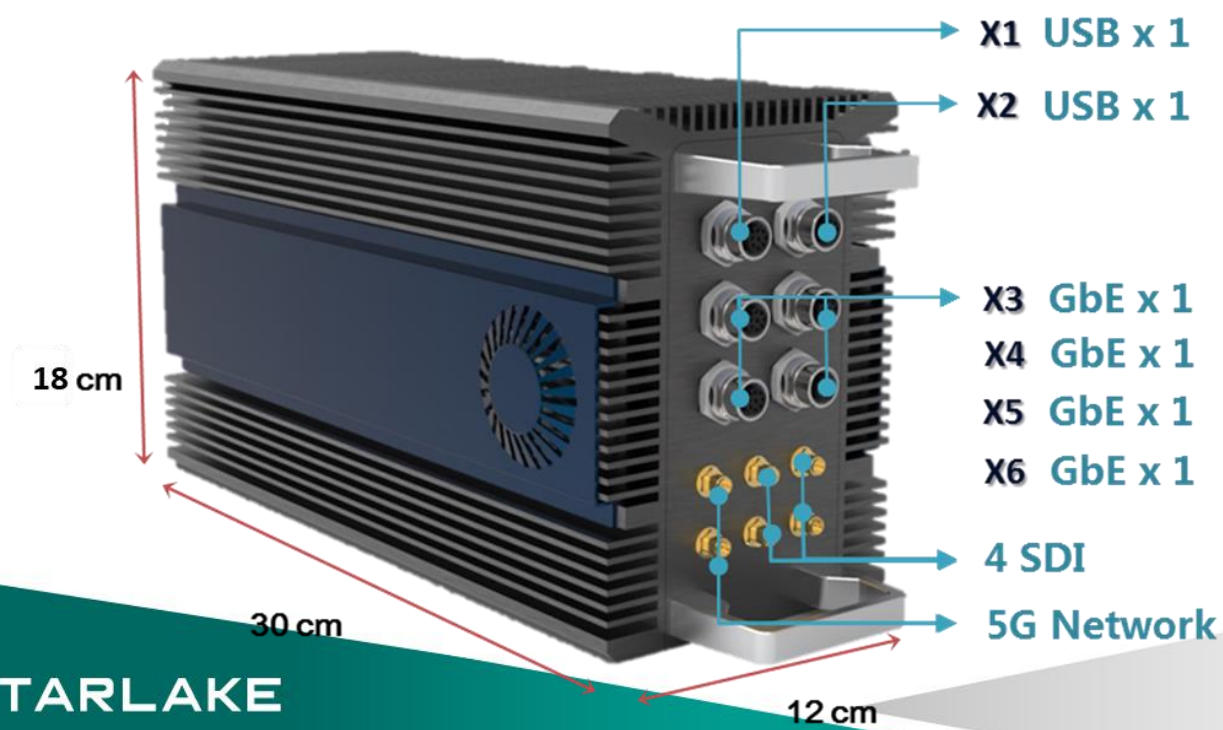
F1-20L supports NVIDIA® QUADRO® RTX 5000™ which is powered by the NVIDIA Turing™ architecture, t's compact, slim and reliable design makes it suitable for mission critical environment.



Shatter the boundaries of what's possible with NVIDIA® Quadro RTX™ 5000. Powered by the NVIDIA Turing™ architecture and the NVIDIA RTX™ platform, it fuses ray tracing, deep learning, and advanced shading to supercharge next-generation workflows. Creative and technical professionals can make more informed decisions faster and tackle demanding design and visualization workloads with ease. Combined with NVIDIA NVLink™ technology, RTX 5000 scales graphics memory and performance to drive the most demanding rendering, AI, and visual computing workloads. And the all-new VirtualLink® provides connectivity to next-generation, high-resolution VR HMDs to let you view your work in the

most compelling virtual environments. Welcome to the future of professional visual computing.

NVIDIA QUADRO MXM RTX5000	
GPU Architecture	NVIDIA Turing
NVIDIA CUDA Cores	3,072
Boost Clock	1.8 GHz
Base Clock	1.6 GHz
Memory Type	16 GB GDDR6
Memory Clock	1750 MHz
TGP	110W



2. Specifications

SYSTEM

CPU	Intel® 9th Gen. XEON 2276ME (6 cores, 4.5GHz, 45W)
Memory type	4 x SO-DIMM DDR4 2666 MHz up to 128GB
GPU	NVIDIA MXM QUADRO RTX5000

STORAGE

Storage 1	1 x NVMe (M.2), up to 2TB
Storage 2	1 x mSATA, up to 1TB

FRONT I/O

USB	2 x USB, Rugged M12 connector
Ethernet	4 x LAN, Rugged M12 connectors
SDI	4x BNC Connector
5G Network	2x BNC connector
DC-IN	1 x DC-IN 18V~36V, Rugged M12 connector

PHYSICAL

Dimension (W x D x H)	120 X 180 X 300 mm
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POWER REQUIREMENT

Power Input	18V~36V DC-DC 300W
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APPLICATIONS & OPERATING SYSTEM

OS	WIN10 ,WINDOWS SERVER2016, UBUNTU 18.04,UBUNTU20.04
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3. Ordering Information

F1-20L Air-Borne ATR Rugged MXM GPU Server with Intel Xeon 2276ME, NVIDIA QUADRO RTX5000 GPU

4. Dimension

