



# F30

3/4 Short ATR



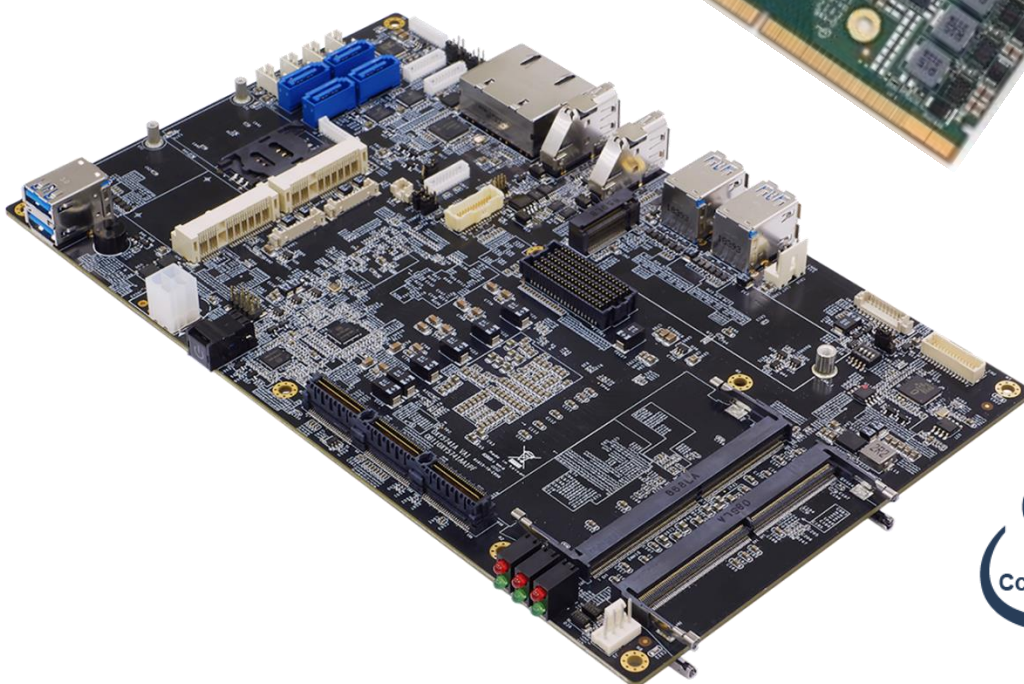
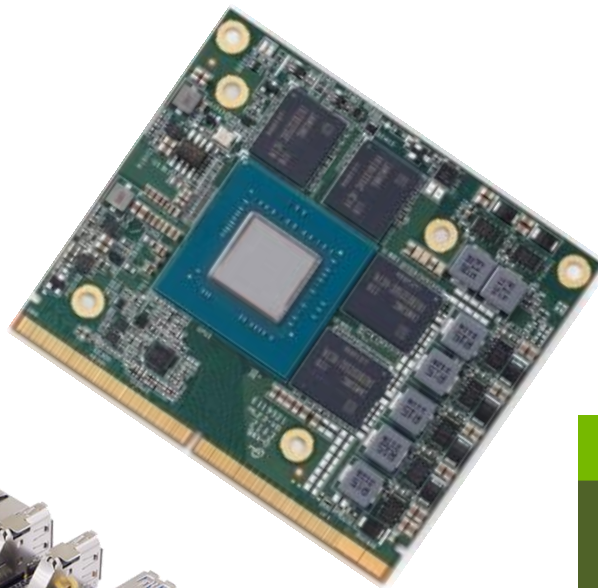
- Intel®Xeon E-2276ML (12M Cache, 2.0 GHz, up to 4.20 GHz, 6-cores, 12 threads)
- NVIDIA®RTX A2000 MXM GPU ; Option : NVIDIA®RTX A1000 MXM GPU
- Modular rugged chassis with stackable PCIe/104 I/O card expansion.
- IP65 sealed chassis with Amphenol DTL-38999 connectors
- Extreme rugged temperature : -40°C to 70°C
- 28V DC MIL-STD-461/1275 Power supply with Voltage transient protections/EMI/EMC conditions
- MIL-STD-810 Thermal Shock, Vibration, Humidity



**ATR (Air Transport Rack)** is a standard that specifies form fit and function of enclosures designed to protect the main internal system. This military enclosure must meet EMI / EMC requirements to prevent noise interference, provide lightning protection and be isolated from small particle contaminants. So, it can be deployed in unmanned aerial vehicles, fighters, and helicopters. To satisfy diverse conditions, ATR chassis are available in different sizes—1/2, 3/4 and Full ATR sizes. Based on 3/4 ATR size, StackRack launches a new Rugged Airborne Mission Computer F30.



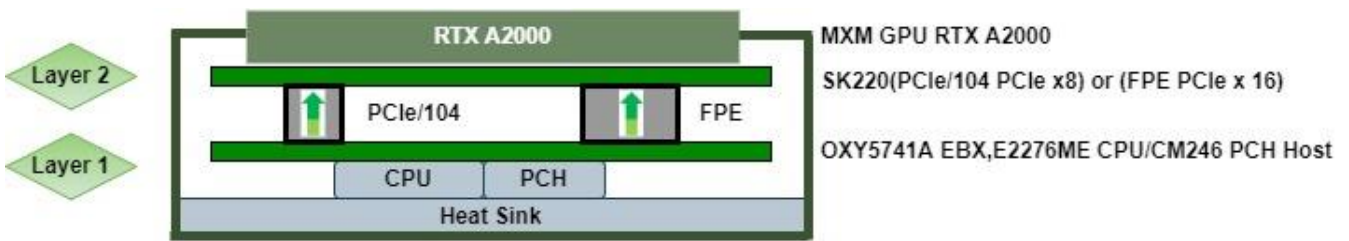
As a modular mission computer, F30 features a build in EBX OXY5741A SBC powered by Intel 9<sup>th</sup> XEON E-2276ML(6 Cores, Max Turbo up to 4.2GHz). Fusing NVIDIA RTX A2000 MXM with 2 x LAN, 4 x USB and 2 x COM for device connects ability and combine Military Standard 18V~36V DC-IN power module), F1-30 is an optimum choice for high performance computing, demanding graphics applications, GPU-accelerated data processing, yet ruggedized enough for harsh environments.





## How to extend dense GPU ?

- PCIe / 104 Type II & FPE  
Powered by Xeon E-2276ML and PCH-CM246, PCIe/104 type II & FPE bring PCIe x 4 or PCIe x 16 bus to GPU and ruggedised, such as SK220 carrier module to extend the RTX A2000



## MIL-STD-1275/704 Power Supply

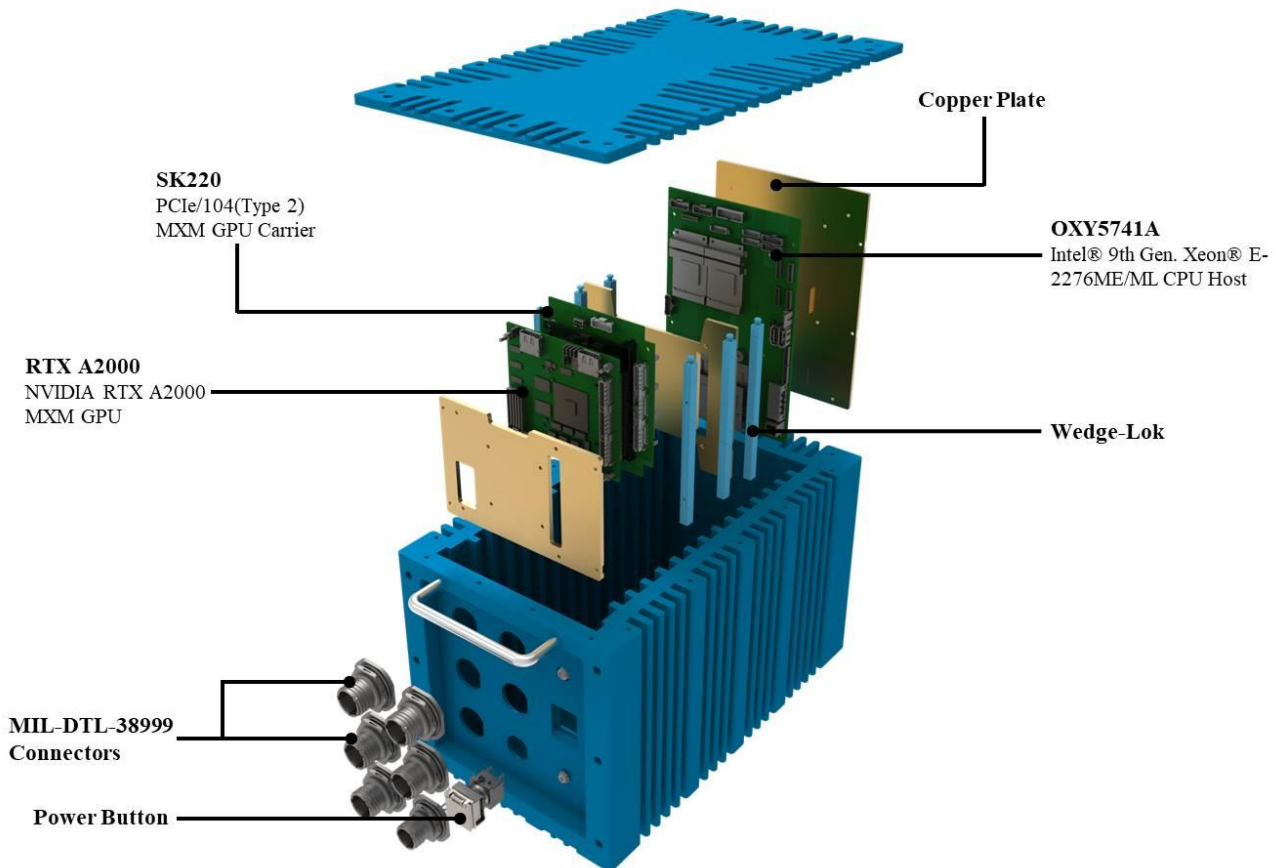
**F30** is designed with MIL-STD-1275/704, protecting against vehicle/aircrafts voltage surges, spikes and transients, and even electromagnetic interference. This characteristic is well suited for the strictest military requirement and delivers optimal performance in harsh conditions.

**SK711**, the power board adopted by F30, supports input range from 18V to 36V. Compliant with MIL-STD 1275/461, SK711 performs as an ideal converter module for severe environment. The Cosel Hi-Rel DC/DC CONVERTER also provides ,Output Over Current Protection (OCP), Output Overvoltage Protection (OVP) and Over Temperature Protection (OTP) to made stability and safety. Module Compliance with MIL-STD-461C/D/E Standards. Furthermore, with parallel design, two SK711 combining can generate power of 300W, supporting prominent system performance.

<b>MIL-STD-461E</b>	<ul style="list-style-type: none"> <li>● CE102 basic,curve,10kHz-30MHz</li> <li>● RE102-4,(1.5MHz)-30MHz-5GHz</li> <li>● RS103,80MHz-GHz</li> </ul>
<b>EN55011 EN55032 CISPR32</b>	Class A <ul style="list-style-type: none"> <li>● Contact Discharge Level 4(8Kv)</li> <li>● Air Discharge Level 4(15Kv)</li> </ul>
<b>IEC61000-4-2</b>	<ul style="list-style-type: none"> <li>● Contact Discharge Level 4(8Kv)</li> <li>● Air Discharge Level 4(15Kv)</li> </ul>
<b>IEC61000-4-3</b>	<ul style="list-style-type: none"> <li>● 12V/m: (80 MHz~1.0 GHz)</li> <li>● 36V/m: (1.4~2.0GHz)</li> <li>● 1.2V/m: (2.0~2.7GHz)</li> <li>● 80% Amplitude modulated</li> </ul>
<b>IEC61000-4-4</b>	<ul style="list-style-type: none"> <li>● Level 4(4 KV)</li> <li>● Repetition Rate:5KHz and 100 KHz</li> </ul>
<b>IEC61000-4-5</b>	<ul style="list-style-type: none"> <li>● Line to Line : Level 4(2KV)</li> <li>● Line to Earth : Level 4(4KV)</li> </ul>

## Thermal Solution – Conductive Cooling

A solid material that can effectively conduct the heat is used to move the heat to the system enclosure and dissipated to the external surroundings. The machined copper cooling plates matching the component layout are placed between each layer ; heat is carried away to the edges where a Wedge-Lock mechanism secures inside the chassis, coming up with a thermal interface.



# Specifications

## System

CPU	Intel® Xeon E-2276ML (12M Cache, 2.0 GHz, up to 4.20 GHz, 6-cores, 12 threads)
Memory type	4 x DDR4 SO-DIMM 2666MHz up to 128GB
GPU	NVIDIA Quadro RTX A2000, MXM Type(8GB-GDDR6, CUDA 2,560) Option : NVIDIA Quadro RTX A1000, MXM Type(4GB-GDDR6, CUDA 2,048)

## Storage

Storage(1)	1 x M.2 (M-key, type:2280, SATA/PCIe 3.0x4 NVMe)
Storage(2)	Support up to 4x SATAIII (RAID 0,1,5) SSD backup storage

## I/O

X1	2 x DVI with D38999
X2	2 x COM(RS232/422/485) with D38999
X3	1 x DIO(4in/4out) with D38999
X4	2 x LAN with D38999
X5	2 x USB3.0 with D38999
Power	1 x DC-IN with D38999
Power Button	1 x Waterproof Button with Backlight

## Mechanical

Housing	Aluminum
Weight	16 Kg (35.24 lb)
Ingress Protection	IP65
Dimension (W x H x D)	190.5(W) x 320.5(L2) x 269.88(H) mm

## Power Requirement

Input Voltage	DC-IN 18V~36V, 300W Military Standard Power Module
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## Environment

Operation Temp.	-40°C to +70°C
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Storage Temp.	-40°C to +85°C
Relative Humidity	5% to 95%, non-condensing
Ingress Protection	Designed for compliance with IP65, MIL-STD-810

### **Test Standard**

EMI/EMC	Designed to meet MIL-STD-461
Temperture	Designed to meet MIL-STD-810
Vibration & Shock	Designed to meet MIL-STD-810

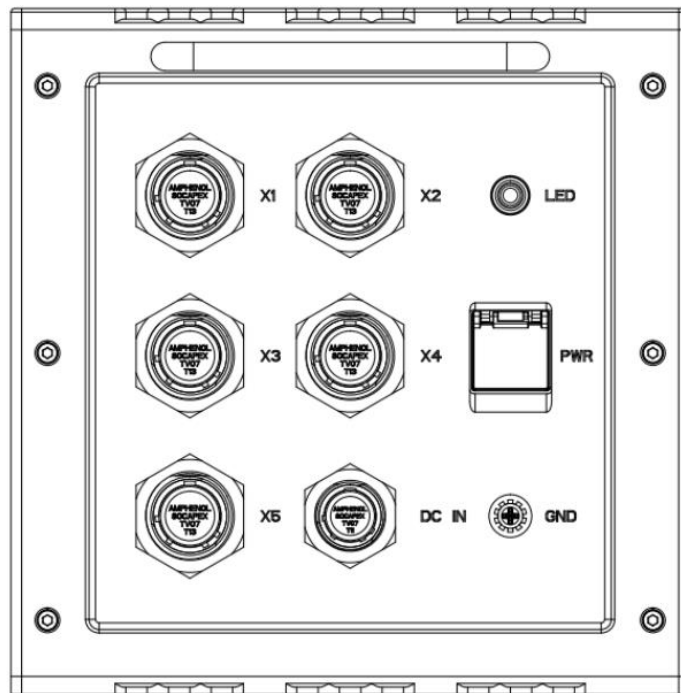
### **Stackable Module**

SK220	Graphic module with NVIDIA RTX A2000 GPU supports four DP output
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## Dimension



## APPERANCE



## Ordering Information

Model	F30-A10	F30-A20
CPU	Intel®Xeon E-2276ML(25W)	
RAM	4 x DDR4 2666MHz up to 128GB	
GPU	RTX A1000 (35W)	RTX A2000 (35W)
DVI	2	
COM(RS232/422/485)	2	
DIO(4in/4out)	1	
LAN	2	
USB3.0	2	
Power	DC-IN 18V~36V , 300W	
Operation Temp	-40 to +70°C	
Option	Frame Grabber : 4xCH HD-SDI	
	Dual 10GbE (Intel X710) Ethernet Ports	
	MIL-1553 , ARINC 429	