



LAND



SEA



AIR



F1-30M

**RUGGED MILITARY COTS COMPUTER
SMALL FORM FACTOR (SFF) WITH
PCIe/104 ARCHITECTURE**



POWER AUTOMATION COMPUTER

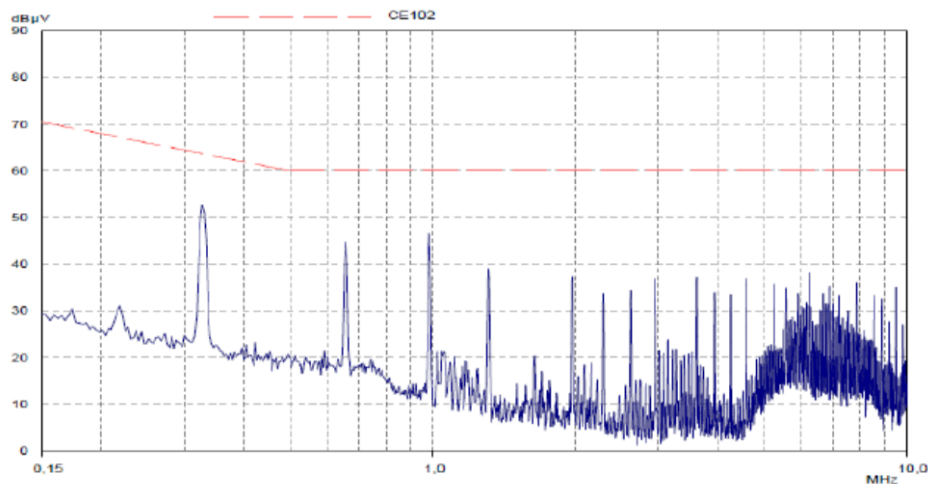
- Intel® Core™ i7-5650U Processor (3.1GHz, 2 cores, 4 threads)
- Up To 16GB DDR3L SDRAM
- 5 x USB, 4 x COM, 2 x LAN, DIO
- Modular rugged chassis with stackable PCIe/104 I/O card expansion
- M12 connector

- **About MIL-STD-1275/704/461 Power supply with Voltage transient protections**

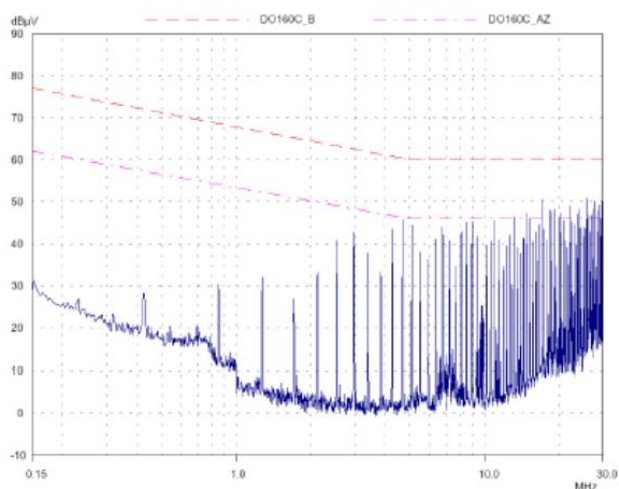
To enhance reliability, F1-30 is designed for rugged extremes. durable metal casing with an isolated MIL-STD-1275, MIL-STD 704 and DO-160 power supply in an IP50 (dustproof) ultra durable metal /aluminum chassis that protects against vehicle/aircraft voltage surges, spikes and transients is well suited for the strictest military requirement and deliver optimal performance in harsh conditions. The GAIA Hi-Rel DC/DC CONVERTER it also provides Undervoltage Lockout (UVLO), Output Over Current Protection (OCP), Output Overvoltage Protection (OVP) and Over Temperature Protection (OTP) to made stability and safty.



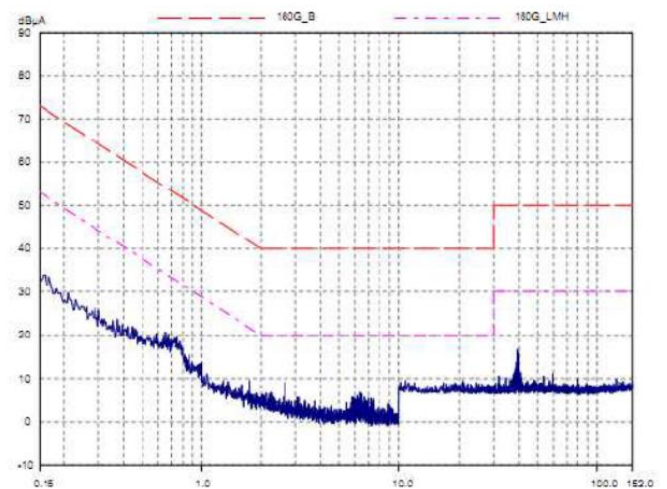
Module Compliance with MIL-STD-461C/D/E Standards



MIL-STD-461E : MGDS-15x-H-J with FGDS-10A-50V



DO-160G : MGDS-15x-H-J with FGDS-10A-50V



Specifications

SYSTEM

High Performance Processor	Intel® Core™ i7-5650U Processor (Frequency 2.2GHz, Turbo Boost Frequency up to 3.1GHz), 2-Core, 42 Thread Support, 4MB SmartCache. Build-in Turbo Boost Technology 2.0, VPro and Hyper-Threading support.
Memory	2 x Rugged Memory XR-DIMM up to DDR3L -1600 16GB
Chipset	SoC, integrated with CPU

DISPLAY

Graphics	NVIDIA GeForce® GT730M
Display Port	Resolution up to 2048 x 1536

STORAGE

mSATA	mSATA Solid State Disk (SSD) - up to 512GB Capacity. Rugged Industrial NAND Flash mSATA Storage w/ Rugged -40/+85C High Capacity, optional Pre-loaded with Linux or Windows OS. 64 / 128 / 256 / 512GB Innodisk 3MG2-P Series MLC SATA III 6Gb/s Flash SSD, Rated for 520 MB/sec Sequential Read ; 350 MB/sec Write Max.
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ETHERNET

Ethernet	2 x Intel Gigabit Ethernet LAN Interfaces (10/100/1000Mbps)
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I/O

VGA	1 x Rugged M12 connector
Ethernet	2 x Rugged M12 connector
USB	5 x Rugged M12 connector (USB 2.0)
Serial Port	4 x Rugged M12 connector (RS-232)
Digital I/O	2 x Rugged M12 connectors (4 DI/4 DO)
DC-IN	1 x Rugged M12 connector
Button	1 x Power Button w/Indicator LED

APPLICATIONS, OPERATING SYSTEM

Applications	Commercial and Military Platforms Requiring Compliance to MIL-STD-810G Embedded Computing, Process Control, Intelligent Automation and manufacturing applications where Harsh Temperature, Shock, Vibration, Altitude, Dust and EMI Conditions. Used in all aspects of
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the military.

Operating System	Windows 10 64Bit Ubuntu14.04, Fedora 20/23, RedHat Linux EL 7.1/7.2
PHYSICAL	
Dimension (W x D x H)	189.5 x 230 x 318 mm
Weight	16 Kg (35.24 lb)
Chassis	Aluminum Alloy, Corrosion Resistant.
Finish	Anodic aluminum oxide (Color Iron gray)
Cooling	Natural Passive Convection/Conduction. No Moving Parts.
Ingress Protection	IP65
ENVIRONMENTAL	
MIL-STD-810G Test	Method 507.5, Procedure II (Temperature & Humidity) Method 516.6 Shock-Procedure V Non-Operating (Mechanical Shock) Method 516.6 Shock-Procedure I Operating (Mechanical Shock) Method 514.6 Vibration Category 24/Non-Operating (Category 20 & 24, Vibration) Method 514.6 Vibration Category 20/Operating (Category 20 & 24, Vibration) 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)
Reliability	No Moving Parts; Passive Cooling. Designed & Manufactured using ISO 9001/2000 Certified Quality Program.
EMC compliance	MIL-STD-461E : CE102 basic curve, 10kHz - 30 MHz RE102-4, (1.5 MHz) -30 MHz - 5 GHz RS103, 1.5 MHz - 5 GHz, 50 V/m equal for all frequencies EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV EN 61000-4-4: Signal and DC-Net: 1 kV EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6kV EN 61000-4-4: Signal and DC-Net: 1 kV EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV EN 61000-4-2: Air discharge: 8 kV, Contact discharge: 6Kv EN 61000-4-4: Signal and DC-Net: 1 kV

EN 61000-4-5: Leads vs. ground potential 1kV, Signal und DC-Net: 0.5 kV
EN 55022, class A EN 61000-4-3: 10V/m CE and FCC

Operating Temperature -40 to 70°C

Storage Temperature 40 to 85°C

Ordering Information

F1-30M

Core i7 Military Airborne Video Frame Grabber Computer -

Small Form Factor (SFF) with PCIe/104 Architecture GPU CPU Open Structure

Dimension

