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SR700-SG

MIL-STD-810G IP65

Rugged Computer

Intel® Core™ Haswell i7 Processor, NVIDIA GTX950M
M12-Type Connectors, Onboard uSSD 64GB,
9V to 36V DC-in, Extended Temp. -40~70°C

Extended Temperature
+70°C
-40°C

- Design for reliability under demanding MIL-STD-810G Thermal, Shock, Vibration, Humidity/EMI/EMC conditions
- Heavy-duty fully IP65 Rugged aluminum chassis with M12 connectors
- 4th Gen Intel® Core™ i7 Processor
- NVIDIA® GeForce GTX950M Graphic
- DDR3L XR-DIMM Up to 8GB
- Onboard uSSD SATAIII up to 64GB
- 1 x VGA, 2 x Gigabit Ethernet, 2 x USB, 2 x COM
- 9V~36V DC-in
- Extended Temperature -40 to 70°C

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Specifications

Specifications	
High Performance Processor	Intel® 4th Gen Core™ i7-4700EQ (Frequency 2.4GHz, Turbo Boost Frequency up to 3.4GHz), Quad-Core, 8 Thread Support, 6MB SmartCache. Build-in HD Graphics 4600 for excellent 3D, Turbo Boost Technology 2.0, VPro and Hyper-Threading support.
Memory	1 x DDR3L XR-DIMM™ up to 8GB
Chipset	Intel® QM87 Chipset providing integrated USB 3.0 and supporting 4th generation Intel® Core™ processor families
Expansion Slot	1 x Full-size mPCIe with SIM card holder 1 x Full-size mPCIe/mSATA
Display	
MXM	NVIDIA® GeForce GTX950M
VGA	Resolution up to 2048x1536
Storage	
uSSD	Onboard uSSD SATAIII up to 64 GB
mSATA	1 x mSATA Solid State Disk (SSD) - up to 512GB Capacity.
Ethernet	
Ethernet	2 x Intel Gigabit Ethernet LAN Interfaces (10/100/1000Mbps)
I/O Interface	
VGA	1 x Rugged M12 connector
USB	1 x Rugged M12 connector (2 x USB 2.0 Ports)
Serial Port	1 x Rugged M12 connector (1 x RS-232, 1 x RS-485)
Ethernet	2 x Rugged M12 connectors
DC-IN	1 x Rugged M12 connector

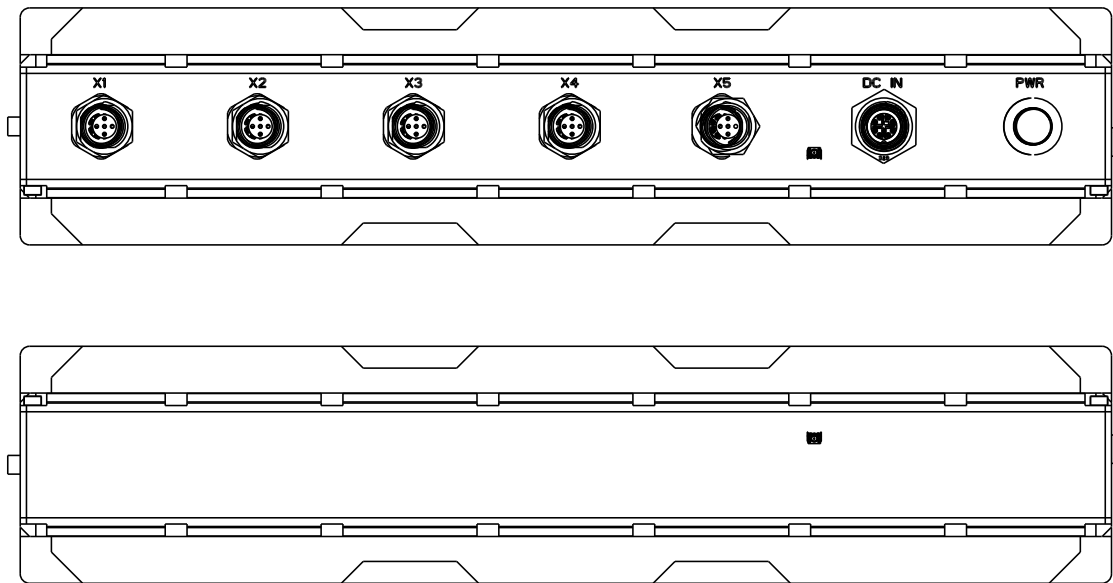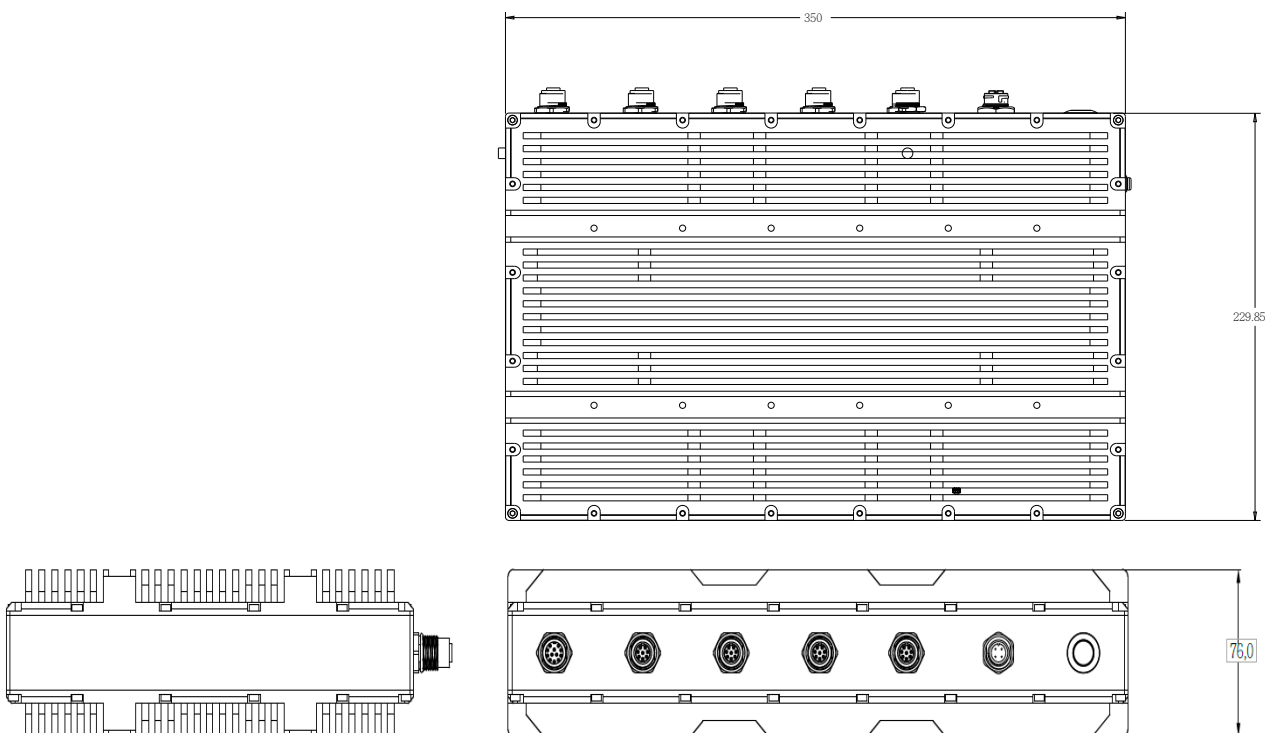| Applications, Operating System	
Applications	Commercial and Military Platforms Requiring Compliance to MIL-STD-810G Embedded Computing, Process Control, Intelligent Automation and manufacturing applications where Harsh Temperature, Shock, Vibration, Altitude, Dust and EMI Conditions. Used in all aspects of the military.
Operating System	Win 7 32/64Bit, Win 8 32/64Bit, Win 8.1 32/64Bit, Win 10 32/64Bit Ubuntu13.04, Ubuntu13.10, Ubuntu14.04, Fedora 20.
Physical	
Dimension (W x D x H)	350 x 230 x 76 mm
Weight	8.6 Kg (18.9 lbs)
Chassis	Aluminum Alloy, Corrosion Resistant.
Finish	Anodic aluminum oxide (Color Iron gray)
Cooling	Natural Passive Convection/Conduction. No Moving Parts.
Connectors	DC-IN : Phoenix Contact 1424136 Ethernet : Phoenix Contact 1424177 VGA : Phoenix Contact 1441833 USB : Phoenix Contact 1424177 COM : Phoenix Contact 1441833
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 uality Program.
EMC	CE and FCC compliance
Green Product	RoHS, WEEE compliance

Ordering Information

SR700-SG

IP65 MIL-STD-810G Rugged Computer with
Intel® Core i7- 4700EQ, NVIDIA® GeForce GTX950M
9V to 36V DC-in, Extended Temp -40 to 70°C

SR700-SG, EBX RUGGED SYSTEM IS A POWERFUL SYSTEM DRIVEN BY INTEL® 4TH GENERATION HASWELL CPU AND CHIPSET SOLDERING ONBOARD. PROCESSOR i7-4700EQ PLUS INTEL® QM87 CHIPSET SUPPORTS CLOCK SPEED 2.4GHZ, UP TO 3.4GHZ.
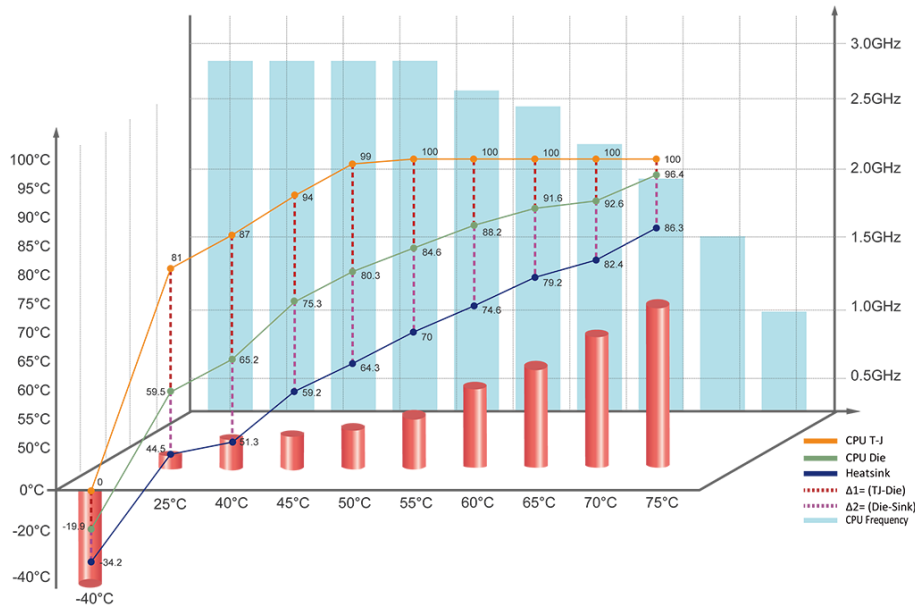
APPEARANCE

DIMENSIONS

CPU Performance

Test Configuration

Item	Device Information
CPU Type	Intel® Core i7-4700EQ 2.40GHz
PCH	Mobile Intel QM87 Express Chipset
Memory	Swissbit XR-DIMM 8 GB DDR3L-1600
port3 SATAII	Innodisk 256G SATA SSD
Test Software	Burnin test v6.0, AS SSD Benchmark, Intel Extreme Tuning Utility 4.3.0.11

Test Result

Model	SR700	Test Result	Pass
Tester	Ian Huang		

Diagram of curves	Test Temperature	Test Time

High	0~85℃	5Hours
Low	-40~0℃	2Hours
Test Standard	Reference IEC60068-2	
Test Software	Burnin test v6.0	
Criteria	After testing, system can't halt.	

SR700 System - IO Performance (-40 to 75℃)										
Point	-40℃	25℃ Room temperature	40℃	45℃	50℃	55℃	60℃	65℃	70℃	75℃
CPU T-J	0	81	87	94	99	100	100	100	100	100
CPU Die	-19.9	59.5	65.2	75.3	80.3	84.6	88.2	91.6	92.6	96.4
Heatsink	-34.2	44.5	51.3	59.2	64.3	70	74.6	79.2	82.4	86.3
Δ1= (TJ-Die)	19.9	21.5	21.8	18.7	18.7	15.4	11.8	8.4	7.4	3.6
Δ2= (Die-Heatsink)	14.3	15	13.9	16.1	16	14.6	13.6	12.4	10.2	10.1
CPU Frequency	2.79GHz	2.79GHz	2.79GHz	2.79GHz	2.59GHz	2.49GHz	2.19GHz	1.9GHz	1.5GHz	1GHz