



Intel Atom® Processor E3900 Series
Fanless Embedded System



EC800-AL

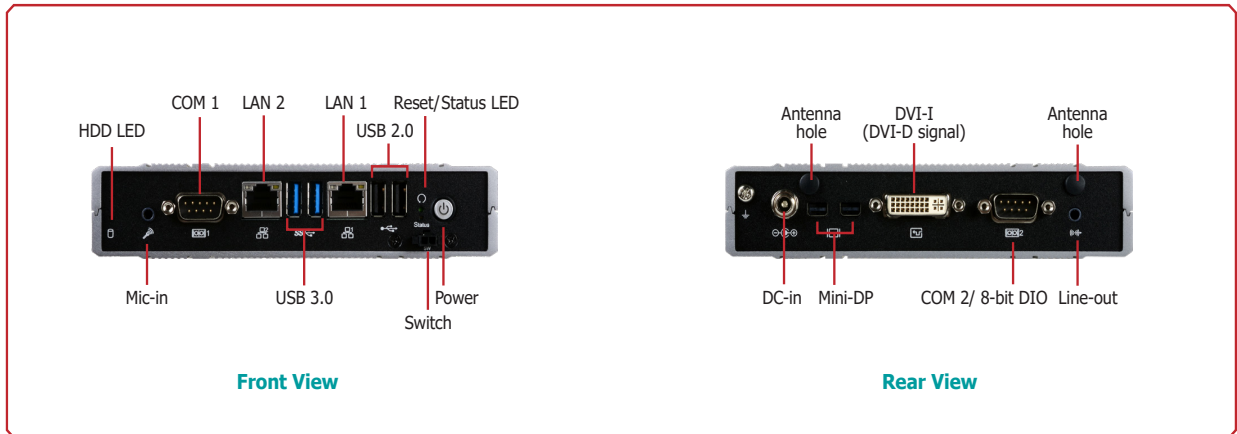


► Features

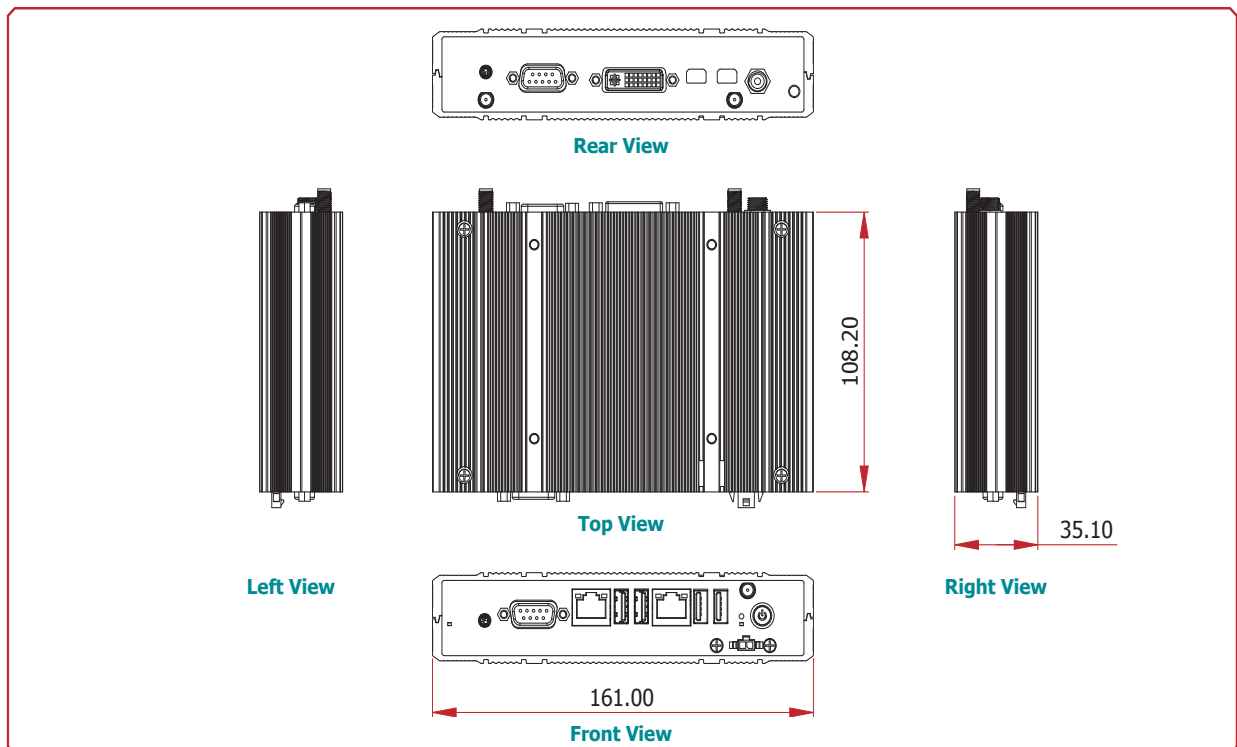
- Palm-sized and Fanless Embedded System
- 2GB/4GB/8GB LPDDR4-2400 memory onboard
- Triple independent displays: 1 VGA/DVI-D + 2 Mini-DP / Micro-HDMI
- Supports 1 Mini PCIe and 2 M.2 slots
- Rich I/O ports: 2 Intel GbE, 2 COM, 4 USB
- Extended operating temperature: -40 to 70°C



► Panel



► Dimensions





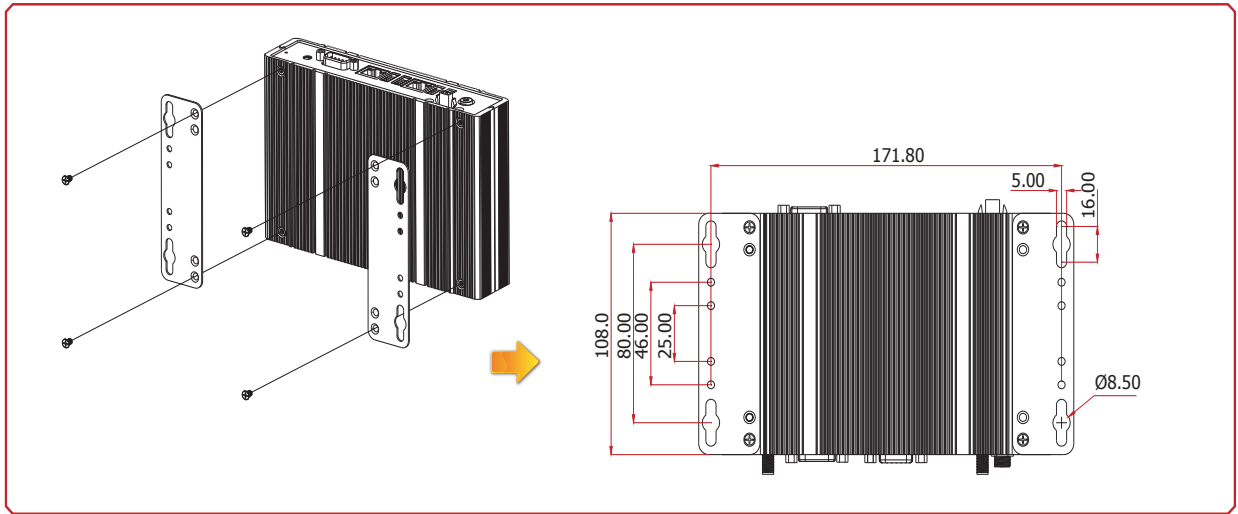
Specifications

SYSTEM	Processor	Intel Atom® Processor E3900 Series, BGA 1296 Intel Atom® x7-E3950 Processor, Quad Core, 2M Cache, 1.6GHz (2.0GHz), 12W Intel Atom® x5-E3940 Processor, Quad Core, 2M Cache, 1.6GHz (1.8GHz), 9W Intel Atom® x5-E3930 Processor, Dual Core, 2M Cache, 1.3GHz (1.8GHz), 6W Intel® Pentium® Processor N4200, Quad Core, 2M Cache, 1.1GHz (2.5GHz), 6W
	Memory	2GB/4GB/8GB Memory Down Dual Channel LPDDR4 2400MHz
	BIOS	Insyde SPI 128Mbit (supports UEFI boot only)
GRAPHICS	Controller	Intel® HD Graphics
	Feature	OpenGL 4.2, Direct X 11.1, OpenCL 1.2, OGL ES 3.0 HW Decode: H.264, MPEG2, VC1, VP8, H.265, MPEG4, MVC, VP9, WMV9, JPEG/MJPEG HW Encode: H.264, MPEG4, VP8, H.265, MVC
	Display	1 x VGA/DVI-D 2 x Mini-DP/Micro-HDMI VGA: resolution up to 1920x1200 @ 60Hz DVI-D: resolution up to 1920x1200 @ 60Hz Mini-DP: resolution up to 4096x2160 @ 60Hz Micro-HDMI: resolution up to 3840x2160 @ 30Hz
EXPANSION	Triple Displays	VGA + 2 Micro-HDMI DVI-D + 2 Mini-DP
	Interface	1 x Full-size Mini PCIe (PCIe/USB/SATA) 1 x M.2 (2242 B Key) (PCIe/USB/SATA) 1 x M.2 (2230 E Key) (PCIe/USB)
AUDIO	Audio Codec	Realtek ALC262
ETHERNET	Controller	2 x Intel® I210AT PCIe (10/100/1000Mbps)
LED	Indicators	1 x Power LED 1 x HDD LED
FRONT I/O	Ethernet	2 x GbE (RJ-45)
	Serial	1 x RS-232/422/485 (DB-9)
	USB	2 x USB 3.0 (type A) 2 x USB 2.0 (type A)
	Audio	1 x Mic-in
	Buttons	1 x Power Button
	Switch	1 x Power Switch (2-pin)
REAR I/O	Serial	1 x RS-232/422/485 (DB-9) (8-bit DIO available upon request)
	Display	1 x VGA/DVI-D 2 x Mini-DP/Micro-HDMI
	Audio	1 x Line-out
	Wi-Fi Antenna	2 x Wi-Fi Module Antenna Hole
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds
POWER	Type	Wide Range 9~36V
	Connector	DC Jack
OS SUPPORT (UEFI ONLY)		Windows 10 IoT (64-bit) Ubuntu 16.04 64-bit (Intel graphic driver available) Linux Yocto Project (64-bit)
MECHANISM	Construction	Aluminum
	Mounting	Wall/VESA/DIN Rail Mount (available upon request)
	Dimensions (W x H x D)	161mm x 35.1mm x 108.2mm
	Weight	700g
ENVIRONMENT	Operating Temperature	E3950, N4200: -20 to 60°C (standard), -40 to 60°C (wide-temp) E3940, E3930: -20 to 60°C (standard), -40 to 70°C (wide-temp) With 0.4m/s Air Flow
	Storage Temperature	-40 to 85°C
	Relative Humidity	10 to 90% RH (non-condensing)
STANDARDS AND CERTIFICATIONS	Shock	Operating: 3G, 11ms Non-Operating: 5G, 11ms
	Vibration	Operating: Random 5~500Hz, IEC68-2-64 (3G) Non-Operating: Sine 10~500Hz, IEC68-2-6 (3G)

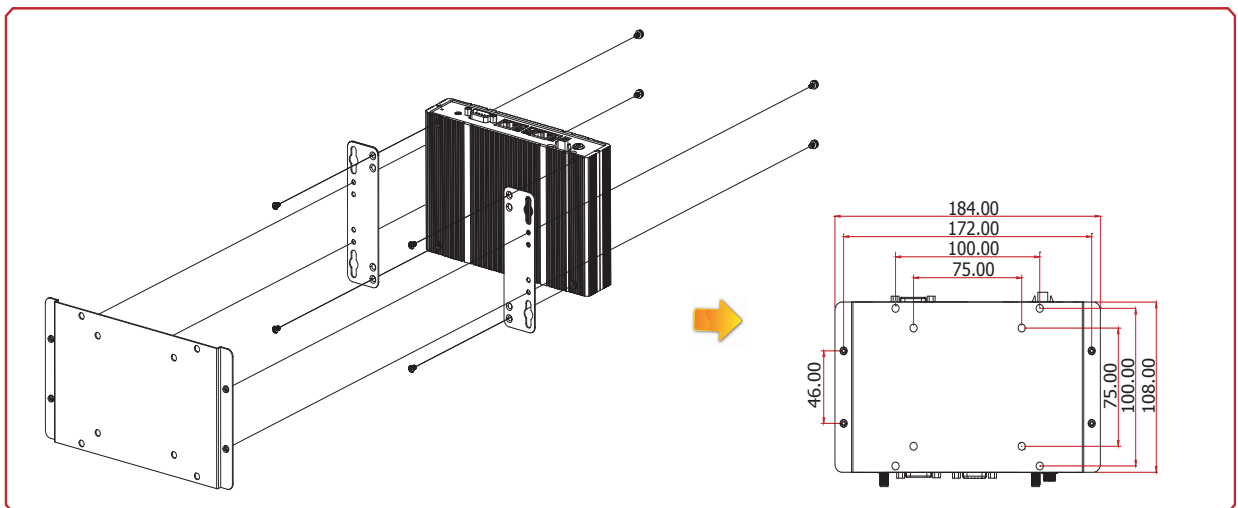


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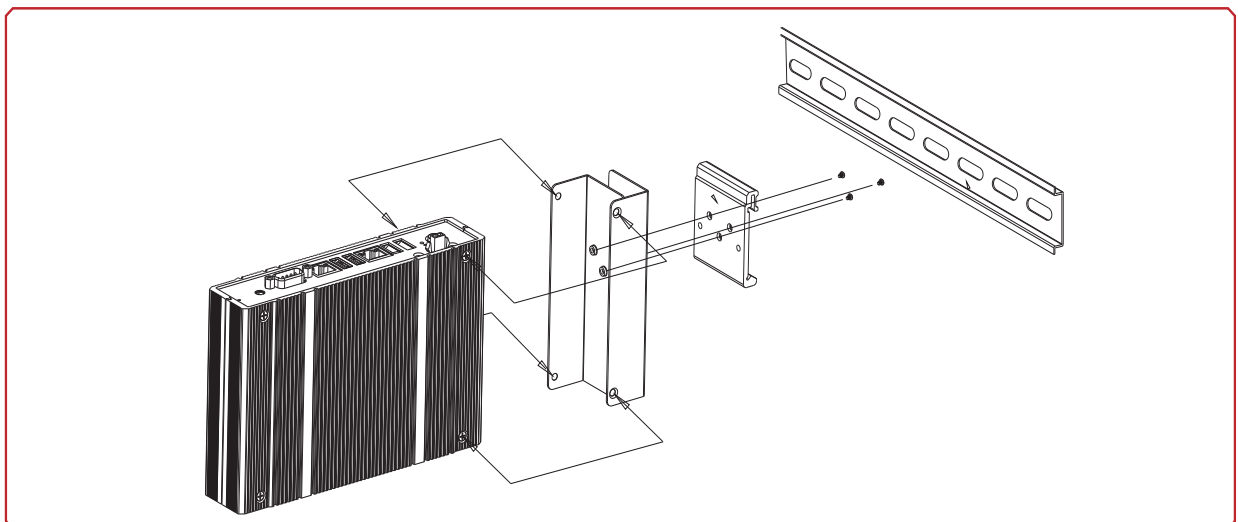
► **Wall Mounting**



► **VESA Mounting**



► **DIN Rail Mounting**





► **Ordering Information**

Model Name	Part Number	Description
EC800-AL552CPD-E3950-4	750-EC8002-000G	Fanless, Intel Atom E3950, 2 Mini-DP, 1 DVI-D, 2 LAN, 2 COM, 4 USB, 4GB LPDDR4 onboard, -20 to 60°C, RoHS
EC800-AL552CHV-E3950-4	750-EC8002-100G	Fanless, Intel Atom E3950, 2 Micro-HDMI, 1 VGA, 2 LAN, 2 COM, 4 USB, 4GB LPDDR4 onboard, -20 to 60°C, RoHS
EC800-AL552TPD-E3950-8	750-EC8002-200G	Fanless, Intel Atom E3950, 2 Mini-DP, 1 DVI-D, 2 LAN, 2 COM, 4 USB, 8GB LPDDR4 onboard, -40 to 60°C (wide-temp), RoHS
EC800-AL552THV-E3950-8	750-EC8002-300G	Fanless, Intel Atom E3950, 2 Micro-HDMI, 1 VGA, 2 LAN, 2 COM, 4 USB, 8GB LPDDR4 onboard, -40 to 60°C (wide-temp), RoHS
EC800-AL552CPD-N4200-4	750-EC8002-400G	Fanless, Intel Pentium N4200, 2 Mini-DP, 1 DVI-D, 2 LAN, 2 COM, 4 USB, 4GB LPDDR4 onboard, -20 to 60°C, RoHS
EC800-AL552THV-E3930-4	750-EC8002-500G	Fanless, Intel Atom E3930, 2 Micro-HDMI, 1 VGA, 2 LAN, 2 COM, 4 USB, 4GB LPDDR4 onboard, -40 to 70°C (wide-temp), RoHS
EC800-AL552THV-E3930-2	750-EC8002-600G	Fanless, Intel Atom E3930, 2 Micro-HDMI, 1 VGA, 2 LAN, 2 COM, 4 USB, 2GB LPDDR4 onboard, -20 to 60°C, RoHS

► **Optional Items**

Optional Items	Part Number	Description
Wi-Fi	785-WIFIKT	Wi-Fi Kit, RoHS
Power Cord	785-PWRD	Power Cord, Standards (USA/EUR/CH), 1.8m, RoHS
Power Adapter	671-106012-000G	60W, 12V/5A, Level 6, RoHS
	671-106013-000G	60W, 12V/5A (-30 to 70°C), Level 6, RoHS
	671-106011-000G	60W, 19V/3.15A, Level 6, RoHS
Wall Mount	761-EC8000-000G	EC800 Wall Mount Kit, RoHS
VESA Mount	761-EC8000-100G	EC800 Mount Kit (75x75mm, 100x100mm), RoHS
DIN Rail Mount	TBD	EC800 DIN Rail Mount Kit, RoHS
SSD mSATA	785-MW128GMH	mSATA Card, 128GB MLC, -40 to 85°C, RoHS
	785-MW64GMH	mSATA Card, 64GB MLC, -40 to 85°C, RoHS
	785-MW32GMH	mSATA Card, 32GB MLC, -40 to 85°C, RoHS
SSD M.2	785-M208GM42	M.2 2242 8GB, MLC
	785-M216GM42	M.2 2242 16GB, MLC
	785-M232GM42	M.2 2242 32GB, MLC
	785-M264GM42	M.2 2242 64GB, MLC
	785-M2128GM42	M.2 2242 128GB, MLC
	785-M2256GM42	M.2 2242 256GB, MLC
	785-M2512GM42	M.2 2242 512GB, MLC
Extend Power Switch Cable	A81-004070-016G	Power cable 2pin stripped, length 1000mm

785-XXX is a group number instead of a unique part number. Please contact your regional sales representative if you need more information.

► **Packing List**

• 1 EC800-AL system unit
• Mounting screws for Mini PCIe module
• Mounting screws for M.2 module (8mm & 4mm), washer between 2 M.2 modules
• 1 Quick Installation Guide

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US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660