



**Intel Atom® Processor E3900 Series
Fanless Embedded System**



EC90A-AL

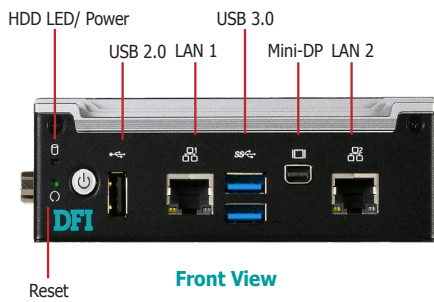


► Features

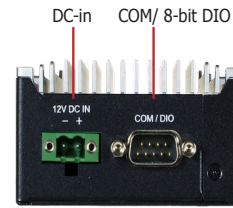
- Palm-sized and Fanless Embedded System
- 2GB/4GB LPDDR4-2400 memory onboard
- Mini-DP++ resolution supports up to 4096x2160 @ 60Hz
- Supports 1 Mini PCIe
- Rich I/O ports: 2 Intel GbE, 1 COM, 3 USB
- Extended operating temperature: -20 to 60°C



► Panel

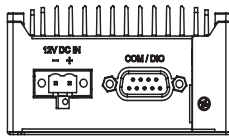


Front View

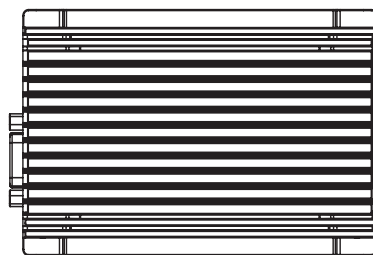


Bottom View

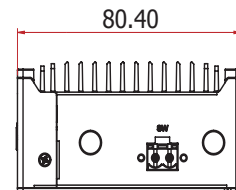
► Dimensions



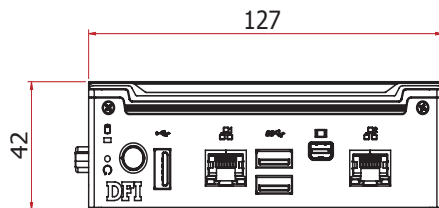
Top View



Front View



Bottom View





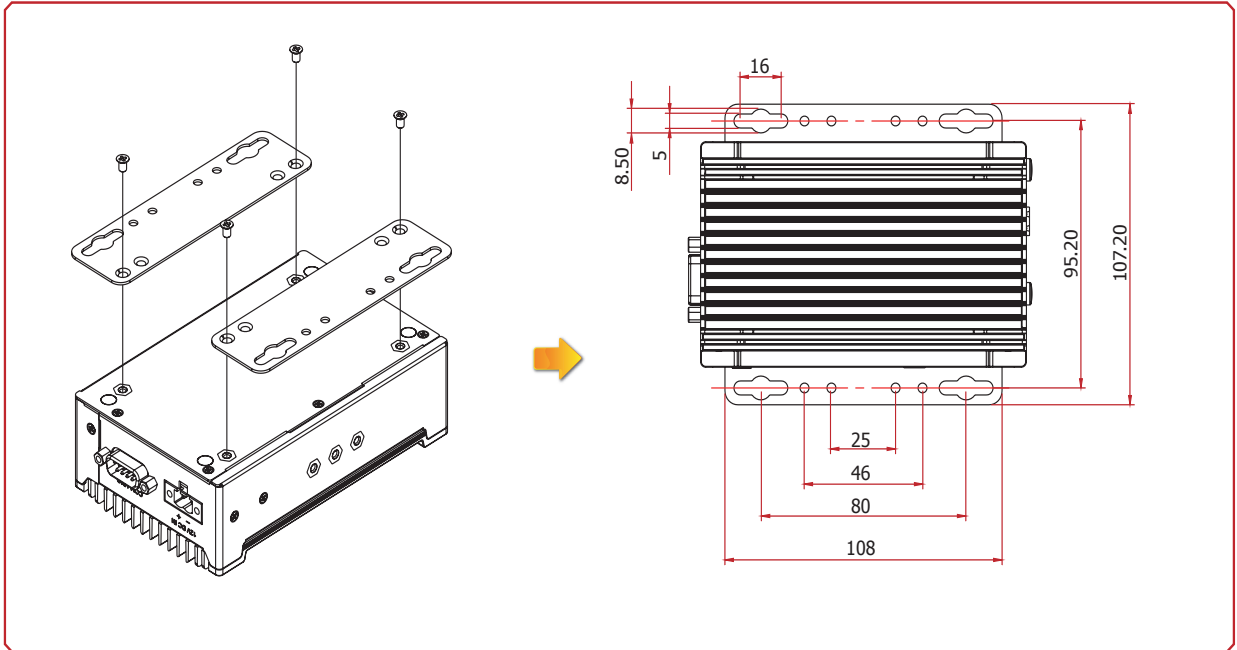
Specifications

SYSTEM	Processor	Intel Atom® Processor E3900 Series, BGA 1296 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), 6.5W
	Memory	2GB/4GB Memory Down Dual Channel LPDDR4 2400MHz
	BIOS	Insyde SPI 128Mbit (supports UEFI boot only)
	GRAPHICS	Controller Intel® HD Graphics
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 Mini-DP++ DP: resolution up to 4096x2160 @ 60Hz
	Single Display	Mini-DP++
STORAGE		16GB/32GB/64GB eMMC
EXPANSION	Interface	1 x Full-size Mini PCIe (PCIe/USB)
ETHERNET	Controller	2 x Intel® I210IT PCIe (10/100/1000Mbps)
LED	Indicators	1 x Power LED 1 x HDD LED
FRONT I/O	Ethernet	2 x GbE (RJ-45)
	USB	2 x USB 3.0 (type A) 1 x USB 2.0 (type A)
	Buttons	1 x Power Button
TOP I/O	Switch	1 x Power Switch (2-pin)
	Wi-Fi Antenna	2 x Wi-Fi Module Antenna Hole
BOTTOM I/O	Serial	1 x RS-232/422/485 (DB-9) (8-bit DIO selected by jumper)
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds
POWER	Type	12V DC-in
	Connector	2-Pole Terminal Block
OS SUPPORT (UEFI ONLY)		Windows 10 IoT (64-bit) Linux Yocto Project (64-bit) Ubuntu 16.04 64-bit (Intel graphic driver available)
MECHANISM	Construction	Sheet Metal
	Mounting	Wall/DIN Rail Mount
	Dimensions (W x H x D)	127mm x 42mm x 80.4mm
	Weight	TBD
ENVIRONMENT	Operating Temperature	-20 to 60°C (TBD) With 0.7m/s Air Flow
	Storage Temperature	-40 to 85°C
	Relative Humidity	5 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)

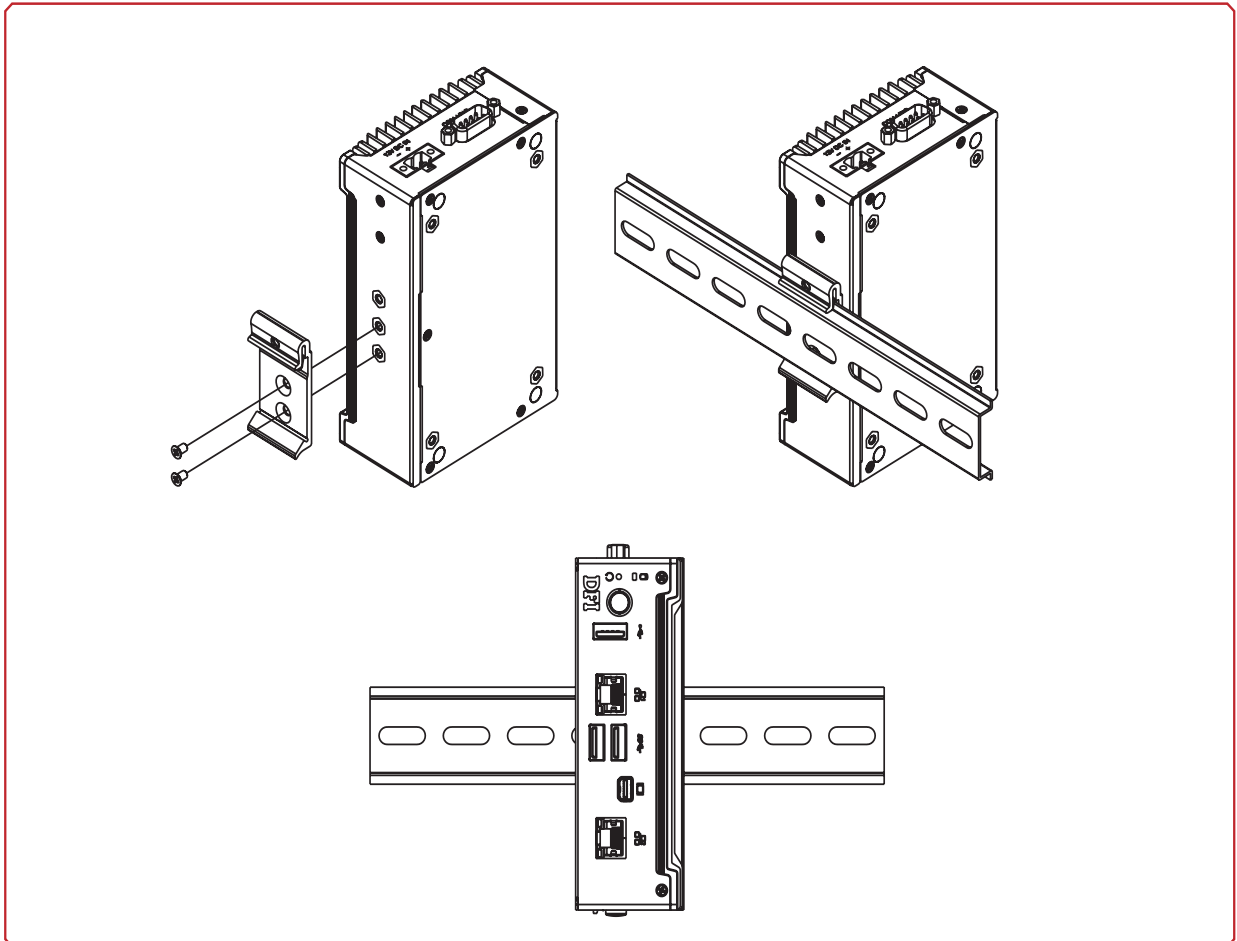


EC90A-AL

► **Wall Mounting**



► **DIN Rail Mounting**





► **Ordering Information**

Model Name	Part Number	Description
EC90A-AL1030-E3930-162	750-EC90A0-000G	Fanless, Intel Atom® x5-E3930, 1 COM, 2 USB 3.0, 1 USB 2.0, 2 LAN, 1 Mini-DP++, 16GB eMMC, 2GB RAM, RoHS
EC90A-AL1030-E3930-164	750-EC90A0-100G	Fanless, Intel Atom® x5-E3930, 1 COM, 2 USB 3.0, 1 USB 2.0, 2 LAN, 1 Mini-DP++, 16GB eMMC, 4GB RAM, RoHS
EC90A-AL1030-E3940-324	750-EC90A0-200G	Fanless, Intel Atom® x5-E3940, 1 COM, 2 USB 3.0, 1 USB 2.0, 2 LAN, 1 Mini-DP++, 32GB eMMC, 4GB RAM, 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
Wall Mount	761-EC8000-000G	EC90A-AL Wall Mount Kit, RoHS
DIN Rail Mount	761-EC90A0-000G	EC90A-AL DIN Rail Mount Kit, RoHS

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 EC90A-AL system unit
• Mounting screws for Mini PCIe module
• 1 Quick Installation Guide

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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