

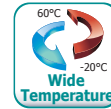
# EC90A-AL

Atom

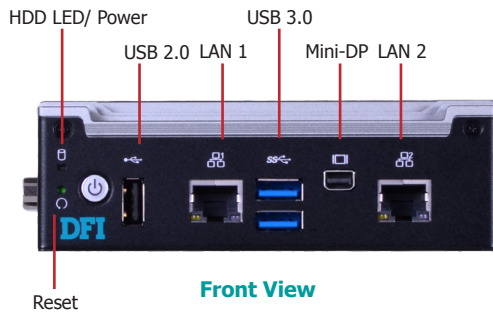


### Features

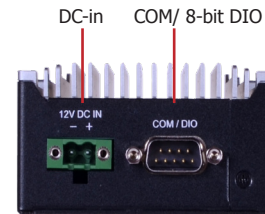
- Palm-sized and Fanless Embedded System
- 2GB/4GB LPDDR4-2400 memory onboard
- Mini-DP++ resolution supports up to 4096x2160 @ 60Hz
- Supports 1 Mini PCIe
- Rich I/O ports: 2 Intel GbE, 1 COM, 3 USB
- Extended operating temperature: -20 to 60°C



### Panel

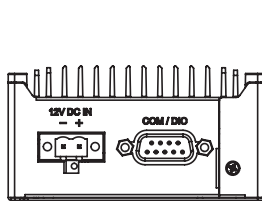


Front View

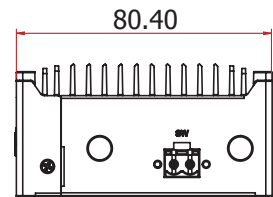
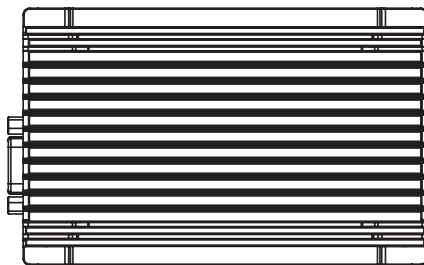


Bottom View

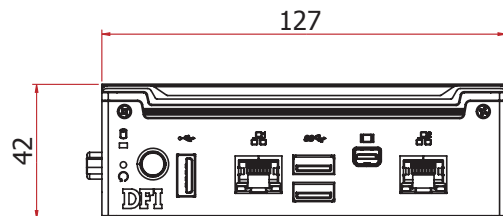
### Dimensions



Top View



Bottom View

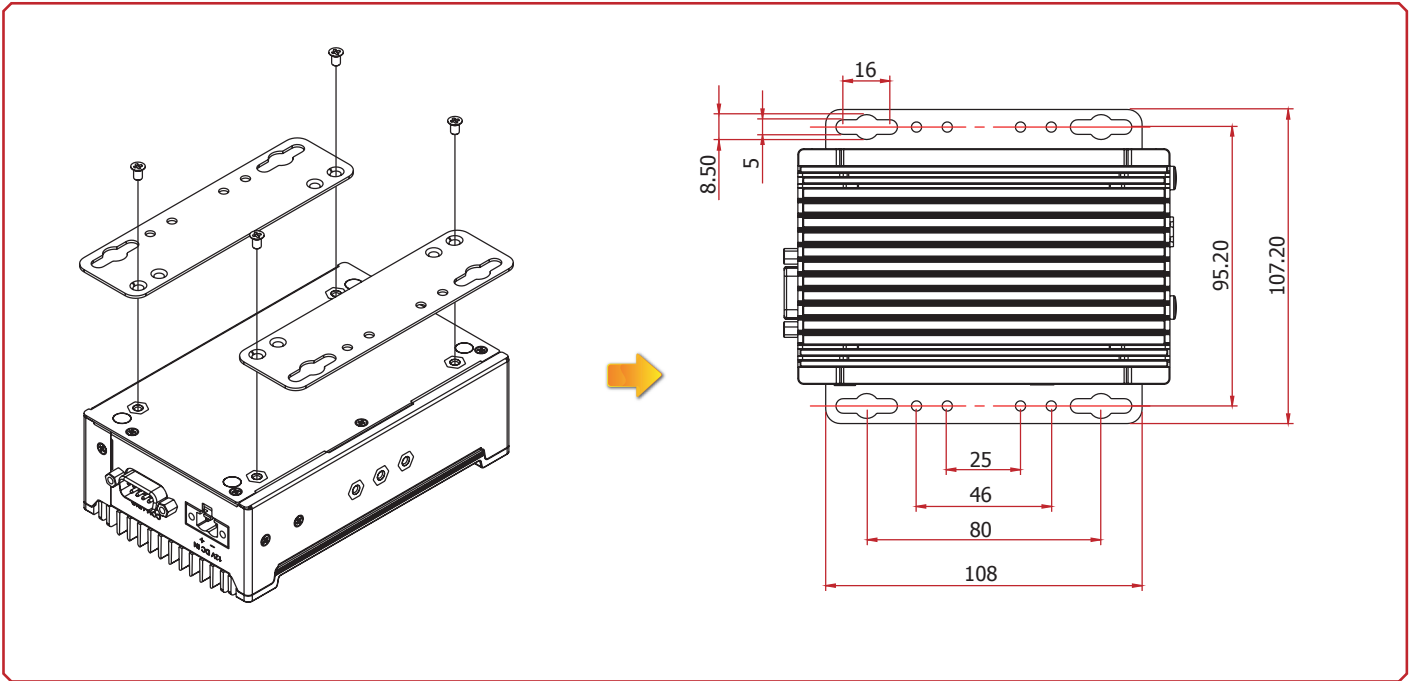


Front View

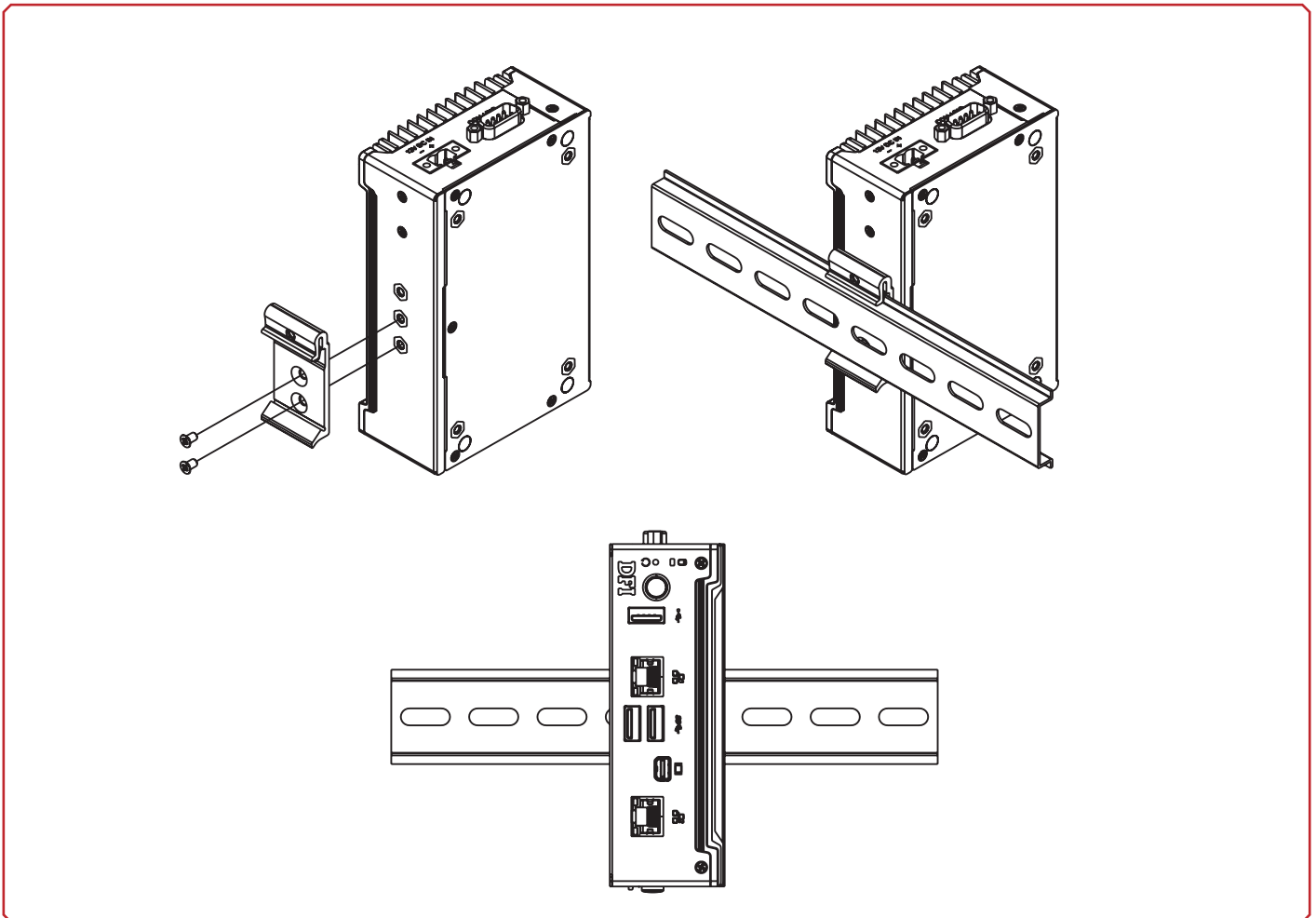
## ► Specifications

<b>SYSTEM</b>	<b>Processor</b>	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
	<b>Memory</b>	2GB/4GB Memory Down Dual Channel LPDDR4 2400MHz
	<b>BIOS</b>	Insyde SPI 128Mbit (supports UEFI boot only)
<b>GRAPHICS</b>	<b>Controller</b>	Intel® HD Graphics
	<b>Feature</b>	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
	<b>Display</b>	1 x Mini-DP++ DP: resolution up to 4096x2160 @ 60Hz
	<b>Single Display</b>	Mini-DP++
<b>STORAGE</b>		16GB/32GB/64GB eMMC
<b>EXPANSION</b>	<b>Interface</b>	1 x Full-size Mini PCIe (PCIe/USB)
<b>ETHERNET</b>	<b>Controller</b>	2 x Intel® I210IT PCIe (10/100/1000Mbps)
<b>LED</b>	<b>Indicators</b>	1 x Power LED 1 x HDD LED
<b>FRONT I/O</b>	<b>Ethernet</b>	2 x GbE (RJ-45)
	<b>USB</b>	2 x USB 3.0 (type A) 1 x USB 2.0 (type A)
	<b>Buttons</b>	1 x Power Button
<b>TOP I/O</b>	<b>Switch</b>	1 x Power Switch (2-pin)
	<b>Wi-Fi Antenna</b>	2 x Wi-Fi Module Antenna Hole
<b>BOTTOM I/O</b>	<b>Serial</b>	1 x RS-232/422/485 (DB-9) (8-bit DIO selected by jumper)
<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds
<b>POWER</b>	<b>Type</b>	12V DC-in
	<b>Connector</b>	2-Pole Terminal Block
<b>OS SUPPORT (UEFI ONLY)</b>		Windows 10 IoT (64-bit) Ubuntu 16.04 64-bit (Intel graphic driver available) Linux Yocto Project (64-bit)
<b>MECHANISM</b>	<b>Construction</b>	Sheet Metal
	<b>Mounting</b>	Wall/DIN Rail Mount
	<b>Dimensions (W x H x D)</b>	127mm x 42mm x 80.4mm
	<b>Weight</b>	TBD
<b>ENVIRONMENT</b>	<b>Operating Temperature</b>	-20 to 60°C (TBD) With 0.7m/s Air Flow
	<b>Storage Temperature</b>	-40 to 85°C
	<b>Relative Humidity</b>	5 to 90% RH (non-condensing)
<b>STANDARDS AND CERTIFICATIONS</b>	<b>Shock</b>	Operating: 3G, 11ms Non-Operating: 5G, 11ms
	<b>Vibration</b>	Operating: Random 5~500Hz, IEC68-2-64 (3G) Non-Operating: Sine 10~500Hz, IEC68-2-6 (3G)

► Wall Mounting



► DIN Rail Mounting



### ► Ordering Information

Model Name	Part Number	Description
<b>EC90A-AL1030-E3930-162</b>	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
<b>EC90A-AL1030-E3930-164</b>	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
<b>EC90A-AL1030-E3940-324</b>	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
<b>Wi-Fi</b>	785-WIFIKT	Wi-Fi Kit, RoHS
<b>Power Cord</b>	785-PWRD	Power Cord, Standards (USA/EUR/CH), 1.8m, RoHS
<b>Power Adapter</b>	671-106012-000G	60W, 12V/5A, Level 6, RoHS
	671-106013-000G	60W, 12V/5A (-30 to 70°C), Level 6, RoHS
<b>Wall Mount</b>	TBD	EC90A-AL Wall Mount Kit, RoHS
<b>DIN Rail Mount</b>	TBD	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