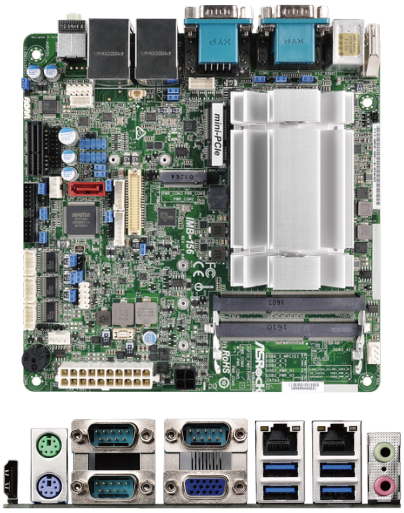
ASRock Industrial

intel IoT Solutions Alliance

IMB-156

Mini-ITX Motherboard



KEY FEATURES

- Intel® Apollo Lake SoC Processor
- 2 x 204-pin SO-DIMM up to 16GB DDR3L 1866 MHz (8GB per DIMM)
- 1 x PCIe x1 (Gen2),4 x USB 3.1 Gen1, 4 x USB 2.0, 1 x mini-PCIe, 1 x M.2 Key M, 1 x M.2 Key E, 6 x COM, 1 x SATA3
- 2 x Realtek 1 Gigabit LAN
- Supports triple display, 1 x HDMI 1.4b, 1 x VGA, 1 x LVDS
- TPM header
- 12V or +19V~+24V DC-In/ ATX PWR

SPECIFICATIONS

Form Factor

Dimensions	Mini-ITX (6.7-in x 6.7-in x 1.5-in)

Processor System

CPU	Intel® Apollo Lake SoC Processor IMB-156M (E3940, QC, 1.6 GHz, 9.5 W) IMB-156J (J3455, QC, 1.5 GHz, 10 W) IMB-156D (N4200, QC, 1.1 GHz, 6 W) IMB-156L (N3350, DC, 1.1 GHz, 6 W)
Chipset	SoC
Socket	N/A
BIOS	AMI SPI 128 Mbit

Memory

Technology	Dual Channel DDR3L 1866 MHz
Capacity	16 GB (8 GB per DIMM)
Socket	2 x 204-pin SO-DIMM

Graphics

Controller	Intel® Gen9 Graphics DX 12
HDMI	HDMI 1.4b Max resolution up to 4096 x 2160@24Hz
DisplayPort	N/A
VGA	Max resolution up to 1920 x 1200@60Hz
LVDS	Dual channel 24 bit up to 1920x1200@60Hz
eDP	N/A
DVI	N/A
MultiDisplay	Triple Display

Expansion Slot

PCIe	1 x PCIe x1 (Gen2)
PCI	N/A
mini-PCIe	1 x Full size with PCIe x1 and shared USB 2.0
M.2	1 x Key E (2230)with PCIe x1 and shared USB 2.0 for Wireless

Audio

Interface	Realtek ALC887/ALC897, High Definition Audio. Line-out,Mic-in

Ethernet

Controller/ Speed	2 x Realtek RTL8111G/RTL8111H-CG with 10/100/1000 Mbps
Connector	2 x RJ-45

Rear I/O

HDMI	1 x HDMI 1.4b
DisplayPort	N/A
VGA	1
DVI	N/A
Ethernet	2 x 1 Gigabit LAN
USB	4 x USB 3.1 (Gen1)
Audio	2 (Mic-in, Line-out)
COM	3 x COM(RS-232/422/485)
PS2	1 x PS/2 combo

Internal Connector

USB	4 x USB 2.0 (2 x 2.54 pitch header)
COM	3 x COM (RS232)
Parallel	1 (shared with GPIO)
GPIO	8 x GPI, 8 x GPO (shared with LPT header)
TPM	TPM Header
LVDS	1
eDP	N/A
VGA	N/A
SATA PWR Output	1
Speaker Header	1

Storage

M.2	1 x Key M (2242/2260)with SATA3 for SSD
mSATA	N/A
SATA	1 x SATA3 (6Gb/s), SATA3_1 shared with M.2_Key M
eMMC	N/A

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	12V or +19V~+24V DC-In/ ATX PWR
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	0°C ~ 60°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

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.

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