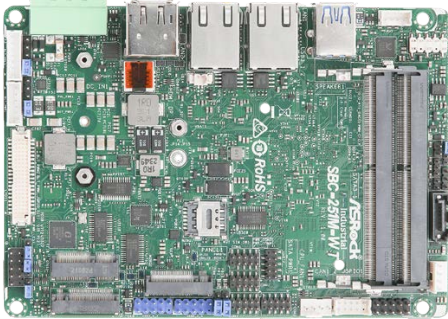


# SBC-251M-WT

3.5" SBC Motherboard



## KEY FEATURES

- Intel® Elkhart Lake Processors X6413E
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 32GB (16GB per DIMM)
- 2 x USB 3.2 Gen2, 4 x USB 2.0, 1 x M.2 Key E, 1 x M.2 Key M, 1 x M.2 Key B, 4 x COM, 1 x SATA3
- 2 x Intel 1 Gigabit LAN
- Supports Triple display, 1 x HDMI 2.0b, 1 x DP 1.4b, 1 x LVDS or eDP
- TPM 2.0 onboard IC
- 9~36V DC-In

## SPECIFICATIONS

### Form Factor

Dimensions	3.5" SBC (5.8-in x 4-in x 0.98-in, 14.7 cm x 10.2 cm x 2.49 cm)
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### Processor System

CPU	Intel® Elkhart Lake Processors X6413E, QC, Max Speed Up to 3.0GHz, 9W
BIOS	AMI SPI 256 Mbit

### Memory

Technology	Dual Channel DDR4 3200 MHz
Capacity	32GB (16GB per DIMM)
Socket	2 x 260-pin SO-DIMM

### Graphics

Controller	Intel® Gen 11 Graphics
HDMI	HDMI 2.0b Max resolution up to 4096 x 2160@60Hz
DisplayPort	DP 1.4b Max resolution up to 4096 x 2160@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)
MultiDisplay	Triple display

### Expansion Slot

M.2	1 x M.2 (Key E, 2230) with PCIe Gen3 x1, USB 2.0 1 x M.2 (Key B, 3042/3052) with PCIe Gen3 x1, USB 3.2, USB2.0 and SIM for 4G/5G
SIM Socket	1 x SIM socket connected to M.2 key B

### Audio

Interface	Realtek ALC256 HD, High Definition Audio.
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### Ethernet

Controller/ Speed	LAN1: Intel® I210AT with 10/100/1000 Mbps LAN2: Intel® I210AT with 10/100/1000 Mbps
Connector	2 x RJ-45

### Rear I/O

HDMI	1 x HDMI 2.0b
DisplayPort	1 x DP 1.4b
Ethernet	2 x 1 Gigabit LAN
USB	2 x USB 3.2 Gen2
Power In	1 x Phoenix Connector

### Internal Connector

USB	4 x USB 2.0 (2 x 2.54 pitch header)
COM	COM1, COM2, COM4 (RS-232) COM3 (RS-232/422/485)
GPIO	4 x GPI, 4 x GPO
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
SATA PWR Output	1
Speaker Header	1
CAN Bus	2 x CAN Bus (1 x 2.00 pitch header)

### Storage

M.2	1 x M.2 (Key M, 2242/2260/2280) with PCIe Gen3 x2 and SATA3 for SSD
SATA	1 x SATA3 (6Gb/s)

### Security

TPM	TPM 2.0 onboard IC
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### Watchdog Timer

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

### Power Requirements

Input PWR	9~36V DC-In
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	-40°C ~ 85°C
Storage Temp	-40°C ~ 85°C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

## 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](mailto: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](mailto: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