

# MS-98F5

Mini-ITX with Intel® Atom™ Bay Trail for Low-Power, Slim/Low-Profile & Fanless Solution

Industrial Computer

COM Express Board

Pico-ITX Board

3.5" Board

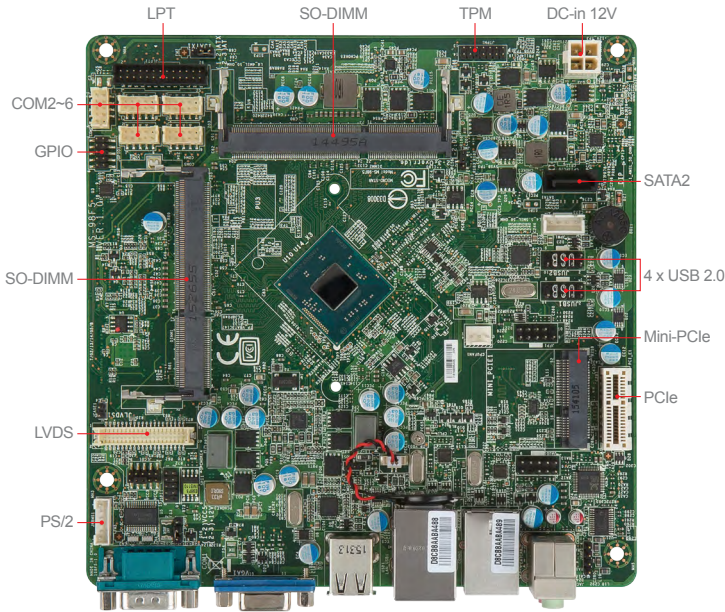
EPIC Board

Mini-ITX Board

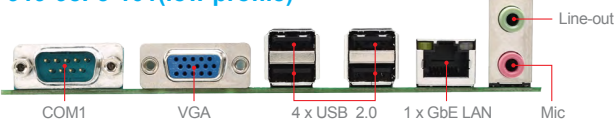
Micro-ATX Board

ATX Board

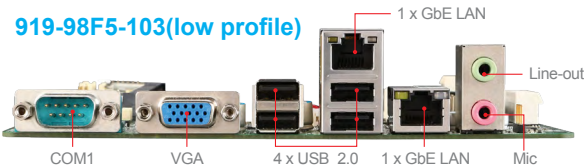
Peripheral



## 919-98F5-101(low profile)



## 919-98F5-103(low profile)



## Features

- Intel® Bay Trail Series SoC
- 2 DDR3L 1333/1066 MHz SODIMM slots up to 8GB
- Dual independent displays: VGA, LVDS
- 2 GbE LAN with RJ-45(1 by option)
- 1 PCI x1 (Gen2), 1 Mini-PCle (Full size, with mSATA) slots
- mSATA, SATA 2.0 for storage
- 8 USB 2.0, 6 COM, GPIO, LPT, PS/2, Audio
- DC-IN 12V

## Ordering Information

Part Number	Description
919-98F5-101	MS-98F5/MS-98F5/609-98F5-010/809-98F5-102/MS-98F5 VER 10 OPT A FOR MS-98F5 STD SKU, 1 LAN, 1 SO-DIMM BULK
919-98F5-103	MS-98F5/MS-98F5/609-98F5-020/809-98F5-101/MS-98F5 VER 10 OPT B FOR MS-98F5 STD SKU, 2 LAN, 2 SO-DIMM BULK

## Packing List

Part Number	Description
E21-98F5010-C22	I/O Shield (2 x LAN)
E21-98F5020-C22	I/O Shield (1 x LAN)
K10-3004215-V03	DC power cable, 160mm
K1D-1012064-V03	SATA cable, 200mm

## Specifications

<b>Processor</b>	CPU	Intel® Celeron® Processor J1900, QC, 10W Intel® Celeron® Processor N2930, QC, 7.5W	
	Frequency	J1900, 2.0 GHz, up to 2.42 GHz N2930, 1.83 GHz, up to 2.16 GHz	
	L2 Cache	2 MB	
	CPU Type	BGA	
	Chipset	Integrated	
<b>Memory</b>	BIOS	AMI	
	Technology	Dual-channel DDR3L 1333/1066 MHz	
	Max. Capacity	Up to 8GB	
	Socket	2 or 1 x 204-pin SO-DIMMs (depends on SKU)	
<b>Display</b>	Controller	Intel® HD Graphics	
	Graphic Memory	Depends on CPU	
	LVDS	Dual Channel 24-bit (add chrontel 7511B chipset)	
	VGA	1	
	Multiple Display	2 independent displays	
<b>Ethernet</b>	Display Interface	VGA up to 2560 x 1600 @60Hz LVDS up to 1920 x 1200 @60Hz	
	Controller	2 or 1 x Realtek® RTL8111G-CG GbE LAN (depends on SKU)	
<b>Audio</b>	Controller	Realtek® ALC887 HD Audio Codec	
<b>Super I/O</b>	Controller	Fintek F81866AD-I	
<b>H/W Monitor</b>	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
<b>TPM</b>	Controller	Pin header	
<b>I/O Interface</b>	USB	8 x USB 2.0 (4 x internal, 4 x rear)	
	Serial	6 x COM ports (COM1: rear, COM2~6: internal) COM1: RS-232, 0V/5V/12V COM2~6: RS-232, w/o power	
	Parallel	1 (Pin header)	
	PS/2	1 (Pin header)	
	GPIO	8-bits (4 x GPI, 4 x GPO), 3.3V	
	<b>Expansion Slot</b>	PCIe x1	1
		M.2	N/A
Mini-PCle		1 x Full-size (w/ mSATA)	
<b>Storage</b>	SATA	1 x SATA 2.0	
	mSATA	1	
<b>Power Supply</b>	DC	DC-in 12V	
	ATX	N/A	
<b>Environment</b>	Operating Temperature	0 ~ 60°C Note: Thermal w/ Airflow:0.7m/s	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
<b>Form Factor</b>	Dimensions	170 x 170 mm (Mini-ITX)	
	Weight	0.37 kg	
<b>Certification</b>	EMC	FCC, CE, RCM, VCCI, BSMI	
<b>Software Platform</b>	OS Support	Windows 7 (32/64-bit) Windows 8 (32/64-bit) Windows 10 (64-bit)	

## Optional Item

Part Number	Description
K14-1018003-V03	COM port cable, 300mm
K1B-3008012-E06	USB 2.0 cable, 330mm