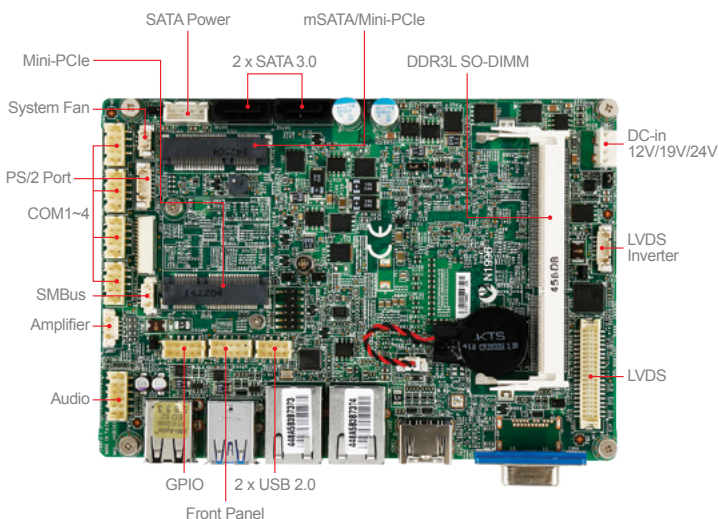
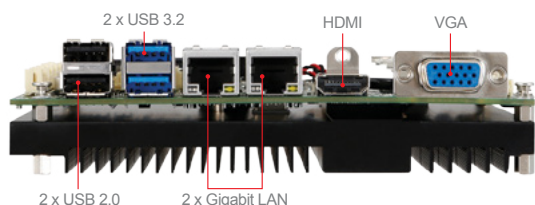


MS-98F3

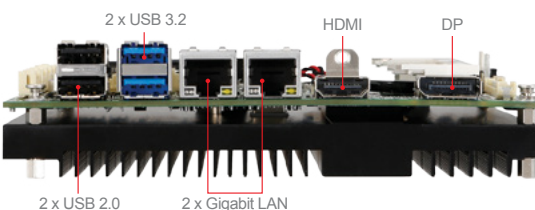
3.5" SBC with Intel® HSW/BDW ULT Series Platform for High-Performance, Low-Power & Fanless Solution



919-98F3-009/919-98F3-011/919-98F3-013
919-98F3-014/919-98F3-016/919-98F3-017



919-98F3-015/919-98F3-018



Features

- Intel® Haswell/Broadwell ULT Series
- DDR3L 1333/1600 MHz SODIMM up to 8GB
- Triple independent displays: VGA(DP by option), HDMI, LVDS
- 2 GbE LAN with RJ-45
- 2 USB 3.2 Gen 1, 4 USB 2.0, 4 COM (1 RS-485), GPIO, PS/2
- Mini-PCle (Full-size with mSATA), Mini-PCle (Half-size) Slots
- 2 SATA 3.0 for storage
- DC-IN 12/19/24V

Ordering Information

Part Number	Description
919-98F3-009	MS-98F3 3.5" DDR3L SO DIMM+VGA+HDMI+LVDS+2*Mini-PCle+2*LAN+2*SATA3.0+2*USB3.0+4*USB 2.0+4*COM,DC 12V/19V/24V
919-98F3-011	MS-98F3 3.5" DDR3L SO DIMM+VGA+HDMI+LVDS+2*Mini-PCle+2*LAN+2*SATA3.0+2*USB3.0+4*USB 2.0+4*COM,DC 12V/19V/24V
919-98F3-013	MS-98F3 3.5" DDR3L SO DIMM+VGA+HDMI+LVDS+2*Mini-PCle+2*LAN+2*SATA3.0+2*USB3.0+4*USB 2.0+4*COM,DC 12V/19V/24V
919-98F3-014	MS-98F3 3.5" DDR3L SO DIMM+VGA+HDMI+LVDS+2*Mini-PCle+2*LAN+2*SATA3.0+2*USB3.0+4*USB 2.0+4*COM,DC 12V/19V/24V
919-98F3-015	MS-98F3 3.5" DDR3L SO DIMM+DP+HDMI+LVDS+2*Mini-PCle+2*LAN+2*SATA3.0+2*USB3.0+4*USB 2.0+4*COM,DC 12V/19V/24V
919-98F3-016	MS-98F3 3.5" DDR3L SO DIMM+DP+HDMI+LVDS+2*Mini-PCle+2*LAN+2*SATA3.0+2*USB3.0+4*USB 2.0+4*COM,DC 12V/19V/24V
919-98F3-017	MS-98F3 3.5" DDR3L SO DIMM+VGA+HDMI+LVDS+2*Mini-PCle+2*LAN+2*SATA3.0+2*USB3.0+4*USB 2.0+4*COM,DC 12V/19V/24V
919-98F3-018	MS-98F3 3.5" DDR3L SO DIMM+DP+HDMI+LVDS+2*Mini-PCle+2*LAN+2*SATA3.0+2*USB3.0+4*USB 2.0+4*COM,DC 12V/19V/24V

Specifications

Processor	CPU	Intel® Core™ i5-4300U/i3-4010U Processors, DC, 15W Intel® Core™ i7-5650U/i5-5350U/i3-5010U/3765U Processors, DC, 15W
	Frequency	i5-4300U, 1.9GHz, up to 2.9GHz i3-4010U, 1.7GHz i7-5650U, 2.2GHz, up to 3.1GHz i5-5350U, 1.8GHz, up to 2.9GHz i3-5010U, 2.1GHz 3765U, 1.9GHz
	L2 Cache	2MB~4MB (Depends on CPU)
	CPU Type	BGA
	Chipset	N/A
Memory	BIOS	AMI
	Technology	Single-channel for DDR3L 1600 MHz
	Max. Capacity	Up to 8GB
	Socket	1 x 204-pin SO-DIMM
Display	Controller	Intel® HD Graphics
	Graphic Memory	Depends on CPU
	LVDS	Dual Channel 18/24-bit
	VGA	1 (optional)
	HDMI	1
	DisplayPort	1 (optional)
Display Interface	Multiple Display	3 independent displays
	Display Interface	VGA up to 1920 x 1200 @60Hz HDMI up to 2560 x 1600 @60Hz LVDS up to 1920 x 1200 @60Hz DP up to 3840 x 2160 @60Hz
Ethernet	Controller	1 x Intel® I210-AT GbE LAN 1 x Intel® I218-LM GbE LAN PHY
Audio	Controller	Realtek® ALC887-VD2-CG HD Audio Codec
Super I/O	Controller	Fintek F81866AD-I
H/W Monitor	Watchdog Timer	256-level Watchdog Timer
I/O Interface	USB	4 x USB 2.0 (2 x internal, 2 x rear) 2 x USB 3.2 Gen 1 (2 x rear with USB 2.0 signal)
	Serial	4 x COM ports (internal) COM1: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V
	PS/2	1 (pin header)
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V
Expansion Slot	M.2	N/A
	Mini-PCle	1 x Full-size (w/ mSATA) 1 x Half-size
Storage	SATA	2 x SATA 3.0
	mSATA	1
Power Supply	DC	DC-in 12V/19V/24V
Environment	Operating Temperature	-10 ~ 60°C
	Operating Humidity	10 ~ 90%, non-condensing
	Storage Temperature	-20 ~ 80°C
Form Factor	Storage Humidity	10 ~ 90%, non-condensing
	Dimensions	146 x 102mm (3.5")
Certification	Weight	0.56 kg
	EMC	FCC, CE, RCM, VCCI, BSMI
Software Platform	OS Support	Windows 7 (64-bit) Windows 8.1 (32/64-bit) Windows 10 (64-bit) Linux Fedora 19 (by request) Linux Ubuntu 13.04 (by request)

Packing List

Part Number	Description	Quantity
G71-SEDC161-N56 (HSW ULT SKU) G71-SEDC162-N56 (BDW ULT SKU)	Driver DVD	1
K10-3002145-V03	DC Power Cable, 120mm	1
K14-1009062-V03	COM Port Cable, 250mm	1
K1B-3008034-V03	USB Cable, 150mm	1
K1D-1012064-V03	SATA Cable with Power, 200mm	1
K1D-3008006-V03	SATA Cable, 300mm	1