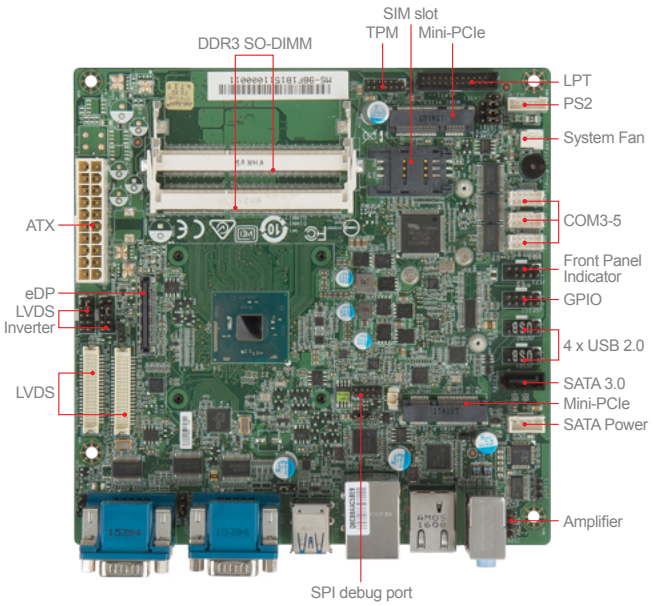
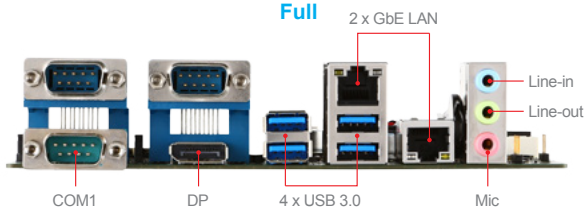
MS-98F1

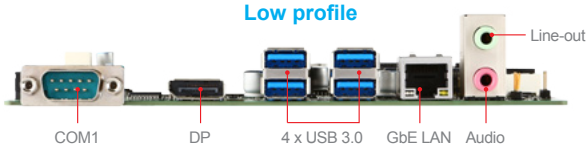
Mini-ITX with Intel® Atom™ Braswell Platform for Multi-Displays, Low-Power and DC/ATX Solution



Full



Low profile



Features

- Intel® Atom™ Braswell Series SoC processor
- Embedded Mini-ITX Motherboard with Rich I/O ports, Low power and fanless design
- 3 independent displays with optional inputs: (1 DP, 1 LVDS, 1 x eDP) or(1 DP, 2 LVDS)
- 4 USB 2.0, 4 USB 3.0, Optional SKU with 4 or 6 COM; SATA3.0 supported
- Dual Intel® LAN and dual mini-PCIe slots
- TPM supported with onboard chip or pin header
- Dual full-size Mini-PCIe (one shared mSATA or SIM holder)
- Power input: DC 12V/19/24V or ATX (depends on SKU)

Ordering Information

Part Number	Description
919-98F1-104	MS-98F1\609-98F1-040\809-98F1-105\VER 11 OPT:D Intel N3160,2*DDR3L,1*DP,1*LVDS,1*LVDS colay eD-P,6*COM,4*USB3.0, 4*USB2.0, 2*Gbe LAN,1*SATA3.0, 2*Mini-PCIe,ATX Power,1*SATA cable,1*CD,1*I/O Shield, Bulk, For channel
919-98F1-103	MS-98F1\609-98F1-030\809-98F1-104\VER 11 OPT:C Intel N3060,2*DDR3L,1*DP,1*LVDS,1*LVDS colay eDP,4*COM,4*USB3.0, 4*USB2.0, 1*Gbe LAN,1*SA-TA3.0, 2*Mini-PCIe,DC Power, 1*SATA cable,1*Power cable,1*CD,1*I/O Shield,Bulk, For Channel

Packing List

Part Number	Description
K1D-1012064-V03	SATA CABLE
K10-3004215-V03	DC POWER CABLE For OPT: C
E21-98F1010-C22	I/O SHIELDING For OPT: C
E21-98F1020-C22	I/O SHIELDING For OPT: D
G71-SEDC153-N56/X03	DRIVER CD

Specifications

Processor	CPU	Intel® Pentium processor N3710, QC, 6W Intel® Celeron processor N3160, QC, 6W Intel® Celeron processor N3060, DC, 6W Intel® Celeron processor N3010, DC, 4W	
	Frequency	N3710, 1.6 GHz, up to 2.56 GHz N3160, 1.6 GHz, up to 2.24 GHz N3060, 1.6 GHz, up to 2.48 GHz N3010, 1.04 GHz, up to 2.24 GHz	
	L2 Cache	2MB	
	CPU Type	BGA	
	Chipset	Integrated	
	BIOS	AMI	
Memory	Technology	Dual-channel DDR3L 1333/1600 MHz	
	Max. Capacity	Up to 8 GB	
	Socket	2 x 204-pin SO-DIMM	
Display	Controller	Intel® HD Graphics	
	Graphic Memory	Shared system memory up to 1.7 GB SDRAM	
	LVDS	2 x dual channel 18/24-bit	
	eDP	1 (colay with LVDS)	
	DisplayPort	1	
	Multiple Display	3 independent displays	
	Display Interface	LVDS up to 1920 x 1200 DP up to 3840 x 2160 eDP up to 2560 x 1600	
Ethernet	Controller	2 x Intel® i210-AT GbE LAN	1 x Intel® i210-AT GbE LAN
Audio	Controller	Realtek® ALC887 co-lay ALC888S	
Super I/O	Controller	Fintek F81866AD-I	
H/W Monitor	Watchdog Timer	256-level Watchdog Timer	
	Smart Fan	Yes	
TPM	Controller	Pin header (default) Infineon SLB9635TT 1.2 (by BOM option) Pin header	
I/O Interface	USB	4 x USB3.0 (rear) 4 x USB2.0 (internal)	4 x USB3.0 (rear) 4 x USB2.0 (internal)
	Serial	6 x COM (3 x rear; 3 x internal) COM1/5: RS-232/422/485, 0V/5V/12V COM2~4: RS-232, 0V/5V/12V COM6: RS-232, w/o power	4 x port (1 x rear; 3 x internal) COM1/5: RS-232/422/485, 0V/5V/12V COM4: RS-232, 0V/5V/12V COM6: RS-232, w/o power
	Parallel	1	
	PS/2	1 (pin header)	
	GPIO	8-bits (4 x GPI; 4 x GPO), 5V	
Expansion Slot	M.2	N/A	
	Mini-PCIe	2 (support Full/Half size, one w/ SIM holder)	
Storage	SATA	1 x SATA 3.0	
	mSATA	1 (support by mini PCIe slot)	
	CompactFlash	N/A	
Power Supply	DC	DC-in 12V/19V/24V	
	ATX	ATX Power 20P	
Environment	Operating Temperature	0 ~ 60°C	
	Operating Humidity	10 ~ 90%, non-condensing	
	Storage Temperature	-20 ~ 80°C	
	Storage Humidity	10 ~ 90%, non-condensing	
Form Factor	Dimensions	170mm x 170mm (Mini-ITX)	
	Weight	0.37 kg	
Certification	EMC	FCC, CE, RCM, VCCI, BSMI	
Software Platform	OS Support	Windows 7 (64-bit) Windows 8.1 (64-bit) Windows 10 (64-bit) Fedora 23, Ubuntu 15.10	

Optional Items

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