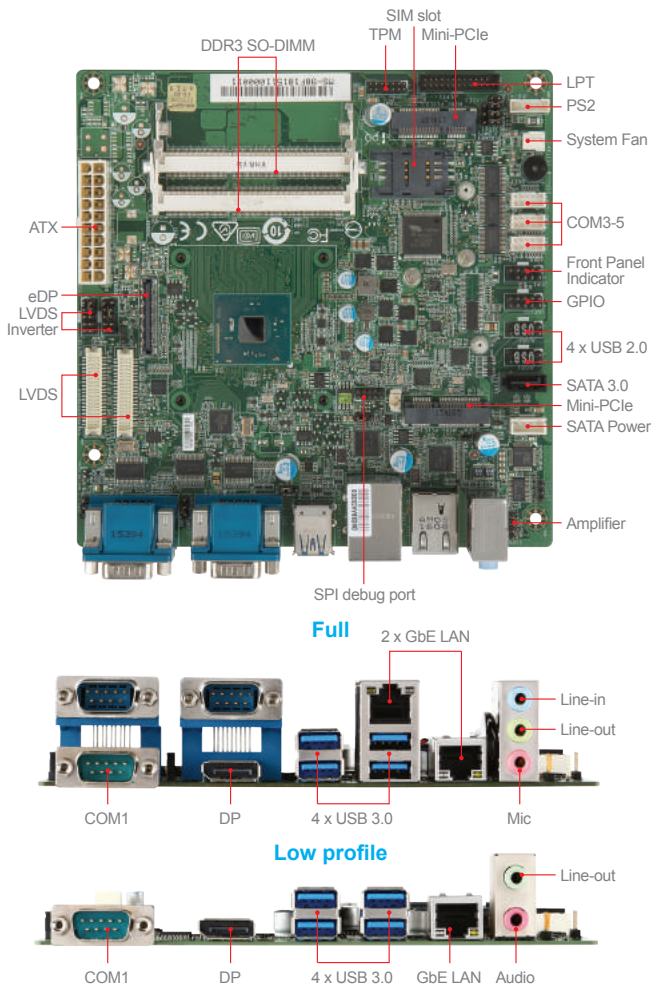


MS-98F1

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



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*SATA3.0, 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
Memory	BIOS	AMI
	Technology	Dual-channel DDR3L 1333/1600 MHz
	Max. Capacity	Up to 8GB
Display	Socket	2 x 204-pin SO-DIMM
	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
Ethernet	Display Interface	LVDS up to 1920 x 1200 @60Hz DP up to 3840 x 2160 @30Hz eDP up to 2560 x 1600 @60Hz
	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
	USB	4 x USB3.0 (rear) 4 x USB2.0 (rear) 4 x USB2.0 (internal) 4 x USB2.0 (internal)
I/O Interface	Serial	6 x COM ports (COM1-2: rear, COM3-6: internal) COM1&5: RS-232/422/485, 0V/5V/12V COM2-4: 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 x 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
Form Factor	Storage Humidity	10 ~ 90%, non-condensing
	Dimensions	170 x 170mm (Mini-ITX)
Certification	Weight	0.37 kg
	EMC	FCC, CE, RCM, VCCI, BSMI
Software Platform	OS Support	Windows 7 (32/64-bit) Windows 8.1 (64-bit) Windows 10 (64-bit) Linux Fedora 23 Linux Ubuntu 15.10

Optional Item

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

Semi-rugged Terminal
POS System
HMI Panel PC
Embedded System
Embedded Board
COM Express Board
Oseven Board
Pico-ITX Board
3.5" Board
EPIC Board
PICMG 1.0 Board
Mini-ITX Board
Micro-ATX Board
ATX Board
Mini-PCIe Module