



# Intel Atom Board-level Products

## Mini-ITX

Updated: May 15, 2015

Form Factor	Mini-ITX		Mini-ITX	Mini-ITX	Mini-ITX	
Application	Infotainment, Medical					
Chipset	N/A			NM10		
Platform	Atom		Atom		Atom	
Model	BT160	BT161	BT100	BT101/BT103	CD101-N Seires	CD102 Series
	same PCB					
Processor	Intel Atom E3800 Series, Intel Celeron				Intel Atom D2550/N2800/N2600	
Memory	2 DDR3L SODIMM up to 8GB / 1 DDR3L SODIMM up to 4GB				2 DDR3 SODIMM up to 4GB/ 1 DDR3 SODIMM up to 2GB	
Display	VGA, LVDS		VGA, LVDS, DVI-I (DVI-D signal)	LVDS, DVI-I	DVI, VGA, LVDS	HDMI, VGA, LVDS
LAN	2		2	2	2	
Expansion	1 PCIe x1 1 Mini PCIe (USB, PCIe, mSATA) 1 DFI Proprietary Extension Bus for PCIe/PCI expansion		1 PCIe x4 (1 x1 signal) 1 Mini PCIe (USB, PCIe, mSATA)	1 PCIe x1 1 Mini PCIe (USB, PCIe, mSATA, 3G) 1 SIM	1 PCIe x1 1 Mini PCIe	
SATA	2 SATA 2.0		2 SATA 2.0	2 SATA 2.0	2 SATA 2.0 1 CF (optional)	2 SATA 2.0
USB	1 USB 3.0 3 USB 2.0 1 vertical USB 2.0		1 USB 3.0 6 USB 2.0	1 USB 3.0 6 USB 2.0	6 USB 2.0	8 USB 2.0 1 vertical USB (optional)
COM	4		6	4	4	
Parallel	N/A		N/A	N/A	N/A	1
LPC*	N/A		N/A	N/A	N/A	1
DIO	8-bit		8-bit	8-bit	12-bit	8-bit
SSD	N/A		N/A	N/A	N/A	
IDE	N/A		N/A	N/A	N/A	
Audio	N/A		5.1-channel	5.1-channel	HD Audio	
AMT	N/A		N/A	N/A	N/A	
TPM	optional		optional	optional	N/A	optional
Power	ATX	12V DC-in / 4-pin power	ATX	12V (BT101) / 19~24V (BT103) DC-in or 4-pin (optional)	9~24V DC-in / 4-pin (optional)	12V DC-in / 4-pin (optional)
Compliance	N/A		N/A	N/A	N/A	
Carrier Board	N/A		N/A	N/A	N/A	
Operating Temp.	0°C to 60°C		0°C to 60°C (Atom, Celeron) -20°C to 70°C (Atom) -40°C to 85°C (Atom)	0°C to 60°C (Atom, Celeron) -20°C to 70°C (Atom) -40°C to 85°C (Atom)	0°C to 60°C	

\*LPC connector supports the additional COM/Parallel ports



# Intel Atom Board-level Products

## Mini-ITX & SBC

Form Factor	Mini-ITX			4"	3.5"		
Application	Infotainment, Medical						
Chipset	<b>ICH8M</b>			<b>N/A</b>	<b>N/A</b>	<b>NM10</b>	
Platform	Atom			Atom	Atom	Atom	
Model	<b>LR102-B18D/M/S</b>	<b>LR100-N18D/M/S</b>	<b>LR100-N16D/M/S</b>	<b>BT253</b>	<b>BT551/BT553</b>	<b>CD952 Series</b>	<b>CD951-C Series</b>
	same PCB						
Processor	Intel Atom D525/D425/N455		Intel Atom D510/N450/D410	Intel Atom E3800 Series, Intel Celeron		Intel Atom D2550/N2800/N2600	
Memory	2 DDR3 SODIMM up to 4GB / 2 DDR3 SODIMM up to 2GB			2GB/4GB DDR3L <b>ECC</b> memory down	2GB/4GB DDR3L memory down	2GB DDR3 onboard	1 DDR3 SODIMM up to 4GB/ 1 DDR3 SODIMM up to 2GB
Display	VGA, LVDS	VGA, LVDS		VGA, LVDS, HDMI	VGA, LVDS, DP	DVI-I or VGA + micro HDMI	VGA, LVDS
LAN	1	2		2	2	2	2
Expansion	1 PCIe x1 1 Mini PCIe 1 PCI 1 connector for daughterboard expansion	1 PCIe x1 1 PCI		3 Mini PCIe (USB, PCIe, mSATA, LPC, 3G) <b>1 SIM</b>	1 Mini PCIe (USB, PCIe)	3 Mini PCIe 1 SIM	1 Mini PCIe
SATA	3 SATA 2.0 1 CF	3 SATA 2.0 1 CF		1 SATA 2.0 eMMC (optional)	1 SATA 2.0 eMMC (optional)	1 mSATA 1 CFast	1 SATA 2.0 1 CF
USB	8 USB 2.0	10 USB 2.0		1 USB 3.0 5 USB 2.0	1 USB 3.0 5 USB 2.0	4 USB 2.0	6 USB 2.0
COM	2	4		6	3	2	6
Parallel	N/A			N/A	N/A	N/A	N/A
LPC*	N/A			N/A	N/A	N/A	N/A
DIO	8-bit			N/A	8-bit	8-bit or isolated 4-bit	8-bit
SSD	N/A			N/A	N/A	N/A	N/A
IDE	N/A	1		N/A	N/A	N/A	1
Audio	HD Audio			HD Audio	HD Audio	HD Audio	HD Audio
AMT	N/A			N/A	N/A	N/A	N/A
TPM	optional			optional	optional	N/A	N/A
Power	ATX			<b>9~36V DC-in</b>	12V (BT551)/ 15~36V (BT553) DC-in or 4-pin (optional)	12~24V DC-in	<b>12V DC-in / 4-pin (optional)</b>
Compliance	N/A			N/A	N/A	N/A	N/A
Carrier Board	N/A			N/A	N/A	N/A	N/A
Operating Temp.	0°C to 60°C			0°C to 60°C (Atom, Celeron) 0°C to 85°C (Celeron) -20°C to 85°C (Atom)	0°C to 60°C (Atom, Celeron) -20°C to 70°C (Celeron) -40°C to 85°C (Atom)	0°C to 60°C	

\*LPC connector supports the additional COM/Parallel ports



# Intel Atom Board-level Products

## COM Express

Form Factor	COM Express Mini		COM Express Compact		
Application	Industrial Automation, Transportation, Medical				
Chipset	<b>N/A</b>	<b>NM10</b>	<b>N/A</b>	<b>NM10</b>	<b>ICH8M</b>
Platform	Atom	Atom	Atom	Atom	Atom
Model	<b>BT9A3</b>	<b>CD9A3</b>	<b>BT968</b>	<b>CD905-B</b>	<b>LR905-B18D/S/M</b>
Processor	Intel Atom E3800 Series, Intel Celeron	Intel Atom D2550/N2800/N2600	Intel Atom E3800 Series, Intel Celeron	Intel Atom D2550/N2800/N2600	Intel Atom D525/D425/N455
Memory	2GB/4GB DDR3L memory down	2GB DDR3 memory down	2 DDR3L SODIMM up to 8GB / 1 DDR3L SODIMM up to 4GB	1 DDR3 SODIMM up to 4GB/ 1 DDR3 SODIMM up to 2GB	
Display	LVDS, <b>DDI (HDMI/DVI/DP)</b>	LVDS, <b>DDI (HDMI/DVI/DP)</b>	VGA, LVDS, <b>DDI (HDMI/DVI/DP)</b>	VGA, LVDS	VGA, LVDS
LAN	1	1	1	1	1
Expansion	3 PCIe x1 1 LPC, 1 SMBus, 1 I <sup>2</sup> C, 2 serial eMMC (optional)	3 PCIe x1 1 LPC, 1 SMBus, 1 I <sup>2</sup> C, 2 serial	3 PCIe x1 1 LPC, 1 SMBus, 1 I <sup>2</sup> C, 2 serial eMMC (optional)	4 PCIe x1 4 PCI 1 LPC, 1 I <sup>2</sup> C	5 PCIe x1 4 PCI 1 LPC, 1 SMBus
SATA	2 SATA 2.0	2 SATA 2.0	2 SATA 2.0	2 SATA 2.0	3 SATA 2.0
USB	1 USB 3.0 8 USB 2.0	8 USB 2.0	1 USB 3.0 8 USB 2.0	8 USB 2.0	8 USB 2.0
COM	N/A	N/A	N/A	N/A	N/A
Parallel	N/A	N/A	N/A	N/A	N/A
LPC*	N/A	N/A	N/A	N/A	N/A
DIO	8-bit	8-bit	8-bit	8-bit	8-bit
SSD	N/A	optional	N/A	N/A	N/A
IDE	N/A	N/A	N/A	1	1
Audio	HD Audio	HD Audio	HD Audio	HD Audio	HD Audio
AMT	N/A	N/A	N/A	N/A	N/A
TPM	N/A	N/A	optional	N/A	N/A
Power	N/A	N/A	N/A	N/A	N/A
Compliance	Mini R2.1, Type 10	Mini R2.1, Type 10	Comapct R2.1, Type 6	Comapct R2.0, Type 2	Comapct R1.0, Type 2
Carrier Board	COM100-B	COM100-B	COM331-B	COM330-B COM630-B	COM630-B
Operating Temp.	0°C to 60°C (Atom, Celeron) -20°C to 70°C (Atom) -40°C to 85°C (Atom)	0°C to 60°C	0°C to 60°C (Atom, Celeron) -20°C to 70°C (Atom) -40°C to 85°C (Atom)	0°C to 60°C	0°C to 60°C

\*LPC connector supports the additional COM/Parallel ports



# Intel Atom Board-level Products

## Qseven

Form Factor	Qseven			
Application	Industrial Automation			
Chipset	N/A	EG20T		
Platform	Atom	Atom	Atom	Atom
Model	BT700	QB702-B	QB701-B	QB700-B
Processor	Intel Atom E3800 Series, Celeron J1900/N2930/N2807	Intel Atom E600 Series		
Memory	2GB/4GB DDR3L onboard	1GB DDR2 onboard	512MB/1GB/2GB DDR2 SDRAM onboard	512MB DDR2 SDRAM onboard
Display	LVDS, DDI (HDMI/DVI/DP)	LVDS, SDVO		
LAN	1	1	1	1
Expansion	3 PCIe x1 1 LPC, 1 SMBus, 1 I <sup>2</sup> C, 1 UART eMMC (optional) 1 SDIO	3 PCIe x1 1 LPC, 1 SMBus, 1 I <sup>2</sup> C, 1 serial 1 CAN-bus 1 SDIO/MMC 1 ExpressCard	3 PCIe x1 1 LPC, 1 SMBus, 1 I <sup>2</sup> C, 1 serial 1 CAN-bus 1 SDIO/MMC	
SATA	2 SATA 2.0	2 SATA 2.0	2 SATA 2.0	2 SATA 2.0
USB	1 USB 3.0 6 USB 2.0	8 USB 2.0	7 USB Host 1 USB Host/Client	6 USB 2.0 1 USB Client
COM	N/A	N/A	N/A	N/A
Parallel	N/A	N/A	N/A	N/A
LPC*	N/A	N/A	N/A	N/A
DIO	N/A	N/A	N/A	N/A
SSD	N/A	optional	optional	N/A
IDE	N/A	N/A	N/A	N/A
Audio	HD Audio	HD Audio	HD Audio	HD Audio
AMT	N/A	N/A	N/A	N/A
TPM	optional	optional	optional	N/A
Power	N/A	N/A	N/A	N/A
Compliance	Qseven R2.0	Qseven R1.2	Qseven R1.2	Qseven R1.1
Carrier Board	Q7X-151	Q7-100	Q7-100	Q7-951
Operating Temp.	0°C to 60°C (Atom, Celeron) -20°C to 70°C (Atom) -40°C to 85°C (Atom)	-40°C to 85°C	0°C to 60°C	0°C to 60°C

\*LPC connector supports the additional COM/Parallel ports