

AL701

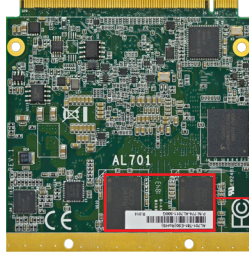
Atom



TOP

Intel Atom® Processor E3900 Series

LPDDR4



BOTTOM

LPDDR4

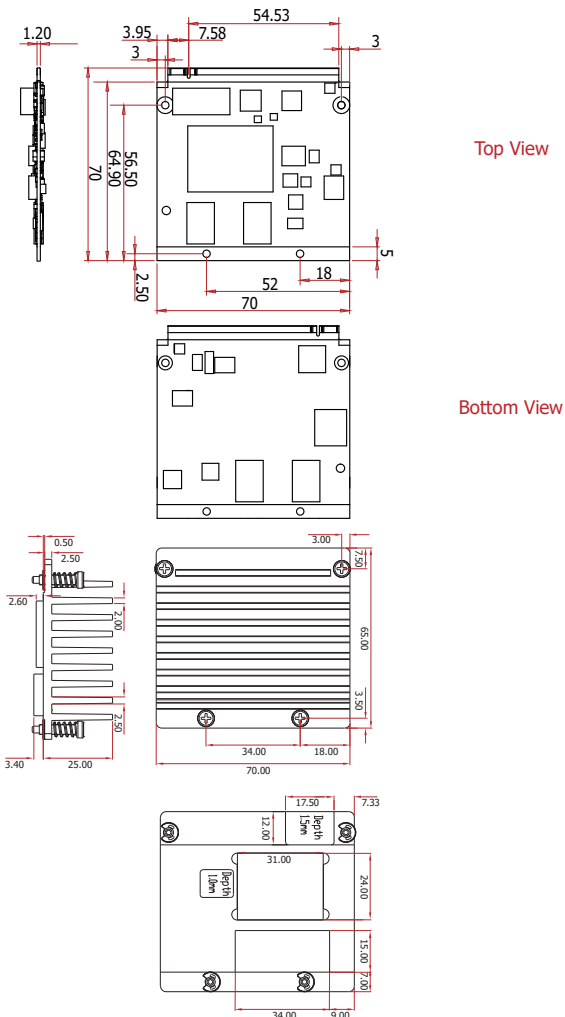
Features

- 4GB/8GB LPDDR4 Dual Channel Memory Down
- 1 DDI*, 1 LVDS*/(eDP + DDI)
- Supports triple displays: eDP+2DDI
- DP++ resolution supports up to 4096x2160 @ 60Hz
- Multiple expansions: 4 PCIe x1
- Rich I/O: 1 Intel GbE, 1 USB 3.0, 8 USB 2.0

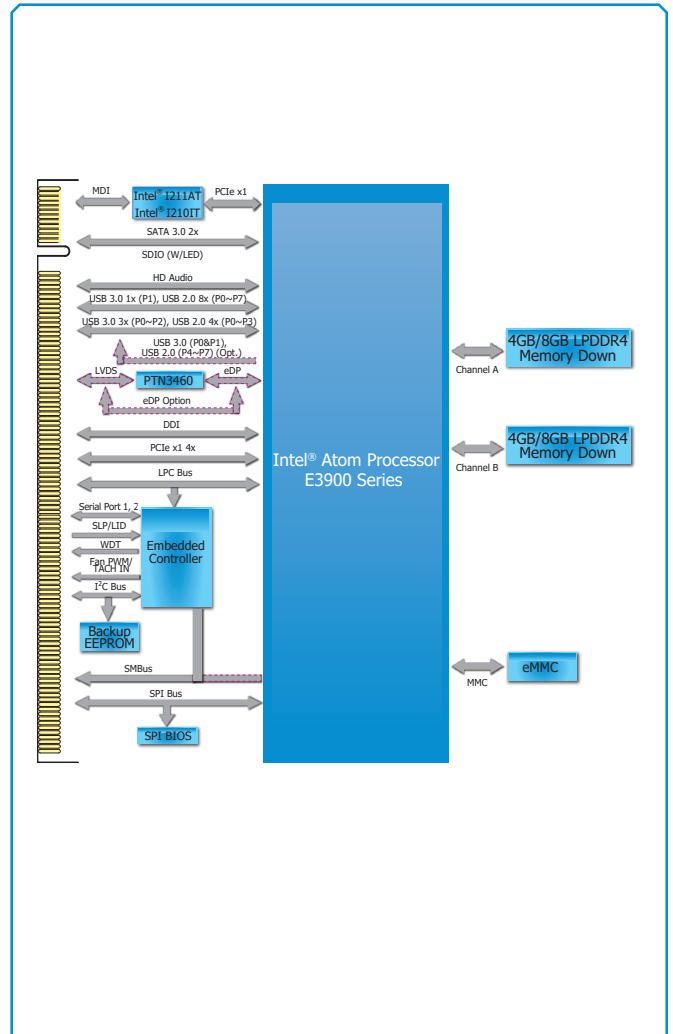
* Populated by default



Mechanical Drawing



Block Diagram



AL701

► Specifications

SYSTEM	Processor	Intel Atom® Processor E3900 Series, BGA 1296 Intel Atom® x7-E3950 Processor, Quad Core, 2M Cache, 1.6GHz (2.0GHz), 12W Intel Atom® x5-E3940 Processor, Quad Core, 2M Cache, 1.6GHz (1.8GHz), 9.5W Intel Atom® x5-E3930 Processor, Dual Core, 2M Cache, 1.3GHz (1.8GHz), 6.5W Intel® Pentium® Processor N4200, Quad Core, 2M Cache, 1.1GHz (2.5GHz), 6W Intel® Celeron® Processor N3350, Dual Core, 2M Cache, 1.1GHz (2.4GHz), 6W	
	Memory	4GB/8GB LPDDR4 Memory Down	Dual Channel LPDDR4 3200MHz
	BIOS	AMI SPI 128Mbit (supports UEFI boot only)	
GRAPHICS	Controller	Intel® HD Graphics Gen9LP Series	
	Feature	OpenGL 5.0, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H.265, VP8, VP9, MVC HW Encode: AVC/H.264, JPEG/MJPEG, HEVC/H.265, VP8, VP9, MVC	
	Display	1 x DDI (HDMI/DVI/DP++) 1 x LVDS/(eDP+DDI) (DDI available upon request)	LVDS: NXP PTN3460, 24-bit, dual channel, resolution up to 1920x1200 @ 60Hz HDMI: resolution up to 3840x2160 @ 30 Hz DP++: resolution up to 4096x2160@60Hz eDP: resolution up to 3840x2160 @ 60Hz
	Dual/Triple Display	LVDS + DDI (Dual) eDP + DDI (Dual)	eDP+2DDI (Triple) (available upon request)
EXPANSION	Interface	4 x PCIe x1 (Gen 2) 1 x SDIO (with LED) 1 x LPC 1 x I ² C 1 x SMBus 1 x SPI 1 x UART (TX/RX)	
AUDIO	Interface	HD Audio	
ETHERNET	Controller	1 x Intel® I211AT (10/100/1000Mbps) (0~60°C) 1 x Intel® I210IT (10/100/1000Mbps) (-40 to 85°C)	
I/O	USB	1 x USB 3.0 + 8 x USB 2.0 3 x USB 3.0 + 4 x USB 2.0 (option)	
	SATA	2 x SATA 3.0 (up to 6Gb/s)	
	eMMC	Supports up to 32GB eMMC eMMC 5.0, BGA-153 Ball 8~32G(MLC mode)	
	GPIO	1 x 4-bit GPIO	
	CAN Bus	CAN Bus Function (only Linux support)	
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
SECURITY	FTPM	Enables or Disables the BIOS support for the security device	
POWER	Type	5V, 5VSB, VCC_RTC	
	Consumption	TBD	
OS SUPPORT (UEFI ONLY)		Windows 10 IoT Enterprise 64-bit	Linux (Intel graphic driver available)
ENVIRONMENT	Temperature	Operating: 0 to 60°C -40 to 85°C	Storage: -40 to 85°C
	Humidity	Operating: 5 to 90% RH	Storage: 5 to 90% RH
	MTBF	TBD	
MECHANICAL	Dimensions	Qseven form factor	70mm (2.76") x 70mm (2.76")
	Compliance	Qseven specification revision 2.1	
CERTIFICATIONS		CE, FCC Class B, RoHS	

► Ordering Information

Model Name	P/N	Processor	Memory	eMMC	LVDS/eDP	GbE	USB 3.0	USB 2.0	Power	Thermal	Temp.
AL701-B40-E30	770-AL7011-100G	x5-E3930	4 GB	N/A	LVDS	1	1	8	ATX/AT	Fanless	0 to 60°C
AL701-B40-E40	770-AL7011-200G	x5-E3940	4 GB	N/A	LVDS	1	1	8	ATX/AT	Fanless	0 to 60°C
AL701-T80-E50	770-AL7011-300G	x7-E3950	8 GB	N/A	LVDS	1	3	4	ATX/AT	Fanless	-40 to 85°C

Note: N4200 and N3350 are supported upon request with MOQ requirement.

► Packing List

• 1 AL701 board	
• 1 Heat sink	A71-008123-000G

► Optional Items

• Qseven Carrier Board	770-Q7X154-000G
• Heat spreader	A71-808321-000G