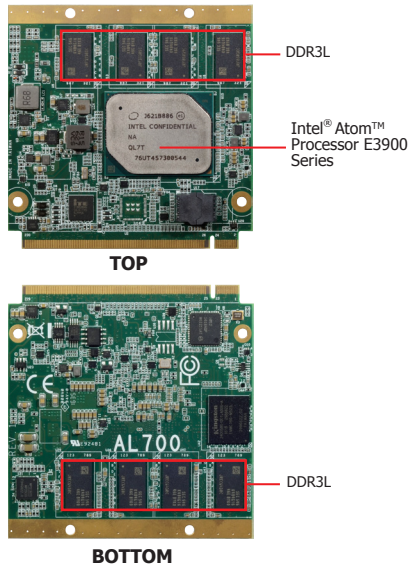


# AL700



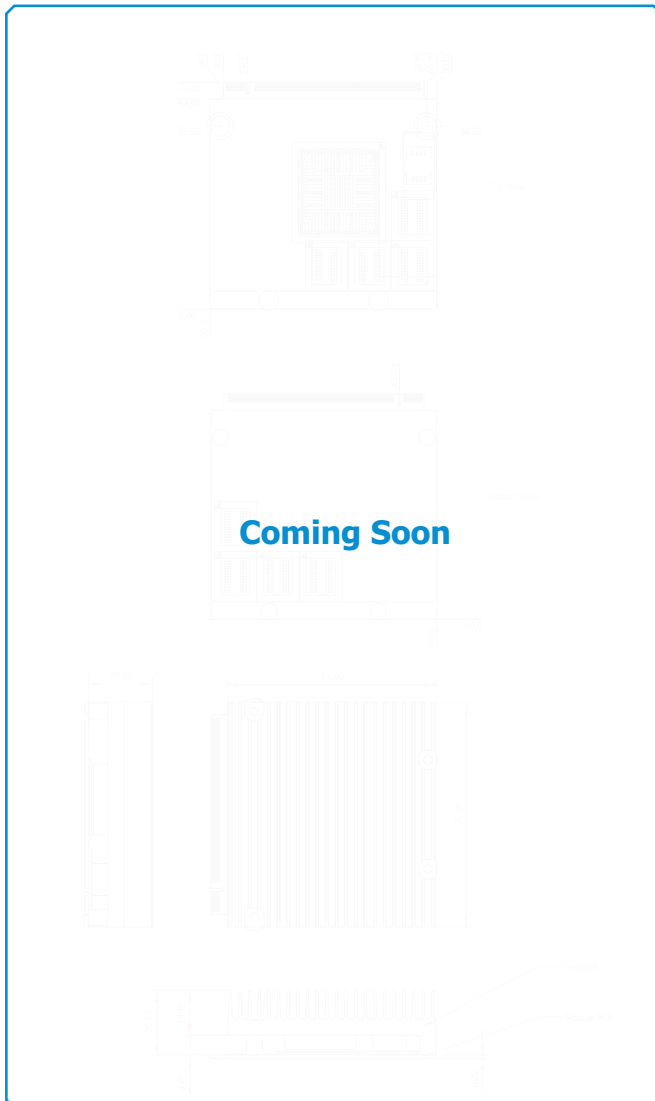
## Features

- 4GB/8GB DDR3L Dual Channel Memory Down
- 1 DDI\*, 1 LVDS\*/(eDP + DDI)
- Supports triple displays: eDP + 2 DDI
- eDP resolution supports up to 4096x2160 @ 60Hz
- Multiple expansions: 4 PCIe x1
- Rich I/O: 1 Intel GbE, 3 USB 3.0, 8 USB 2.0

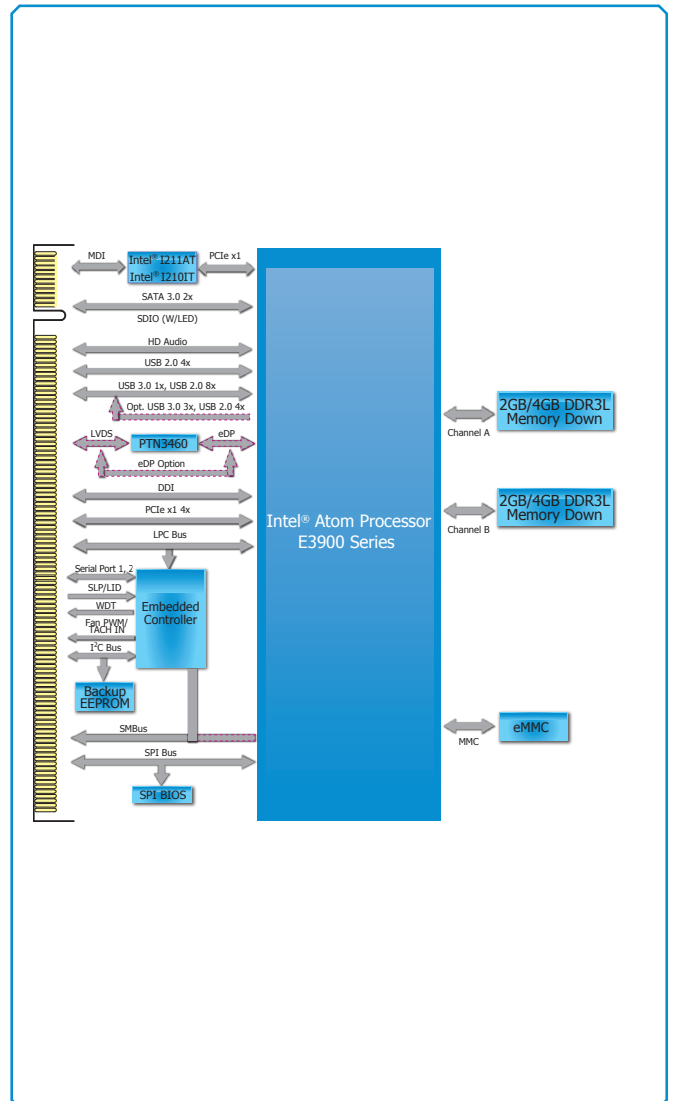
\* Populated by default



## Mechanical Drawing



## Block Diagram



## Specifications

<b>SYSTEM</b>	<b>Processor</b>	Intel® Atom™ Processor E3900 Family, 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	
	<b>Memory</b>	4GB/8GB DDR3L Memory Down	Dual Channel DDR3L 1600MHz
	<b>BIOS</b>	AMI SPI 128Mbit	
<b>GRAPHICS</b>	<b>Controller</b>	Intel® HD Graphics	
	<b>Feature</b>	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	
	<b>Display</b>	1 x DDI (HDMI/DVI/DP++) 1 x LVDS/(eDP+DDI) (DDI available upon request)	LVDS: dual channel 24-bit, resolution up to 1920x1200 @ 60Hz HDMI: resolution up to 3840x2160 @ 30Hz DP++: resolution up to 4096x2160 @ 60Hz eDP: resolution up to 4096x2160 @ 60Hz
	<b>Dual/Triple Display</b>	LVDS + DDI (Dual) eDP + DDI (Dual) (available upon request)	eDP + 2 DDI (Triple) (available upon request)
<b>EXPANSION</b>	<b>Interface</b>	4 x PCIe x1 (Gen 2) 1 x SDIO (with LED) 1 x LPC 1 x I <sup>2</sup> C 1 x SMBus 1 x SPI 1 x UART (TX/RX)	
<b>AUDIO</b>	<b>Interface</b>	HD Audio	
<b>ETHERNET</b>	<b>Controller</b>	1 x Intel® I211AT (10/100/1000Mbps) (0~60°C) 1 x Intel® I210IT (10/100/1000Mbps) (-40 to 85°C)	
<b>I/O</b>	<b>USB</b>	1 x USB 3.0 + 8 x USB 2.0 2 x USB 3.0 + 6 x USB 2.0 (available upon request) 3 x USB 3.0 + 4 x USB 2.0 (available upon request)	
	<b>SATA</b>	2 x SATA 3.0 (up to 6Gb/s)	
	<b>eMMC</b>	1 x 8GB/16GB/32GB eMMC (available upon request)	
	<b>GPIO</b>	1 x 4-bit GPIO	
<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds	
<b>POWER</b>	<b>Type</b>	5V, 5VSB, VCC_RTC	
	<b>Consumption</b>	TBD	
<b>OS SUPPORT</b>		Windows 10 IoT Enterprise 64-bit	Debian 8 (with VESA graphic driver) CentOS 7 (with VESA graphic driver) Ubuntu 15.10 (Intel graphic driver available) Yocto Project v2.0
<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: 0 to 60°C -40 to 85°C	Storage: -40 to 85°C
	<b>Humidity</b>	Operating: 5 to 90% RH	Storage: 5 to 90% RH
	<b>MTBF</b>	TBD	
<b>MECHANICAL</b>	<b>Dimensions</b>	Qseven form factor	70mm (2.76") x 70mm (2.76")
	<b>Compliance</b>	Qseven specification revision 2.1	

## Ordering Information

Model Name	P/N	Processor	Memory Down	LVDS/eDP	USB 3.0	USB2.0	eMMC	Power	Thermal	Temperature
AL700-B40-E30	770-AL7001-300G	x5-E3930	4GB DDR3L	LVDS	1	8	0	ATX/AT	Fanless	0°C to 60°C
AL700-B40-E40	770-AL7001-200G	x5-E3940	4GB DDR3L	LVDS	1	8	0	ATX/AT	Fanless	0°C to 60°C
AL700-B40-E50	770-AL7001-100G	x7-E3950	4GB DDR3L	LVDS	1	8	0	ATX/AT	Fanless	0°C to 60°C
AL700-T40-E30	770-AL7001-600G	x5-E3930	4GB DDR3L	LVDS	1	8	0	ATX/AT	Fanless	-40°C to 85°C
AL700-T40-E40	770-AL7001-500G	x5-E3940	4GB DDR3L	LVDS	1	8	0	ATX/AT	Fanless	-40°C to 85°C
AL700-T81-E40	770-AL7001-400G	x5-E3940	8GB DDR3L	LVDS	1	8	16GB	ATX/AT	Fanless	-40°C to 85°C

The following specifications will be available upon request. Please contact your sales representative for more information.

Model Name	Temperature	Memory Down	eMMC	Processors
AL700	- B B: 0°C to 60°C T: -40°C to 85°C	4 4: 4GB 8: 8GB	0 0: None 8: 8GB 1: 16GB 3: 32GB	- E50 E50: Intel® Atom™ x7-E3950, Quad Core, 2M Cache, 1.6GHz (2.0GHz), 12W E40: Intel® Atom™ x5-E3940, Quad Core, 2M Cache, 1.6GHz (1.8GHz), 9.5W E30: Intel® Atom™ x5-E3930, Quad Core, 2M Cache, 1.3GHz (1.8GHz), 6.5W N00: Intel® Pentium® N4200, Quad Core, 2M Cache, 1.1GHz (2.5GHz), 6W N50: Intel® Celeron® N3350, Dual Core, 2M Cache, 1.1GHz (2.4GHz), 6W

## Packing List

- 1 AL700 board
- 1 DVD
- 1 Heat sink: TBD

## Optional Items

- Q7X-151-RC carrier board kit: 770-Q7X153-000G
- Heat spreader: TBD