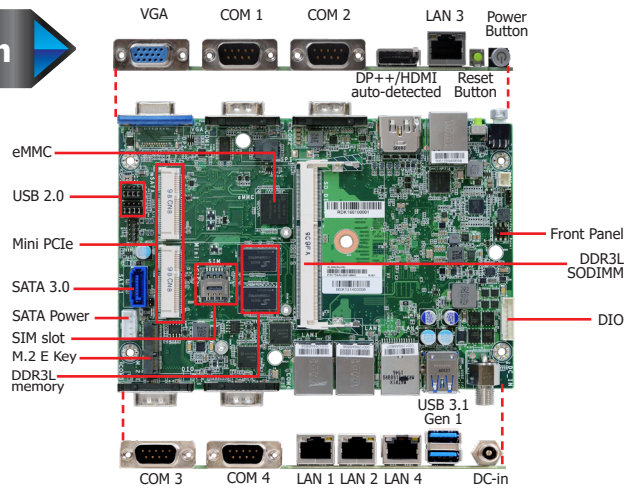
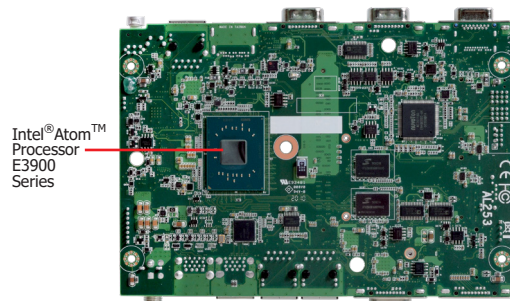


# AL253

Atom



Top View



Bottom View

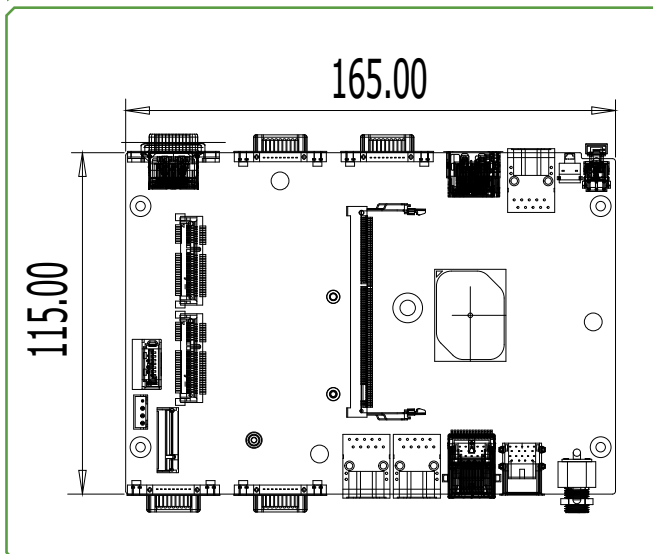
## Features

- Memory up to 8GB: Single channel DDR3L SODIMM + 2G/4G/8G DDR3L memory on board
- Two independent displays: DP/HDMI (auto-detection) + VGA/DP
- DP resolution up to 4096x2160 @ 60Hz
- Multiple OS support: Win 7/Win 10/Linux
- Rich I/O: max. 4 Intel GbE, 5 COM, 4 USB 3.0, 2 USB 2.0

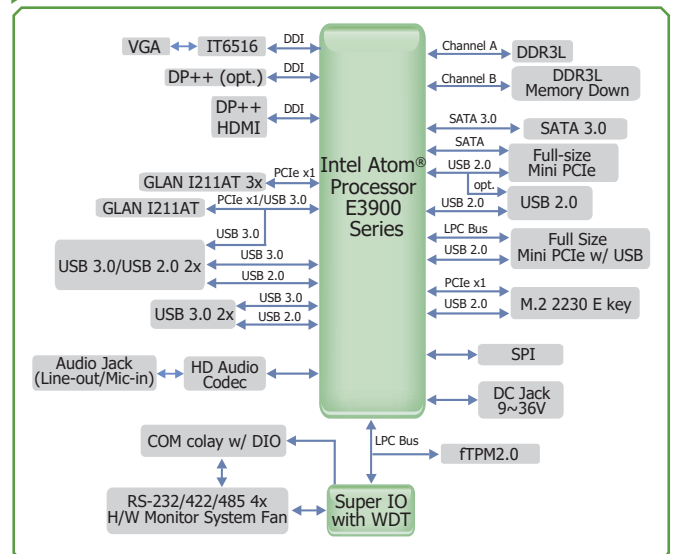
\* Populated by default



## Mechanical Drawing



## Block Diagram



## Specifications

<b>SYSTEM</b>	<b>Processor</b>	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), 6W Intel® Pentium® Processor N4200E, Quad Core, 2M Cache, 1.1GHz (2.5GHz), 6W	
	<b>Memory</b>	Single Channel DDR3L SODIMM 2G/4G/8G DDR3L memory on board	Total memory up to 8GB
	<b>BIOS</b>	AMI SPI 128Mbit (support UEFI/legacy mode)	
<b>GRAPHICS</b>	<b>Controller</b>	Intel® HD Graphics	
	<b>Feature</b>	OpenGL 4.2, Direct X 11.1, OpenCL 1.2, OGL ES 3.0 HW Decode: H.264, MPEG2, VC1, VP8, H.265, MPEG4 HW Encode: H.264, MPEG2, MPEG4	
	<b>Display</b>	1 x DP/HDMI (auto-detection) 1 x VGA/DP	DP: resolution up to 4096x2160 @ 60Hz HDMI: resolution up to 3840x2160 @ 30Hz VGA: resolution up to 1920x1200 @ 60Hz
	<b>Dual Displays</b>	DP++/HDMI + VGA/DP	
<b>STORAGE</b>	<b>eMMC</b>	1 x 8G/16G/32G/64G (opt.)	
<b>EXPANSION</b>	<b>Interface</b>	1 x Full-size mSATA (SATA/LPC, USB is available by BOM option) 1 x Full-size Mini PCIe (USB2.0/reset/nano-SIM, PCIe is available for config. with 4 LAN) 1 x M.2 (2230 E Key) (PCIe/USB2.0)	
<b>ETHERNET</b>	<b>Controller</b>	4 x Intel® I211AT PCIe, co-lay with I210IT (10/100/1000Mbps)	
<b>REAR I/O</b>	<b>Ethernet</b>	up to 4 x GbE (RJ-45) (1 x GbE colay 2 x USB 3.0)	
	<b>Serial</b>	4 x RS-232/422/485 (1 x RS-232/422/485 colay 1 x 8-bit DIO by jumper setting)	
	<b>USB</b>	up to 4 x USB 3.0 (2 x USB 3.0 colay 1 x GbE)	Support up to USB 3.0 Super Speed
	<b>Display</b>	1 x DP++/HDMI (auto-detection) 1 x VGA/DP	
<b>INTERNAL I/O</b>	<b>USB</b>	2 x USB 2.0 (2.0mm pitch)	
	<b>SATA</b>	1 x SATA 3.0 (up to 6Gb/s, support SSD only)	1 x SATA Power
	<b>DIO</b>	1 x 8-bit DIO	
	<b>Other I/O</b>	1 x Front Panel	
<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds	
<b>SECURITY</b>	<b>TPM</b>	fTPM2.0	
<b>POWER</b>	<b>Type</b>	9~36V DC input	
	<b>Connector</b>	DC Jack	
	<b>Consumption</b>	TBD	
	<b>RTC Battery</b>	CR2032 Coin Cell, link main board with cable	
<b>OS SUPPORT</b>	<b>Microsoft/Linux</b>	Windows 10 IoT Enterprise 64-bit Windows 7 (/WES7) 32/64-bit (project support only)	Linux
<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: -20 to 60°C/-40 to 70°C (E3930 only)	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>	4" SBC Form Factor	165mm (6.49") x 115mm (4.53")
	<b>Height</b>	PCB: 1.6mm	Top Side: TBD, Bottom Side: TBD