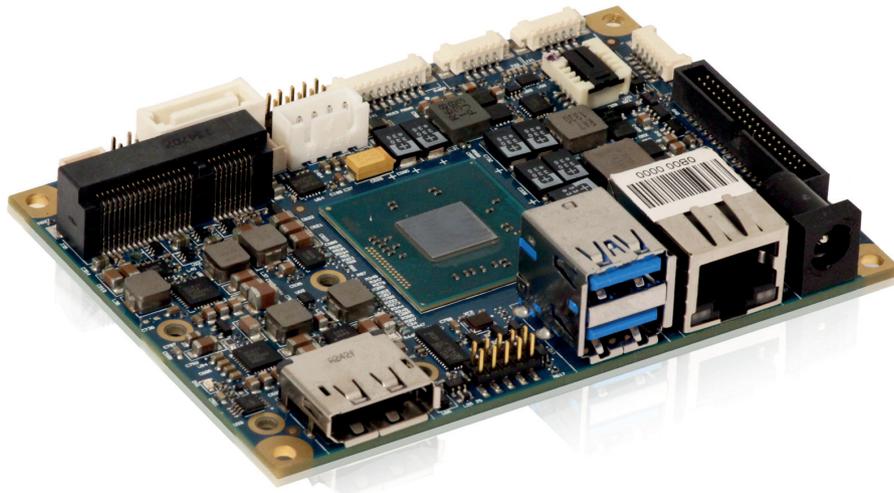


## » pITX-E38 «



## Ultrasmall 2.5" Pico-ITX board with Intel® Atom™ E38XX System on Chip (SoC)

- » Intel® Atom™ E38xx SoC (1, 2 or 4 cores), TDP: 5-10W
- » SO-DIMM Socket DDR3L-1333 Memory (up to 8GB)
- » Intel® Gen7 Graphics, OpenGL 3.0, OpenCL 1.2, DX11, H.264, MPEG2, MCV, VC-1, VP8
- » LVDS 24Bit dual channel and Display Port 1.1a
- » 10/100/1000Mbit RJ45 Ethernet LAN, SATA, mSATA or mPCIe in mPCIe connector
- » USB 2.0 & USB 3.0 ports, Serial ports 16550 UART, GPIOs
- » Bootable high capacity micro SD Card slot
- » Lockable DC power connector (5V)
- » Extended temperature operating from -25°C to +75°C (E1)

## pITX-E38

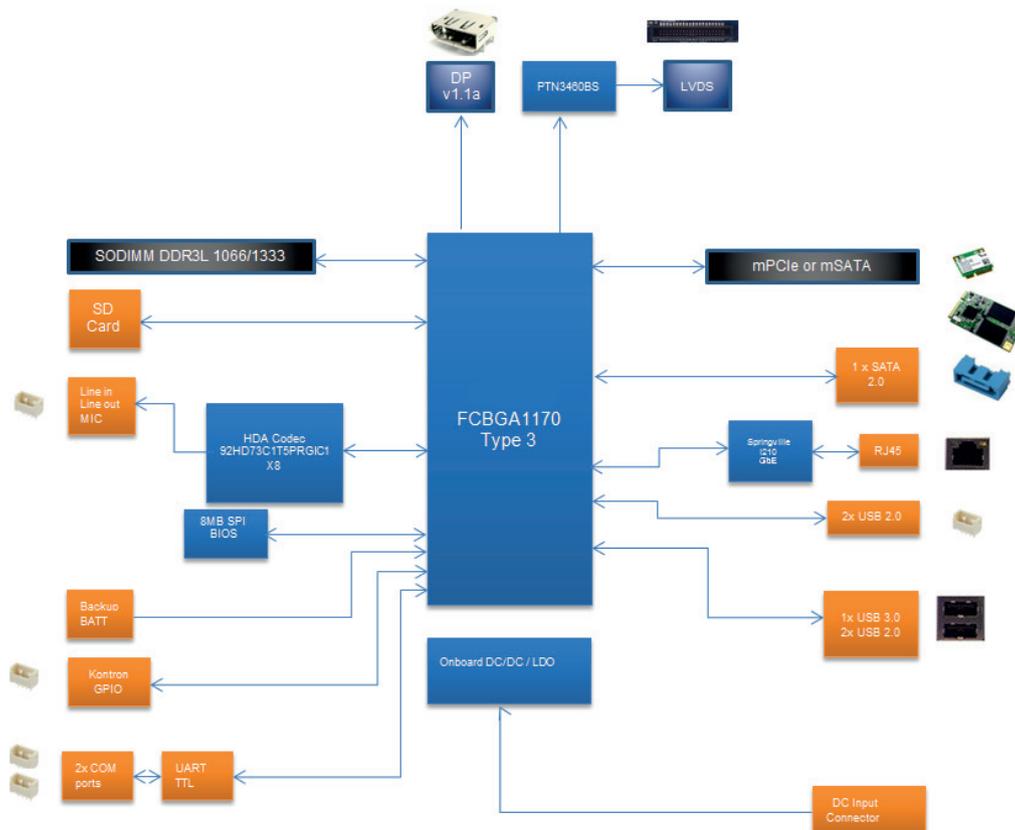
The pITX-E38 form factor is ideal for compact PC applications. Due to its small size (100 x 72mm) it's easily integrated into virtually any system with severe space constraints and/or thermal restrictions, where other form factor simply will not fit the requirements. The compact size of pITX-E38 gives the board a unique advantage over traditional PC based motherboards like the mITX or Flex to become the preferred choice in any compact applications. The industry target for smaller size and lower power plays a bigger role these days. The pITX form factor is becoming more popular due to its increasing performance and substantial range of connectivity options, while still maintaining its compact size and low power consumption. Not only are pITX-E38 compact in size, but it also offers leading edge CPU and GPU performance with the next generation Intel® Atom™ System on Chip (SoC) and a large variety of high-speed interfaces.

The pITX-E38 offers two display outputs delivering high resolution video content to LVDS driven panels or Display Port monitor as well as 3D graphics performance in a low power envelope. Not only does the low power Intel Atom™ Core provide high resolution video playback, 3D graphics and CPU core performance, but it also offers a wide range of standard interfaces. This makes the pITX-E38 board ideal for applications where compact size and standard interfaces like Gigabit Ethernet, SATA, mSATA & mPCIe are desired in a low power environment. Supporting OS bootable high capacity, high speed microSD media cards shrinks the footprint even more as applications do not necessarily require external use of SSD or HDD devices connected to the SATA port. Furthermore, the pITX-E38 board supports high-speed DDR3L memory modules which can be operated over a wide temperature range, with a passively Intel®

Atom™ core cooled environment and powered by a single supply of 5Volts. The pITX-E38 supports a wide variety of Embedded and non-Embedded operating systems and 7 years supply longevity.

### Typical Applications

- » **POS/POI:** Higher Graphics and CPU core performance, Low power, multi display support
- » **Medical:** Higher Graphics and CPU core performance, wide temperature range, longevity
- » **Industrial Automation:** Wide range of I/Os, wide temperature range, compact size, longevity
- » **Digital signage:** Wide temperature range, multi display support, low power, wide range of I/Os
- » **Future-oriented Devices:** Due to Display Port and LVDS, low power, compact size



## Technical Information

<b>SOC</b>	Intel® Atom™ E38xx SoC (1, 2 or 4 cores) up to QC 1.91GHz, Low power 5-10W TDP
<b>Memory</b>	1x SO-DIMM Socket supporting DDR3L-1333/1066 (up to 8 GB) (E3815/E3826 only supports DDR3L-1066)
<b>Graphics</b>	2x independent graphic outputs (LVDS dual channel 24bit, DP 1.1a) LVDS up to 1920x1200 / DP up to 2560x1600
<b>Ethernet</b>	1x RJ45 10/100/100 Mb/s Ethernet
<b>SATA</b>	1x SATA 2.0, 1x mSATA shared with mPCIe
<b>USB</b>	3x USB 2.0 and 1x USB2.0/3.0 (2 on front I/O, 2 internal)
<b>Mass Storage</b>	1x microSD card slot (SDXC)
<b>Serial Ports</b>	2x Serial ports UART 16550 (3v3 digital inputs/outputs)
<b>I/O Features</b>	1x mPCIe® 2.0 port (x1 lane), 8x GPIOs, SUSLED, SATALED
<b>Audio</b>	HD Analog audio interface (Line-In, Line-Out, Mic-In)
<b>Power Supply</b>	Single supply 5V DC, Internal and external lockable connector
<b>Battery</b>	Battery module included with board
<b>Temperature</b>	Operating -25°C to +75°C (E1)
<b>Dimensions</b>	100 x 72 mm (Pico-ITX)
<b>MTBF</b>	Prediction Model: Telcordia Issue 2 Method I Case 3, 40°C and 75°C
<b>Regulatory</b>	Comply with Emission: EN55022, Immunity EN55022. RoHS
<b>Safety</b>	IEC 60950-1: 2005, 2nd Edition UL 60950-1, CSA C22.2 No. 60950-1
<b>Cooling solutions</b>	Passive (5W SoC) and active (7-10W SoC) cooling solutions
<b>Operating systems</b>	Win7, Win8, WES7, WES8, Linux, VxWorks

## Ordering Information

Article	Part No.	Description
<a href="#">pITX-E38 QC 1.91GHz (E3845)</a>	810600-4500	Board, pITX-E38 QC 1.91GHz (E3845), with active cooler solution
<a href="#">pITX-E38 DC 1.46GHz (E3826)</a>	810601-4500	Board, pITX-E38 DC 1.46GHz (E3826), with passive cooler solution
<a href="#">pITX-E38 SC 1.46GHz (E3815)</a>	810602-4500	Board, pITX-E38 SC 1.46GHz (E3815), with passive cooler solution
<b>Recommended Memory Modules</b>		
Grade W -40°C to +85°C	1055-9445	DDR3L, 1GB, 1600MHZ, PC3-12800 SODIMM G/W
Grade W -40°C to +85°C	1055-9446	DDR3L, 2GB, 1600MHZ, PC3-12800 SODIMM G/W
Grade W -40°C to +85°C	1055-9447	DDR3L, 4GB, 1600MHZ, PC3-12800 SODIMM G/W
Grade W -40°C to +85°C	1055-9448	DDR3L, 8GB, 1600MHZ, PC3-12800 SODIMM G/W
Standard Grade 0°C to +60°C	1055-9939	DDR3L, 2GB, 204P, 1600MHZ, PC3-12800 SODIMM
Standard Grade 0°C to +60°C	1055-9941	DDR3L, 4GB, 204P, 1600MHZ, PC3-12800 SODIMM
Standard Grade 0°C to +60°C	1055-9942	DDR3L, 8GB, 204P, 1600MHZ, PC3-12800 SODIMM