DFI-ITOX®

○ Revision Control   ○ Long Life Cycle

LR102-B18M
Intel® Atom™ N455 Mini-ITX Board
with optional XLT0-2C1G2U daughterboard

LR102-B18M Motherboard

PROCESSOR
- Intel® Atom™ N455 (Single-Core)
- 1.66GHz core frequency
- Cooling option: heat sink (fanless solution)

SOUTHBRIDGE
- Intel® ICH8M I/O Controller Hub

SYSTEM MEMORY
- Two 204-pin SODIMM sockets
- Supports DDR3 667MHz only
- Supports up to 2GB system memory
- Single channel memory interface

ONBOARD GRAPHICS FEATURES
- Intel® GMA 3150
  - Contains a refresh of the 3rd generation graphics core
- 200MHz render clock frequency
- Display ports: LVDS and VGA
  - LVDS: Chrontel CH7036; 18/24-bit single channel; resolution up to 1280x800 or 1366x768, 24bpp
  - Analog VGA: resolution up to 1400x1050 @ 60Hz
- DirectX 9 compliant Pixel Shader 2.0

ONBOARD AUDIO FEATURES
- Realtek ALC262 2-channel High Definition Audio
- High performance DACs with 100dB SNR
- ADCs with 90dB SNR
- Two stereo DACs support 24-bit PCM format for stereo audio play-back
- Three stereo ADCs support 20-bit PCM format for multiple input streaming
- S/PDIF audio interface

ONBOARD LAN FEATURES
- Intel 82567V Gigabit Ethernet Phy
- Supports 10Mbps, 100Mbps and 1Gbps data transmission
- IEEE 802.3 (10/100Mbps) and IEEE 802.3ab (1Gbps) compliant

SERIAL ATA INTERFACE
- 3 Serial ATA ports compliant with SATA 1.0 specification
- SATA speed up to 3Gb/s (SATA 2.0)

REAR PANEL I/O PORTS
- 1 mini-DIN-6 port for PS/2 mouse and PS/2 keyboard ports
- 1 DB-9 RS232/422/485 serial port
  - Pins 1 and 9 of RS232 function as RS232 signal or power (selectable via jumper)
- 1 DB-15 VGA port
- 1 RJ45 LAN port
- 2 USB 2.0/1.1 ports
- 1 line-out jack

I/O CONNECTORS
- 3 connectors for 6 external USB 2.0/1.1 ports
- 1 connector for an external RS232/422/485 serial port
- 1 LVDS LCD panel connector
- 1 LCD/inverter power connector
- 1 8-bit DIO connector
- 1 DIO power connector
- 1 SMBus connector
- 1 front audio connector for line-out and mic-in jacks
- 1 CD-in connector
- 1 S/PDIF connector
- 3 Serial ATA connectors
- 1 24-pin ATX power connector
- 1 front panel connector
- 1 chassis intrusion connector
- 2 fan connectors

BIOS
- AMI BIOS
- SPI BIOS

EXPANSION SLOTS
- 1 PCIe x1 slot
- 1 mini PCIe x1 slot
- 1 PCI slot
- 1 CompactFlash socket
- 1 connector for daughterboard expansion
  - 3 PCIe x1
  - 2 USB 2.0
  - 1 LPC
  - 1 HDMI TMDS 1366x768 (max)
  - 3.3V, 5V, 12V, 3.3V standby, 5V standby, 3V battery

TRUSTED PLATFORM MODULE (TPM) - optional
- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

ENERGY EFFICIENT DESIGN
- ACPI v1.0a specification
- System Power Management
- Wake-On-Events include:
  - Wake-On-USB Keyboard/Mouse
  - Wake-On-LAN
  - Wake-On-Ring
  - RTC timer to power-on the system
- AC power failure recovery

DAMAGE FREE INTELLIGENCE
- Monitors CPU/system temperature and overheat alarm
- Monitors 5V/1.05V/1.5V/12V/3VSB/VBAT/VCORE voltages and failure alarm
- Monitors system fan speed and failure alarm
- Read back capability that displays temperature, voltage and fan speed
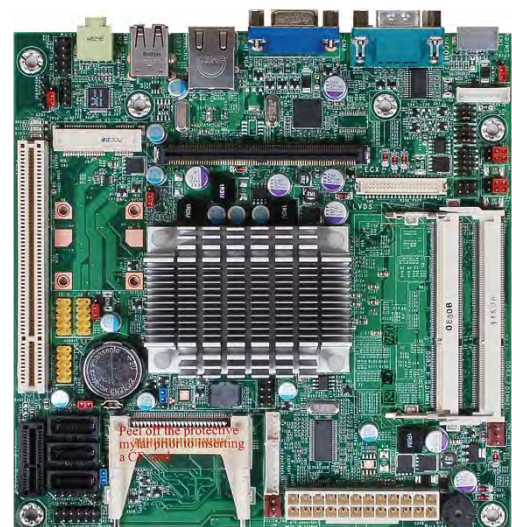- Watchdog timer function

TEMPERATURE
- 0°C to 60°C

HUMIDITY
- 10% to 90%

PCB
- Mini-ITX form factor
- 170mm (6.7") x 170mm (6.7")

USB 1

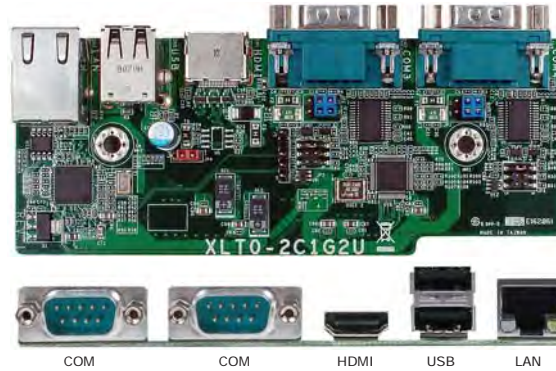PS/2   COM   VGA   LAN   USB 0   Line-out

XLT0-2C1G2U Daughterboard
(optional)

I/O PORTS

- 2 DB-9 RS232/422/485 serial ports
- 1 HDMI port
- 2 USB ports
- 1 LAN port

DIMENSIONS

- 130mm (5.11") x 51mm (2")

COM   COM   HDMI   USB   LAN

LR102-B18M + XLT0-2C1G2U

XLT0-2C1G2U Daughterboard

I/O of XLT0-2C1G2U

I/O of LR102-B18M