



## Main Features

- Embedded Intel® Atom Bay-trail-I SOC chip with 4 core support
- Embedded controller built in with EAPI support
- Support DDR3L memory down 1066/1333MHz up to 4GBytes
- Support onboard EMMC up to 8GBytes
- Support 4PCIe x1(Optional Port 4 if LAN is disabled)/1x USB 3.0/7x USB 2.0/2x SATA 2.0 and GbE
- 1x DP/ LVDS interfaces
- Dimension 84x 55mm (W x L)

## Product Overview

The ICES 501X is a COM Express® Type 10 mini size module that features Intel® Atom™ Quad-Core processor Bay-trail-I SOC solution. DDR3L Memory down chips 1066 / 1333MHz up to 4GB. The ICES 501X integrates with Intel® Gen7 Graphic engine to support dual displays of LVDS resolution up to 1366 x 768 resolutions and 1DP link with HDMI1.4a / DP1.2 configurations. The high performance ICES 501X COM Express module supports SATA, USB 2.0 & USB 3.0 / VGA/ DP (HDMI) / PCIE x 1.

## Specifications

### CPU Support

- Intel® Atom™ quad core Bay-trail-I SOC up to 1.91GHz.

### Main Memory

- DDR3L memory down 1066/1333MHz memory up to 4GB

### BIOS

- AMI system BIOS
- Plug and play support
- Advanced power management and advanced configuration & power interface support

### Display

- Intel® HD graphics with DX9 support
- One DP interfaces down to the carried board
- LVDS 18/24 bit interface

### Audio

- HD audio interface

### On-board LAN

- Intel® I210 GbE controller, support boot from LAN, wake on LAN
- Support PXE boot from LAN, wake on LAN function
- Signals down to I/O board

### Onboard-Storage

- Optional 4GB or 8GB: Micron EMMC chip on board

### COM Express Connector

- LVDS/HDA/2 x SATA/GbE/4PCIE x 1(Optional Port 4 if LAN is disabled) /7 x USB 2.0/1 x USB 3.0
- LPC bus / GPIO / SMBus (I2C)/ SPI BIOS

### Power Requirements

- +12V, VCC5,VCC3, VCORE, 5VSB Voltage detection
- Support both AT and ATX Power supply mode

### Dimensions

- 84mm (W) x 55mm (L)

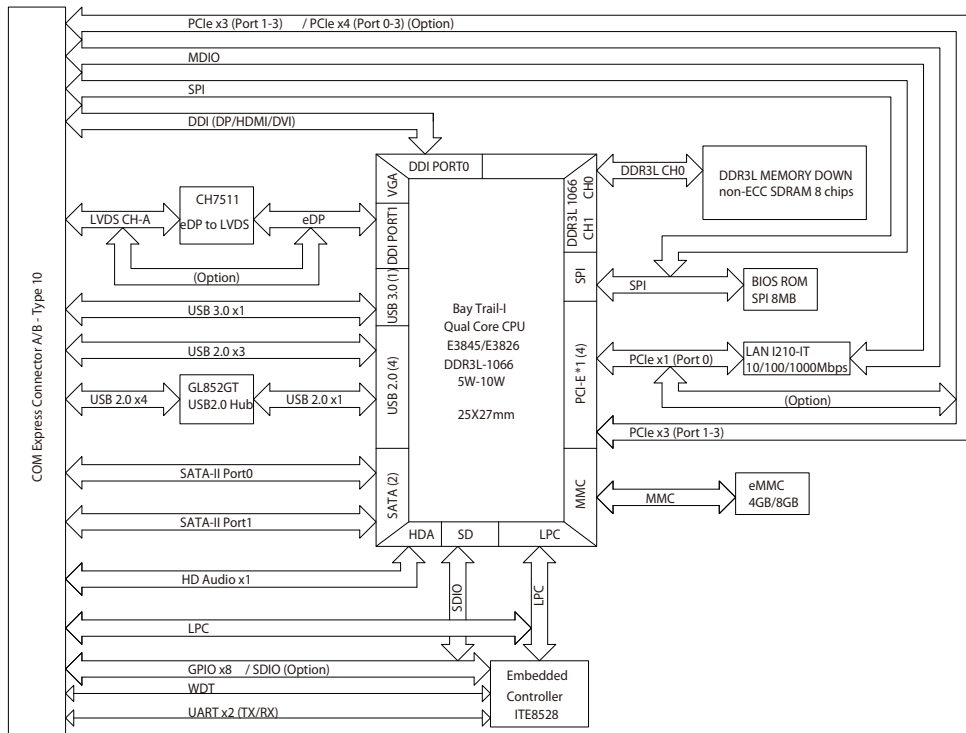
### Environment

- Board level operating temperatures: -40°C to 85°C
- Storage temperatures: -40°C to 85°C
- Relative humidity:
  - 10% to 90% (operating, non-condensing)
  - 5% to 95% (non-operating, non-condensing)

### Certifications

- Meet CE
- FCC class B

## Block Diagram



## Ordering Information

- ICES501X-E3845 (P/N: TBD)**  
 COM Express type 10 Compact Module Extended -40°C to + 85°C with Intel® Atom™ processor E3845/4C, 1.91GHz /DDR3L memory down with 4GByte SIZE/Onboard 8GBytes eMMC with PCIe/HDMI/LVDS/SATA/GbE
- ICES501X-E3826 (P/N: TBD)**  
 COM Express type 10 Compact Module Extended -40°C to + 85°C with Intel® Atom™ processor E3826/2C, 1.46GHz /DDR3L Memory down with 2GBytes/Onboard 4GBytes eMMC with PCIe/HDMI/LVDS/SATA/GbE