

## Main Features

- Intel Atom® x6000 processor
- 1 x DDR4 SO-DIMM with non-ECC SO-DIMM 3200 MHz up to 32GB
- Support triple display VGA, HDMI, LVDS
- 2 x Intel® GbE LAN, 2 x USB 3.2 (Gen1), 4 x USB 2.0, 3 x RS232, 1 x RS232/485/422, 1 x SATA 3.0, 8-bit GPIO, HD audio
- 1 x M.2 Key B
- TPM 2.0
- 12V or 24V

## Product Overview

EBC 358 is a 3.5-inch single-board computer designed for next-generation edge applications in the 5G era. It is equipped with Intel Atom® x6000E series with 40% higher performance than the previous generation platform, ECB 358 comes with up to 32GB of DDR4 SO-DIMM, offers greater flexibility and expandability than onboard memory. To further enhance its 5G connectivity, the EBC 358 is designed with M.2 and nano SIM slot compatible with 5G network. For reliable Ethernet connectivity in outdoor edge computing, the EBC 358 is equipped with dual Intel® i210 GbE Ethernet controllers for robust industrial LAN connectivity. Best for telematics applications.

The EBC 358 has an operating temperature range of 0°C to 60°C, making this design ideal for embedded applications operating in outdoor or semi-outdoor environments.

## Specifications

### CPU Support

- Intel Atom® x6000 series processors, BGA 1493
  - Intel Atom® x6425E processor, quad core, 1.5M cache, 2.0GHz (3.0GHz), 12W
  - Intel Atom® x6413E processor, quad core, 1.5M cache, 1.5GHz (3.0GHz), 9W
  - Intel Atom® x6211E processor, dual core, 1.5M cache, 1.3GHz (3.0GHz), 6W

### Main Memory

- 1 x DDR4 SO-DIMM with non-ECC SO-DIMM 3200 MHz up to 32GB

### BIOS

- AMI (UEFI)

### Display

- 1 x VGA (resolution up to 1920 x 1080@60Hz)
- 1 x HDMI 1.4b (resolution up to 3840 x 2160@30Hz)
- 1 x Dual channel 18/24bit LVDS, (resolution up to 1920 x 1080@60Hz)

### Storage

- 1 x SATA 3.0/1 x SATA power connector x 1(+5V)

### Expansion Slot

- 1 x Full size mPCIe with nano-SIM (support PCIe/USB 2.0 Interface)
- 1 x M.2 3042 Key B (support SATA/PCIe/USB 3.2 Gen1) with nano-SIM

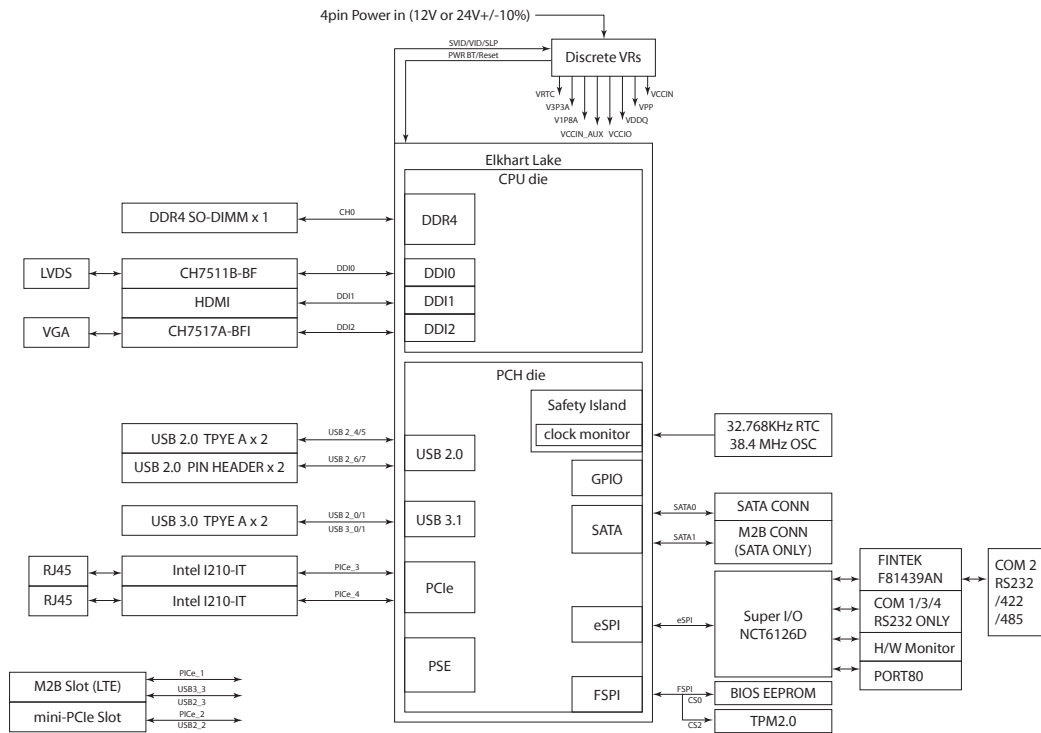
### Rear I/O

- 2 x USB 3.2 Gen 1
- 2 x GbE LAN (Intel® I210-IT)
- 2 x USB 2.0
- 1 x VGA, 1 x HDMI connector

### Internal I/O

- 2 x USB 2.0 (pin header)
- 4 x Serial ports:
  - 3 x RS232, 1 x RS232/485/422
- 1 x Front panel header, 8-bit digital I/O (4-In/4-Out)
- WDT, supports on board TPM 2.0
- HD Audio (Line-Out, SPK-Out, MIC-In)
- 1 x Fan connector
- 1 x 4-pin (2 x 2) ATX power connector

## Block Diagram



### Power Requirement

- 1 x 4-pin (2 x 2) ATX power connector
  - Input power DC 12V or 24V only
- Support both AT and ATX power supply mode

### Dimensions

- 3.5" SBC form factor, (146mm x 105mm)

### Environment

- Board level operation temperature: 0°C to 60°C
- Storage temperature: -40°C to 85°C
- Relative humidity:
  - 10% to 95% (operating, non-condensing)
  - 5% to 95% (non-operating, non-condensing)

### Certifications

- Meet CE/FCC Class A

## Ordering Information

### Barebone

- **EBC 358 (P/N: 10E00035800X0)**  
Intel Atom® x6425E processors, DDR4, VGA, HDMI, LVDS, 2 x USB 3.2 (Gen1), 4 x USB 2.0, 2 x GbE LAN, 1 x SATA 3.0, 3 x RS232, 1 x RS232/422/485, M.2 Key B and mini-PCIe

- **EBC 358-6211E (P/N: 10E00035801X0)**

Intel Atom® x6211E processors, DDR4, VGA, HDMI, LVDS, 2 x USB 3.2 (Gen1), 4 x USB 2.0, 2 x GbE LAN, 1 x SATA 3.0, 3 x RS232, 1 x RS232/422/485, M.2 Key B and mini-PCIe

- **EBC 358-6413E (P/N: 10E00035802X0)**

Intel Atom® x6413E processors, DDR4, VGA, HDMI, LVDS, 2 x USB 3.2 (Gen1), 4 x USB 2.0, 2 x GbE LAN, 1 x SATA 3.0, 3 x RS232, 1 x RS232/422/485, M.2 Key B and mini-PCIe

### Optional Accessories

- **EBC358X cooler kit (P/N: 685050203581F)**
- **EBC358 heat spreader kit (P/N: 685050403583F)**

\* Heat Spreader: Please note that the heat spreader is a thermal coupling device that comes in contact with the CPU through thermal gap fillers. It is designed to transfer the heat away from the CPU and is different to a heatsink in terms of cooling properties. Please do not consider it as a heatsink. Additional thermal gap fillers can be used on other components on the module to allow them to come in contact with the heat spreader for heat dissipation.