

## Main Features

- Intel® Atom® x6000 processor
- 1 x SO-DIMM DDR4 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), 3 x USB 2.0, 3 x RS232
- 1 x RS232/485/422, 1 x SATA3.0, 8-bit GPIO, HD audio
- 1 x M.2 Key B
- TPM 2.0
- 12V or 24 V auto detect

## Product Overview

The EBC 358X is an 3.5" SBC. It is equipped with Intel Atom® x6000 processor. It comes with four DDR4 SO-DIMM sockets up to 32GB DDR4 3200MHz with non-ECC support and integrated UHD graphic controller.

EBC 358X operates at a temperature range from -40°C to 80°C, this design is ideal for embedded applications that run in outdoor or semi-outdoor environments, such as outdoor systems installed in harsh environments, home automation, and thin clients.

3.5" SBC Target Market:

Energy and environment/traffic signal control and monitoring/speed cameras/railway gates/MRT-TVM/charging stations

## Specifications

### CPU/Chipset

- 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

- DDR4-3200 SO-DIMM sockets supported

### 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 18/24-bit 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

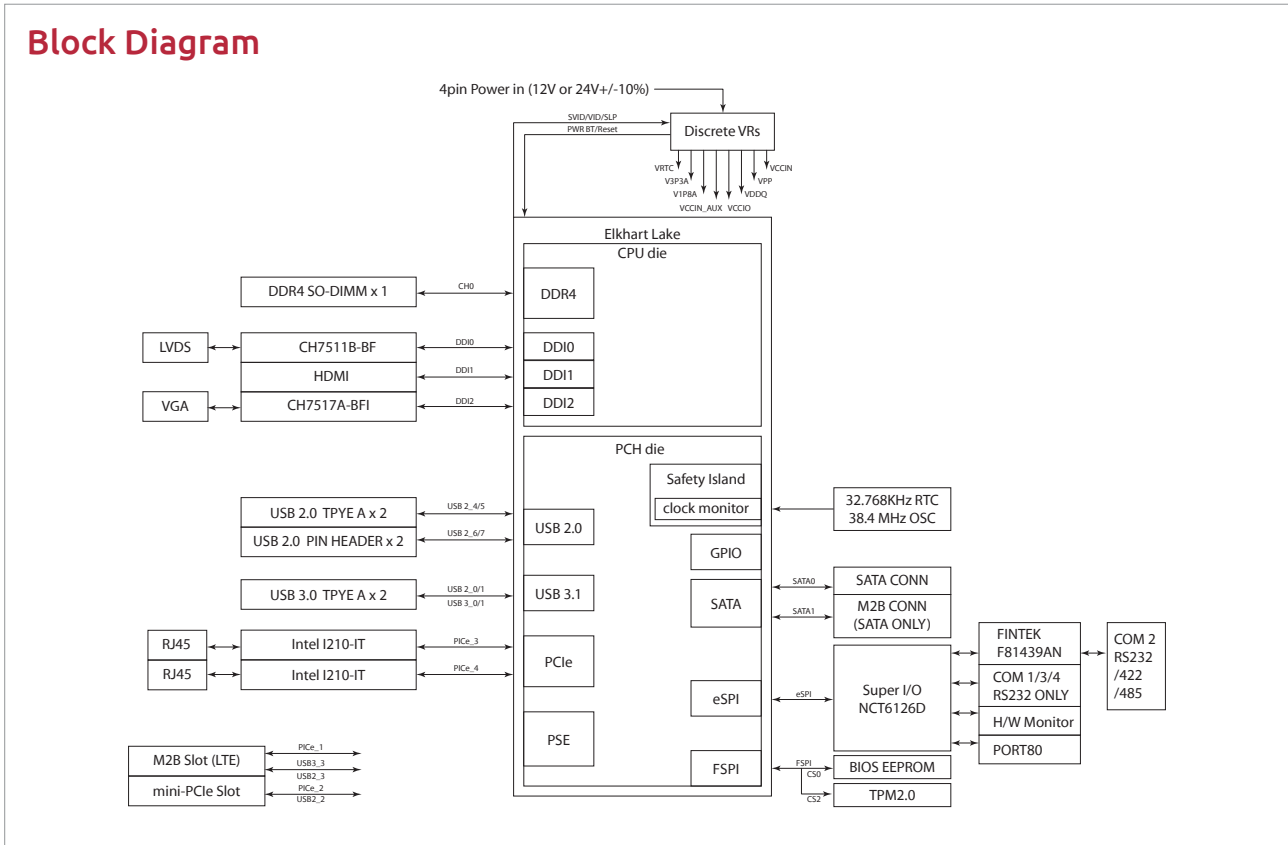
### Internal I/O

- 2 x USB 2.0 (pin header)
- 4 x Serial ports:
  - 1 x RS232, 2 x RS232/485/422.
- 1 x Front panel header, 8-bit digital I/O(4-In/4-Out)
- WDT, supports onboard 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

### 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

## Block Diagram



### Dimensions

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

### Environment

- Board level operation temperature: -40°C to 80°C (base on the cooler kit)
- 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 358X (P/N: 10E00035803X0)**  
3.5" SBC, Intel® Atom® x6425E processors, temperature: -40°C to 80°C

- **EBC 358X-6413E (P/N: 10E00035805X0)**  
3.5" SBC, Intel® Atom® x6413E processors, operation temperature: -40°C to 80°C

- **EBC 358X-6211E (P/N: 10E00035806X0)**  
3.5" SBC, Intel® Atom® x6211E Processors, temperature: -40°C to 80°C

### 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.