

Main Features

- On-board Intel® Pentium®/Celeron® Processors N3000 product family (codename Braswell)
- Supports dual channel DDR3L 1600MHz, 2 x SO-DIMM, up to 8GB system memory
- 3 x HDMI connector, 2 of 3 HDMI resolution support 4K/2K
- 2 x SATA 3.0/ 4 x USB 3.0/M.2 module/ 4-in & 4-out GPIO, Mic-in, Speak out
- Support AT/ATX mode and single +12VDC input

Product Overview

EBC 356 is a 3.5" SBC embedded board equipped with Intel® Pentium®/Celeron® Processors N3000 product family to provide a high performance with lower power consumption structure for any application, which supports DDR3L 1600 memory, along with integrated Intel® Gen. 8 Graphics Engine enhanced Gfx & video, and support DX 11*. EBC 356 also provides two SATA 3.0, four USB 3.0 ports, one M.2 interfaces, and supports triple HDMI outputs.

Specifications

CPU Support

- Support Intel® Pentium®/Celeron® Processors N3000 product family

Main Memory

- Dual 204-pin SO-DIMM socket supports up to 8 GB DDR3L 1600 MHz SDRAM

BIOS

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

Display

- Integrated Intel® Gen. 8 Graphics Engine
- Supports HDMI interface
- 3 x HDMI connector
- 2 of 3 HDMI resolutions support 4K/2K, (3840x2160 @ 30Hz, 2560 x 1600 @ 60Hz)
- 1 support 2K (2560x1440 @ 60Hz)

Audio

- Realtek ALC886 CODEC for high definition:
- 1 x 4 pin pin-header for mic-in
- 1x 4 pin-header for line out
- 1x 5 pin header for speak out

On-board LAN

- 1 x Intel® i210 Gigabit Ethernet
- Support PXE boot from LAN, wake on LAN function

Expansion

- 1 x M.2 slot, for an optional 3G/4G or M.2 SSD module

I/O Interface

- Series port: 2 ports
- COM1/2: RS232 1 x10 pin JST connector
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL level (0/5V)
- One 4-pin FAN connector
- One 3 pin header for AT/ATX mode
- One 6 pin header for PS2 keyboard & mouse
- One 4 pin header for power/storage LED
- Onboard buzzer/SMBus2.0/reset SW/on & off switch button

Edge I/O Interface

- 3 x HDMI connector
- 2 x dual stack USB3.0 connector
- 1 x RJ45 with LED connector

Watchdog Timer

- Watchdog time-out can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)

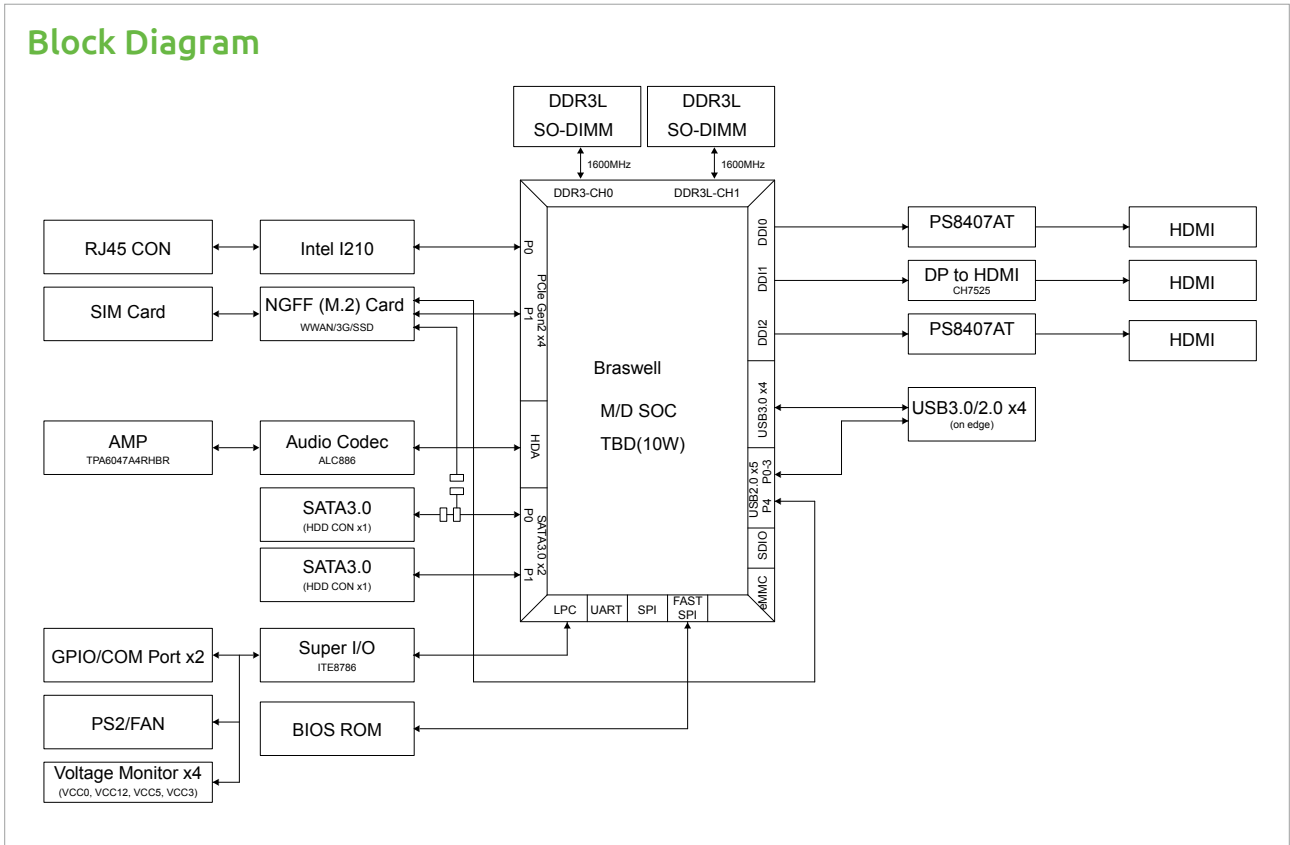
Storage

- 2 x SATA 3.0 ports

System Monitor

- Monitoring of 4 voltages and 2 temperatures
- 4 voltage (Vcore, +12V, +3.3V, 5V)
- 2 temperatures (CPU, system)

Block Diagram



- 1 fan speed detection

On-board RTC

- On-chip RTC with battery backup
- 1 x external Li-ion battery

Power Requirements

- Power requirement: +12V DC Input
- One 4-pin power connector

Dimensions

- 146mm (L) x 102mm (W) 5.7" x 4.0"

Environment

- Board Level Operating temperatures: -20°C to 60°C
- Storage temperatures: -25°C to 85°C
- Relative humidity:
 - 10% to 90% (operating, non-condensing)
 - 5% to 95% (non-operating, non-condensing)

Certifications

- Meet CE
- FCC Class A

Ordering Information

- **EBC 356 (P/N: 10E00035600X0) RoHS Compliant (N3150)**

Low power embedded board with 4 core Intel® Pentium®/Celeron® Processors N3000 product family SoC, support 2 x DDR3L/M.2 module/4 x USB 3.0/2 x SATA 2.0/GbE, HDMI interfaces

- **EBC 356-N3050 (P/N: TBD) RoHS Compliant**

Low power embedded board with 2 core Intel® Pentium®/Celeron® Processors N3000 product family SoC, support 2 x DDR3L/M.2 module/4 x USB 3.0/2 x SATA 2.0/GbE, HDMI interfaces