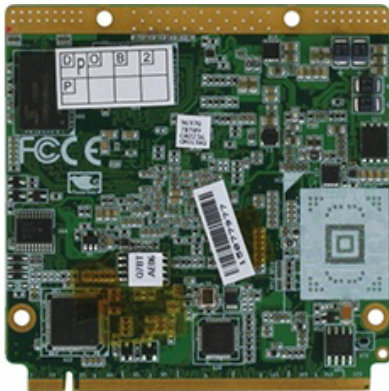


# Onyx Single Board Computer Unit

# AQ7-BT

Q7 CPU Module with Onboard Intel® Atom™ E3800 or Celeron® N2807 Product Family Processor SoC



## Features

- Intel® Atom™ E3800 or Celeron® N2807 Processor SoC
- Onboard DDR3L 2 GB Memory
- Gigabit Ethernet x 1
- 18/24-bit Single Channel LVDS LCD/eDP, DDI x 1 (Default DP Signal) High Definition Audio Interface
- SATA x 2 (One for SSD)
- USB2.0 x 6, USB3.0 x 1, GPIO 8-bit, PCI-Express [x1] x 3
- Qseven Rev. 2.0, 70mm x 70mm

## Specifications

### Main Specifications

Processor	Intel® Atom™ Processor SoC, N2807: Dual Core 1.58GHz/4.3W, E3825: Dual Core 1.33GHz/6W, E3845: Quad Core 1.91GHz/10W
Form Factor	Q7
System Memory	Onboard DDR3L 2 GB
Chipset	Intel® Atom™ E3800 or Celeron® N2807 Processor SoC
H/W Status Monitoring	Supports CPU Temperature Monitoring.
Expansion Interface	PCI Express [x1] x 3, SMBUS x 1, SPI x 1, SDIO x 1, DDI x 1, I2C x 1
BIOS	AMI I210 or I211 BIOS, Legacy free BIOS
Wake on LAN	Yes
Watchdog Timer	ITE IT8528VG

### I/O

USB	USB2.0 x 6, USB3.0 x 1
Serial Port	4-Wire UART x1
Ethernet	Intel® I211AT for 10/1000/1000Base-TX
Storage	SATA x2 (one may share with onboard SSD)
Audio	High definition audio
Display Chipset	Intel® Atom™ E3800 Product Family Processor SoC
Resolution	LCD: up to 1366 x 768@ single LVDS
HDMI	HDMI: Up to 1920 x 1080
LCD Interface	18/24-bit single channel LVDS
GPIO	8-bit GPIO
PS/2 Port	-
Others	SMBus, I2C, LPC, SPI, SDIO

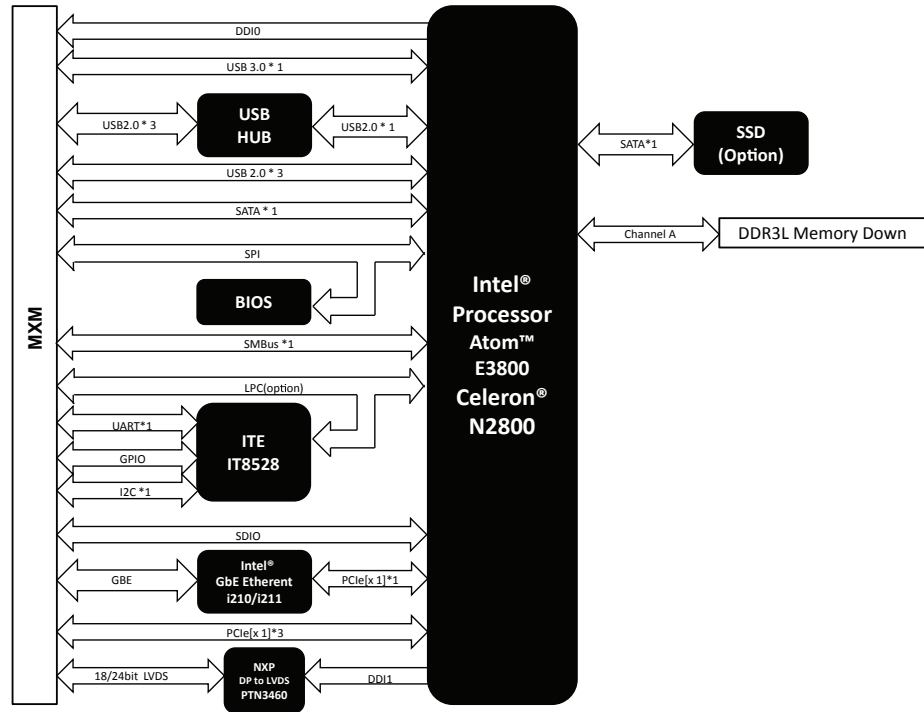
### Mechanical and Environmental

Power Consumption	E3845, Full load, 2.72A@5V
Power Requirement	Normal : + 5V
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Operating Temperature	32°F ~140°F (0°C ~60°C)
Storage Temperature	-40 °F ~ 185 °F (-40 °C ~ 85 °C) by E3815
Gross weight	0.44 lb (0.2 kg)
Dimensions(W x D x H)	2.75" x 2.75" (70mm x 70mm)
MTBF (Hours)	-

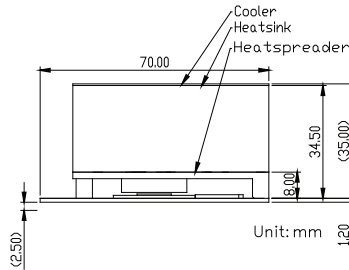
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## Block Diagram



## Dimension / Unit: mm



## Ordering Information

Part Number	Form Factor	CPU	Memory	Display	LVDS	Storage	LAN	USB	UART	Expansion Slot	Power	Temp
AQ7-BT-A10-0001	Qseven2.0	N2807	Onboard 2 GB DDR3L	DDIx1	18/24b 1Ch	SATA x 2	GbE x 1	USB2.0 x 6 USB3.0 x 1	4-wire x 1	PCIe[x1] x 3, GPIO x 8, SMBus x 1, SDIO, I2C, LPC	5V	0°C~60°C
AQ7-BT-A10-0002	Qseven2.0	E3825	Onboard 2 GB DDR3L	DDIx1	18/24b 1Ch	SATA x 1 8GB SSD MLC onboard	GbE x 1	USB2.0 x 6 USB3.0 x 1	4-wire x 1	PCIe[x1] x 3, GPIO x 8, SMBus x 1, SDIO, I2C, LPC	5V	0°C~60°C
AQ7-BT-A10-0003	Qseven2.0	E3845	Onboard 2 GB DDR3L	DDIx1	18/24b 1Ch	SATA x 1 4GB SSD SLC onboard	GbE x 1	USB2.0 x 6 USB3.0 x 1	4-wire x 1	PCIe[x1] x 3, GPIO x 8, SMBus x 1, SDIO, I2C, LPC	5V	0°C~60°C