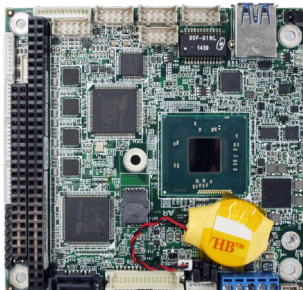


# Em104-i230F R1.1

Wide-Range Temperature Intel® Atom™ E3800 PC/104 CPU Module



## Features

- **Fanless Design**
- Support Intel® Atom™ E3800 Family
- Dual Gigabit Ethernet ports
- LVDS, Analog RGB Port
- Support Dual Independent Displays
- **Wide-Range Operating Temp.: -40 ~ 85°C**

## System

|                |                                                                                               |
|----------------|-----------------------------------------------------------------------------------------------|
| CPU            | Soldered onboard Intel® Atom™ Processor<br>E3825 dual-core 1.33GHz<br>E3845 quad-core 1.91GHz |
| Memory         | 1 x DDR3L SO-DIMM socket, supporting up to 8GB 1333 MT/s SDRAM                                |
| BIOS           | Insyde BIOS                                                                                   |
| Watchdog Timer | 1~255 levels reset                                                                            |

## I/O

|                  |                                                                     |
|------------------|---------------------------------------------------------------------|
| Super I/O Chip   | Fintek F81866                                                       |
| Serial Port      | 2 x RS-232                                                          |
|                  | 2 x RS-232/422/485 selectable                                       |
| USB Port         | 2 x USB 2.0 ports                                                   |
|                  | 1 x USB 3.0 port                                                    |
| KB/MS            | 6-pin wafer connector for PS/2 keyboard and mouse via Y-cable       |
| Expansion        | PC/104 interface                                                    |
| Storage          | 1 x Serial ATA port with 300MB/s HDD transfer rate                  |
|                  | 1 x mSATA socket (Socket shared and BIOS selectable with Mini-card) |
| Ethernet Chipset | 2 x Intel i211AT PCIe GbE controllers                               |
| Digital I/O      | 8-bit programmable                                                  |
| Audio            | Realtek ALC888S HD Audio CODEC, Mic-in/Line-in/Line-out             |

## Display

|                   |                                                       |
|-------------------|-------------------------------------------------------|
| Graphic Chipset   | Integrated Intel® HD Graphics                         |
| Graphic Interface | Analog RGB that supports resolution up to 2048 x 1536 |
|                   | LCD: Dual Channel 24-bit LVDS                         |

## OS Support

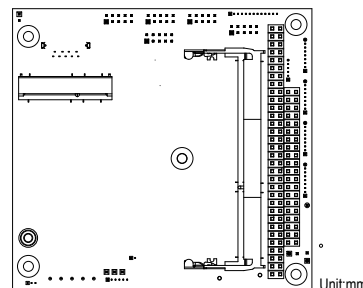
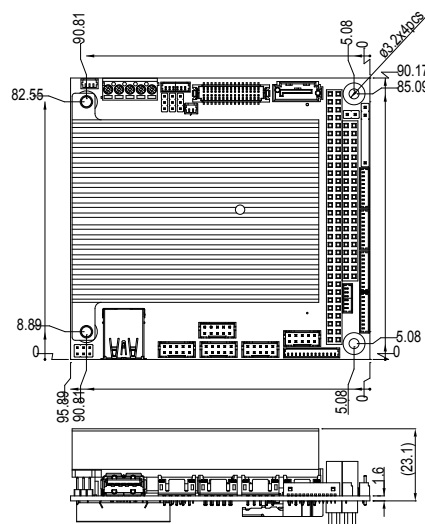
Windows 7 32-bit/64-bit without ISA support\*  
Windows 8.1 32-bit/64-bit without ISA support\*  
Linux: Ubuntu

\*Note: OEM Request for ISA support

## Mechanical & Environmental

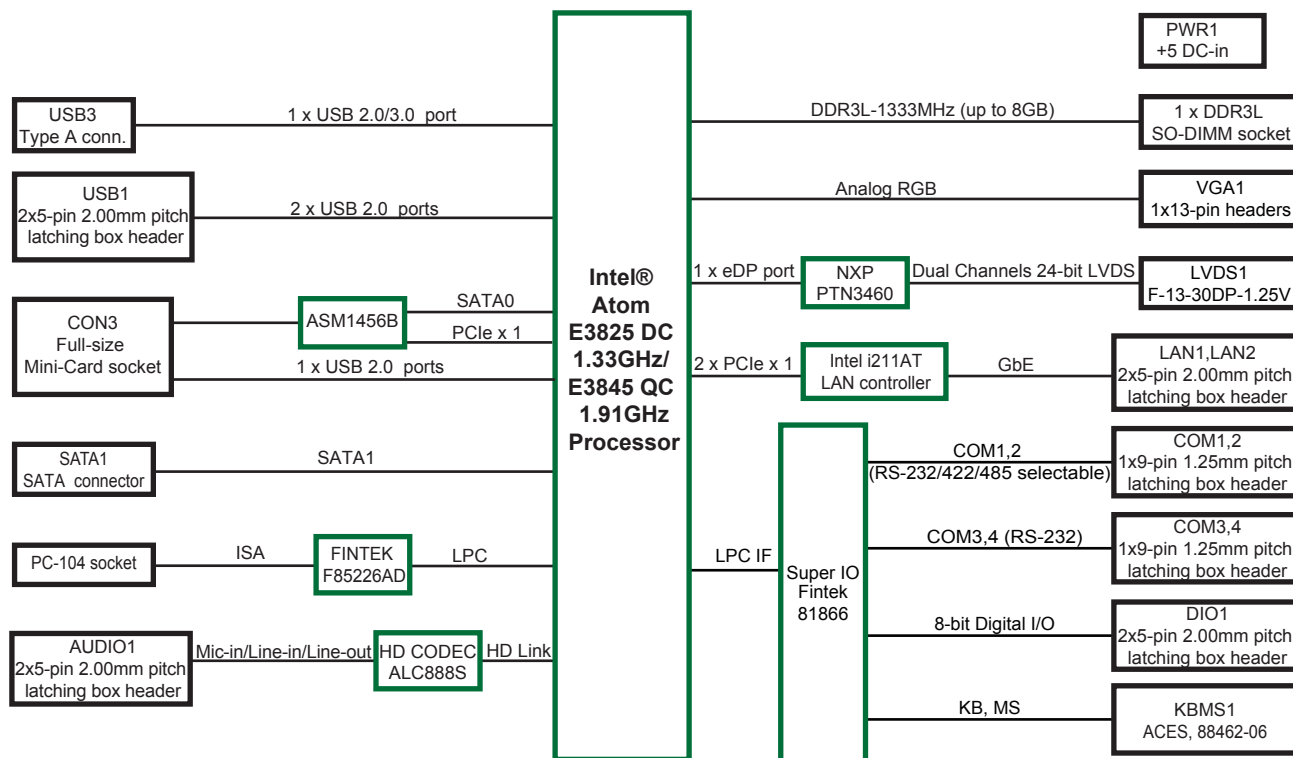
|                    |                                                                 |
|--------------------|-----------------------------------------------------------------|
| Power Requirement  | +5V (Additional +12V might be required for LCD panel and PC104) |
| Power Consumption  | 1.81A@5V with E3825 (Typical)<br>2.24A@5V with E3845 (Typical)  |
| Operating Temp.    | -40 ~ 85°C (-40 ~ 185°F)                                        |
| Operating Humidity | 10 ~ 95% @ 85°C (non-condensing)                                |
| Dimension (L x W)  | 96 x 90 mm (3.8" x 3.5")                                        |

## Dimensions



Unit:mm

## Block Diagram



## Ordering Information

|                           |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|
| Em104-i230F-WT-E3825 R1.1 | Intel® Atom™ Processor E3825 PC/104 WT CPU module, w/ i211AT, ALC888S, -40 ~ 85°C |
| Em104-i230F-WT-E3845 R1.1 | Intel® Atom™ Processor E3845 PC/104 WT CPU module, w/ i211AT, ALC888S, -40 ~ 85°C |

## Optional Accessories

|                |                                                                                                                                                  |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| CBK-11-230F-00 | Cable kit<br>1 x SATA cable<br>1 x Audio cable<br>4 x COM port cables<br>1 x KB & MS Y-cable<br>1 x USB cable<br>1 x VGA cable<br>2 x LAN cables |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|