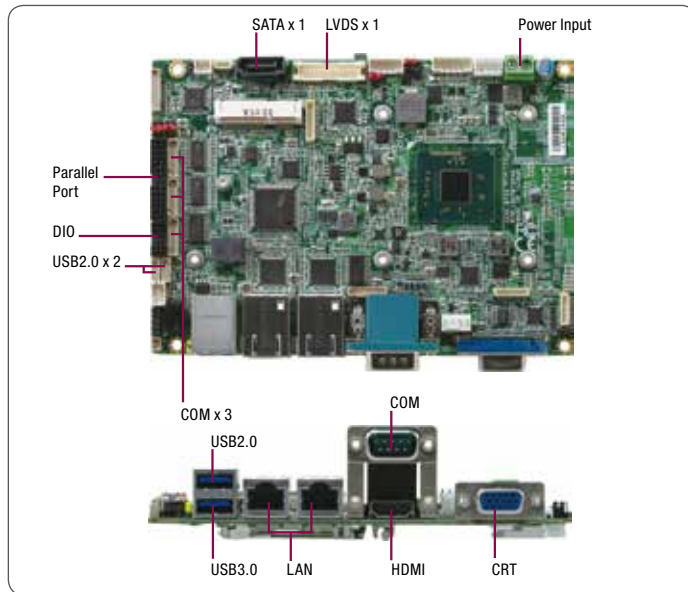


# GENE-BT05

3.5" SubCompact Board with Intel® Atom™ and Celeron® Processor SoC



## Specifications

| System                        |  |
|-------------------------------|--|
| Form Factor                   | 3.5"   |
| Processor                     | Intel® Atom™/ Celeron® Processor SoC<br>E3845: 4C/ 1.91 GHz/ 10W<br>E3825: 2C/ 1.33 GHz/ 6W<br>N2930: 4C/ 1.83 GHz/ 7.5W<br>N2807: 2C/ 1.58 GHz/ 4.5W<br>J1900: 4C/ 2.0 GHz/ 10W |
| System Memory                 | 204-pin DDR3L 1066/1333 MHz SODIMM x 1, up to 8 GB   |
| Chipset                       | Intel® Atom™ and Celeron® Processor SoC  |
| I/O Chipset                   | Fintek F81866D   |
| Ethernet                      | Intel® I211 (for N2930/N2807/J1900) Intel® I210 (for E3845/3825), 10/100/1000Base-TX, RJ-45 x 2  |
| BIOS                          | AMI BIOS - 8 MB SPI Flash  |
| Wake on LAN                   | Yes  |
| Watchdog Timer                | Generates a time-out system reset  |
| H/W Status Monitoring         | Supports power supply voltages and temperature monitoring  |
| Expansion Interface           | Mini-Card x 2, LPC (Full-size x 1, Half-size x 1)  |
| Trusted Platform Module (TPM) | Atmel, AT97SC3204 (optional)   |
| Battery                       | Lithium battery  |
| Power Requirement             | +12V, AT/ATX   |
| Power Consumption (Typical)   | Intel® Celeron® N2930, DDR3L 1600 8 GB<br>0.65A @ +12V   |
| Board Size                    | 5.75" x 4" (146mm x 101.6mm)   |
| Gross Weight                  | 0.88 lb (0.4 kg)   |
| Operating Temperature         | 32°F ~ 140°F (0°C ~ 60°C)  |
| Storage Temperature           | -40°F ~ 176°F (-40°C ~ 80°C)   |
| Operating Humidity            | 0% ~ 90% R/H, non-condensing   |
| MTBF (Hours)                  | 111,000  |
| Display                       |  |
|                               | Supports CRT/LCD, HDMI/LCD simultaneous/ dual view displays  |
| Chipset                       | Intel® Atom™ and Celeron® Processor SoC  |
| Memory                        | Shared system memory up to 512 MB  |
| Resolutions                   | Up to 2560 x 1600 for CRT, up to 1920 x 1200 for LCD, HDMI   |
| LCD Interface                 | Up to 24-bit dual-channel LVDS x 1   |
| HDMI                          | Up to 1920x1080 @ 60 Hz  |
| I/O                           |  |
| Storage                       | SATA 3.0 Gb/s x 1, CFast™ x 1, Half-size mSATA x 1 (Optional)  |
| Serial Port                   | RS-232 x 2, RS-232/422/485 (auto flow) x 2   |
| USB                           | USB3.0 x 1, USB2.0 x 3   |
| PS/2 Port                     | Keyboard x 1, Mouse x 1  |
| Digital I/O                   | Supports 8-bit (Programmable)  |
| Audio                         | Line-in, Line-out, Mic-in  |
| Touch Screen                  | Supports 4/5/8-wire resistive touch screen (optional)  |

## Features

- Onboard Intel® Atom™ and Celeron® Processor SoC
- DDR3L 1066/1333 MHz SODIMM x 1, Up to 8 GB
- Gigabit Ethernet x 2, RJ-45 x 2
- CRT, 18/24-bit Dual-Channel LVDS LCD, HDMI
- 2CH HD Audio
- SATA 3.0 Gb/s x 1, CFast™ x 1
- USB3.0 x 1, USB2.0 x 3, COM x 4, 8-bit Digital I/O
- Mini-Card x 2 (Full-size x 1, Half-size x 1)
- +12V Only Operation
- Onboard 4/5/8-wire Resistive Touch Screen Controller (Optional)
- AAEON Hi-Safe/SDK/Utility Supported
- mSATA x 1 (Optional, Would Replace Mini-Card Interface)
- Onboard Trusted Platform Module (Optional)



## Packing List

- Product DVD
- GENE-BT05 with Passive Heatsink

## Optional Accessories

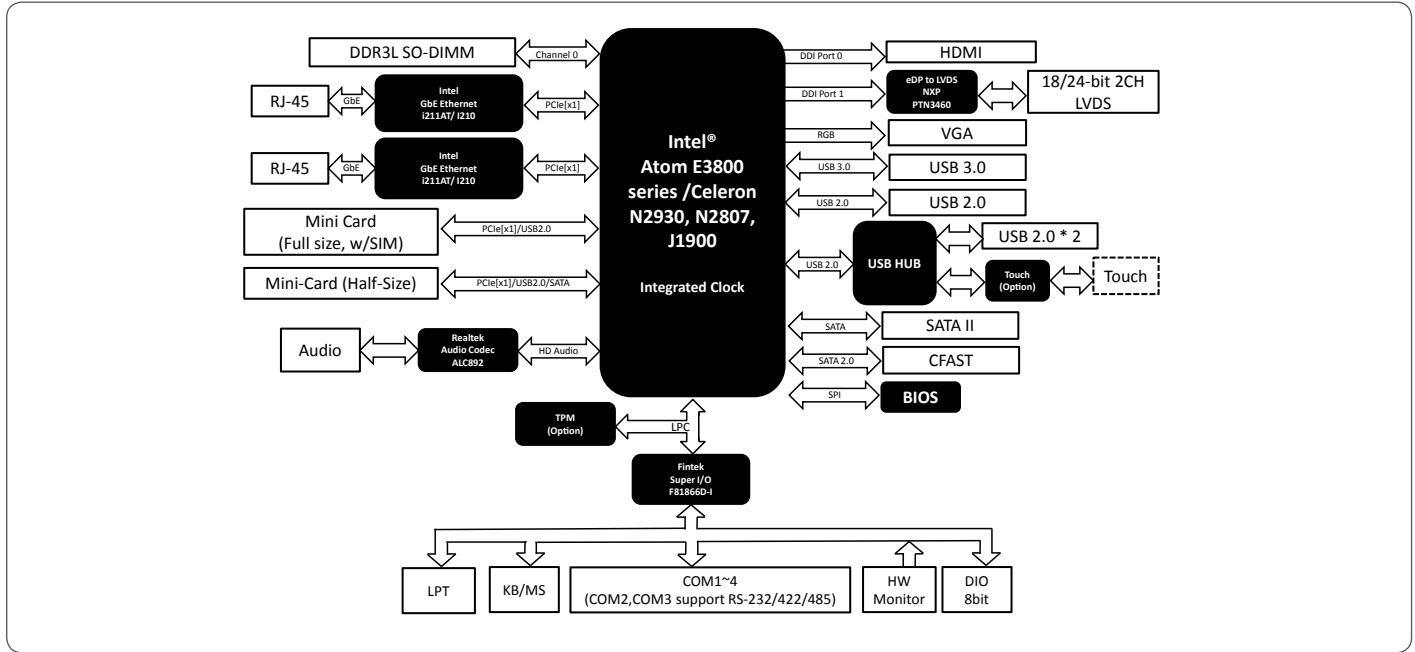
| Part Number | Description  | QTY |
|-------------|--|-----|
| 1700050207  | (TF)USB CABLE.1*5P Pitch=1.25mm Housinh.20cm.for PFM-945C                  | 2   |
| 1701090150  | (TF)Flat Cable.D-Sub 9(M).9P Housing.9P 1.25mm pitch Housing.15cm          | 3   |
| 1709100254  | (TF)PHONE JACK Cable.3P AUDIO JACK.1*10P 1.25mm HOUSING(F).25cm            | 1   |
| 1709070500  | (TF)SATA CABLE.7P Pitch 1.27mm.50cm  | 1   |
| 1701260200  | (TF)Flat Cable.25P D-SUB FEMALE.26P 2.00mm Pitch Housing.20cm              | 1   |
| 170204010R  | (TF)Power Cable.Double 4P 5.08mm Housing(M).10cm                           | 1   |
| 1702150155  | (TF)Power Cable.15P SATA(F).2P 2.0mm Housing(PH).15cm                      | 1   |
| 170220020B  | (TF)Power Cable.20P ATX(M).4P 5.08mm Housing(F).+3P 2.5mm Housing(XH).20cm | 1   |
| 1700060157  | (TF)Cable.6P 2.0mm Housing.6P JACK W/SCREW KB&MS.15cm                      | 1   |

### PER-S001

Half-size mSATA 8G w/ Android image for GENE-BT05 standard version.

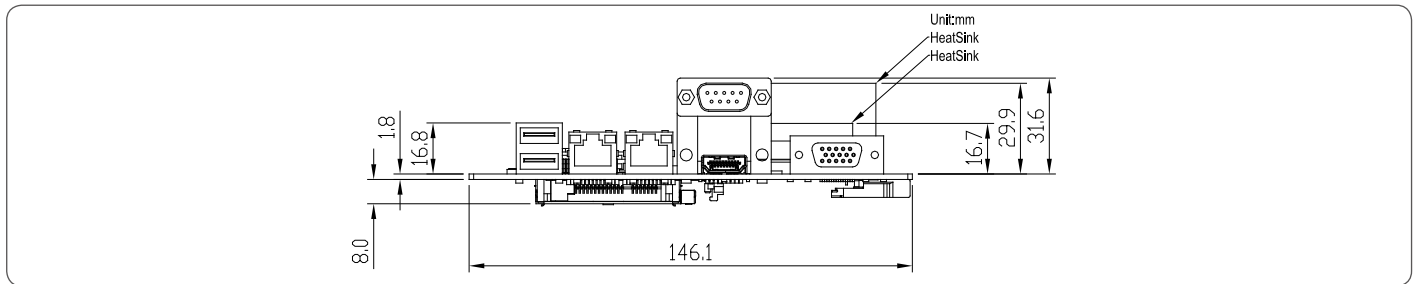
# GENE-BT05

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

| Part Number          | CPU                   | Fan/Fan-less | Display                             | LVDS       | Storage                           | LAN     | USB                      | RS-232 | RS-232/422/485 | Expansion Slot                                  | Power            | Temp                      | Others                      |
|----------------------|-----------------------|--------------|-------------------------------------|------------|-----------------------------------|---------|--------------------------|--------|----------------|---|------------------|---------------------------|-----------------------------|
| GENE-BT05-A10-0001   | Intel® Celeron® N2930 | Fanless      | CRT + LVDS, LVDS + HDMI, HDMI + CRT | 24b, 2CH   | SATA x 1<br>CFast™ x 1            | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 2<br>(Full-Size x 1, Half-Size x 1) | +12V, AT/<br>ATX | 0°C ~ 60°C                | TPM, Touch,<br>SIM, DIO x 8 |
| GENE-BT05-A10-0002   | Intel® Celeron® N2930 | Fanless      | CRT + LVDS                          | 24b, 2CH   | SATA x 1<br>mSATA x 1 (Half-size) | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 1 (Full-Size)                       | +12V, AT/<br>ATX | 0°C ~ 60°C                | DIO x 8                     |
| GENE-BT05-A10-0003   | Intel® Celeron® N2807 | Fanless      | CRT + LVDS, LVDS + HDMI, HDMI + CRT | 24b, 2CH   | SATA x 1<br>CFast™ x 1            | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 2<br>(Full-Size x 1, Half-Size x 1) | +12V, AT/<br>ATX | 0°C ~ 60°C                | TPM, Touch,<br>SIM, DIO x 8 |
| GENE-BT05-A10-0004   | Intel® Celeron® N2807 | Fanless      | CRT + LVDS                          | 24b, 2CH   | SATA x 1<br>mSATA x 1 (Half-size) | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 1 (Full-Size)                       | +12V, AT/<br>ATX | 0°C ~ 60°C                | DIO x 8                     |
| GENE-BT05-A10-0005   | Intel® Atom™ E3845    | Fanless      | CRT + LVDS, LVDS + HDMI, HDMI + CRT | 24b, 2CH   | SATA x 1<br>CFast™ x 1            | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 2<br>(Full-Size x 1, Half-Size x 1) | +12V, AT/<br>ATX | 0°C ~ 60°C                | TPM, Touch,<br>SIM, DIO x 8 |
| GENE-BT05-A10-0006   | Intel® Atom™ E3845    | Fanless      | CRT + LVDS                          | 24b, 2CH   | SATA x 1<br>mSATA x 1 (Half-size) | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 1 (Full-Size)                       | +12V, AT/<br>ATX | 0°C ~ 60°C                | DIO x 8                     |
| GENE-BT05-A10-0007   | Intel® Atom™ E3825    | Fanless      | CRT + LVDS, LVDS + HDMI, HDMI + CRT | 24b, 2CH   | SATA x 1<br>CFast™ x 1            | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 2<br>(Full-Size x 1, Half-Size x 1) | +12V, AT/<br>ATX | 0°C ~ 60°C                | TPM, Touch,<br>SIM, DIO x 8 |
| GENE-BT05-A10-0008   | Intel® Atom™ E3825    | Fanless      | CRT + LVDS                          | 24b, 2CH   | SATA x 1<br>mSATA x 1 (Half-size) | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 1 (Full-Size)                       | +12V, AT/<br>ATX | 0°C ~ 60°C                | DIO x 8                     |
| GENE-BT05-A10-0009   | Intel® Celeron® J1900 | Fanless      | CRT + LVDS, LVDS + HDMI, HDMI + CRT | 24b, 2CH   | SATA x 1<br>CFast™ x 1            | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 2<br>(Full-Size x 1, Half-Size x 1) | +12V, AT/<br>ATX | 0°C ~ 60°C                | TPM, Touch,<br>SIM, DIO x 8 |
| GENE-BT05-A10-0010   | Intel® Celeron® J1900 | Fanless      | CRT + LVDS                          | 24b, 2CH   | SATA x 1<br>mSATA x 1 (Half-size) | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini-Card x 1 (Full-Size)                       | +12V, AT/<br>ATX | 0°C ~ 60°C                | DIO x 8                     |
| GENE-BT05W2-A10-0008 | Intel® Atom™ E3825    | Fanless      | CRT + LVDS                          | 24bit, 2CH | SATA x 1<br>mSATA x 1 (Half Size) | GbE x 2 | USB3.0 x 1<br>USB2.0 x 3 | 2      | 2              | Mini Card x 1 (Full-Size)                       | +12V, AT/<br>ATX | WITAS 2<br>(-40°C ~ 85°C) | DIO x 8                     |