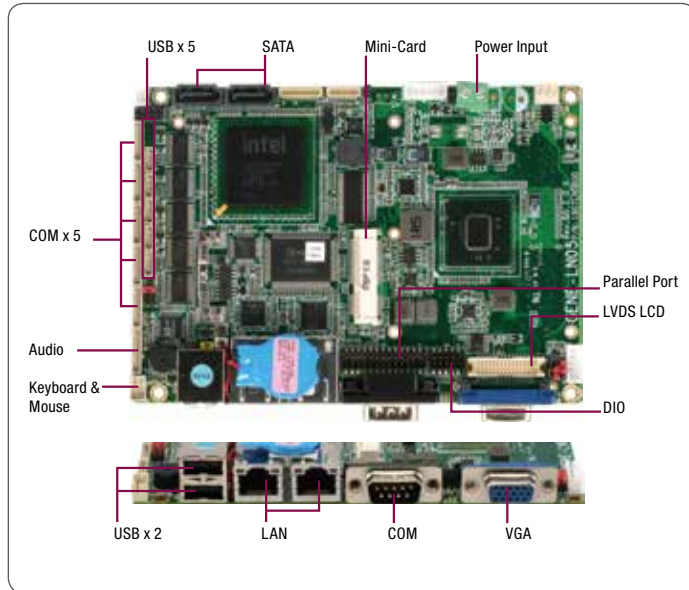


# GENE-LN05 Rev. B

3.5" SubCompact Board With Intel® Atom™ N455/ D525 Processor



## Features

- Intel® Atom™ N455/D525 Processor
- Intel® ICH8M
- DDR3 800 MHz SODIMM, Up to 4 GB For Intel® Atom™ D525  
DDR3 800 MHz SODIMM, Up to 2 GB For Intel® Atom™ N455
- Gigabit Ethernet x 2, RJ-45 x 2
- CRT, 18/24-bit Single Channel LVDS LCD
- 2CH HD Audio
- SATA 3.0 Gb/s x 2 (Optional RAID 0 & 1), CompactFlash™ x 1
- USB2.0 x 7, COM x 6, Parallel x 1, 8-bit Digital I/O
- Onboard 4/5/8-wire Resistive Touch Screen Controller
- Mini-Card x 1
- +12V or +5V (Optional)
- Onboard Trusted Platform Module (Optional)

## Specifications

| System   |  |
|--|--|
| Form Factor                                      | 3.5"   |
| Processor  | Intel® Atom™ N455/D525 1.8 GHz Processor   |
| System Memory                                    | 204-pin DDR3 800 MHz SODIMM x 1, up to 4 GB for Intel® Atom™ D525<br>204-pin DDR3 800 MHz SODIMM x 1, up to 2 GB for Intel® Atom™ N455 |
| Chipset  | Intel® ICH8M   |
| I/O Chipset                                      | Nuvoton W83627DHG-P, Fintek F81216DG   |
| Ethernet   | Intel® 82567V & 82583V, 10/100/1000Base-TX, RJ-45 x 2  |
| BIOS   | AMI Plug & Play SPI BIOS - 2 MB 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 1, LPC bus   |
| Trusted Platform Module (TPM)                    | Infineon SLB 9635 TT 1.2 (Optional)  |
| Battery  | Lithium battery  |
| Power Requirement                                | +12V or +5V (optional), AT/ATX   |
| Power Consumption (Typical)                      | Intel® Atom™ D525, DDR3 1 GB<br>1.29A@+12V   |
| Board Size                                       | 5.75"(L) x 4"(W) (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 ~ 185°F (-40°C ~ 85°C)   |
| Operating Humidity                               | 0% ~ 90% relative humidity, non-condensing   |
| MTBF (Hours)                                     | 66,000   |
| Display  |  |
| Supports CRT/LCD simultaneous/ dual view display |  |
| Chipset  | Intel® N455/D525 integrated  |
| Memory   | Shared system memory up to 224 MB/DVMT 4.0   |
| Resolutions                                      | Up to 1920 x 1440 for CRT (D525)<br>Up to 1280 x 1024 for CRT (N455)<br>Up to 1366 x 768 or 1280 x 800 for LCD                         |
| LCD Interface                                    | 18/24-bit single channel LVDS LCD  |
| I/O  |  |
| Storage  | SATA 3.0 Gb/s x 2, CompactFlash™ x 1   |
| Serial Port                                      | RS-232 x 5, RS-232/422/485 (auto flow) x 1   |
| Parallel Port                                    | SPP/EPP/ECP x 1  |
| USB  | USB2.0 x 7   |
| 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   |



## Packing List

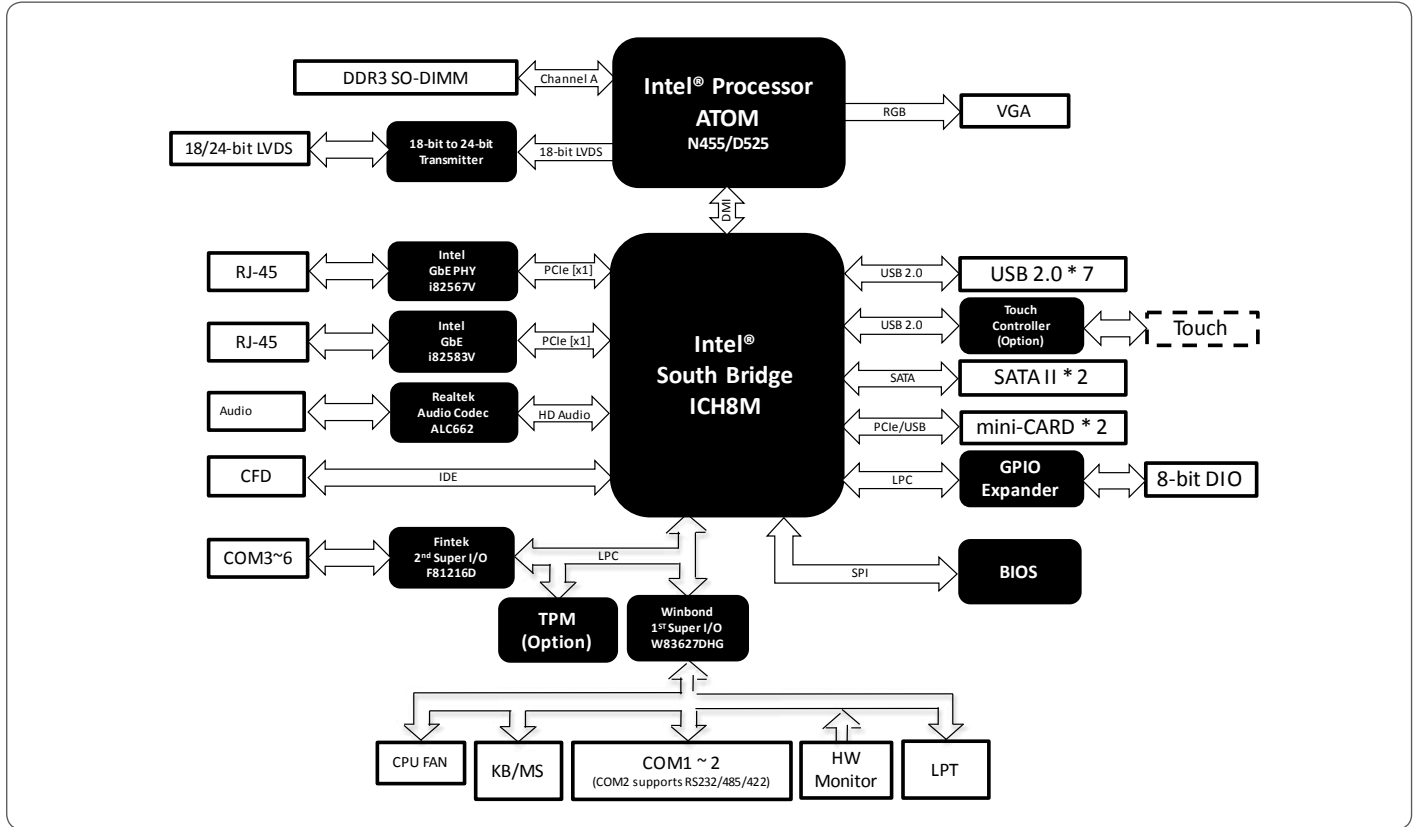
- Product CD
- GENE-LN05 Rev.B with Active Cooler (D525 Version) or with Passive Heatsink (N455 Version)

## Optional Accessories

- **1700050207**  
USB Cable, Length 20cm
- **1701090150**  
COM Port Cable, Length 15cm
- **1709100254**  
Audio Cable, Length 25cm
- **1709070500**  
SATA Cable, Length 50cm
- **1701260200**  
Parallel Port Cable, Length 20cm
- **1702002010**  
Big Single Row 4-pin Power Input Cable for +12V Input, Length 10cm
- **1702150155**  
Power Cable for 2.5" SATA Hard Disk, Length 15cm
- **170220020B**  
Conversion Cable ATX Power Supply, Length 20cm
- **170204010P**  
Big Single Row 4-pin Power Input Cable for +5V Input, Length 10cm
- **1700060157**  
KB/Mouse Cable

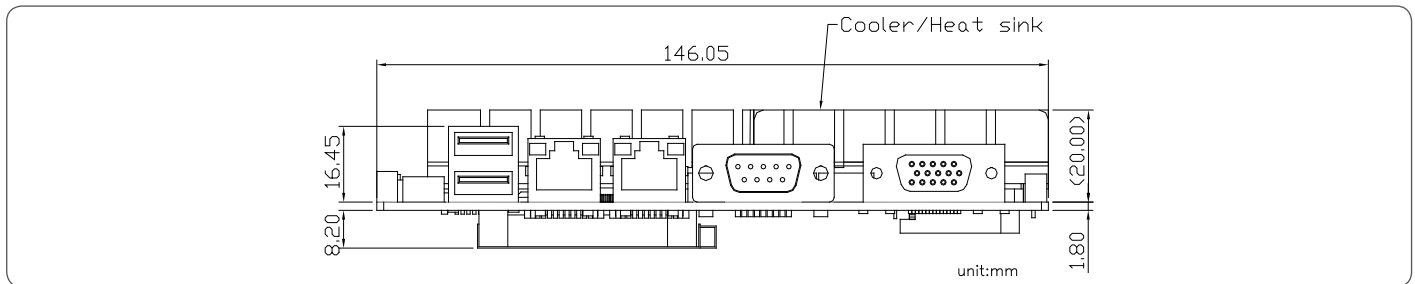
# GENE-LN05 Rev. B

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

| Part Number           | CPU               | Chipset | Fan/<br>Fanless | Display    | LVDS           | Storage                       | LAN     | USB        | RS-<br>232 | RS-<br>232/422/485 | Expansion<br>Slot | Power        | Power Temp             | Others                         |
|-----------------------|-------------------|---------|-----------------|------------|----------------|-------------------------------|---------|------------|------------|--------------------|-------------------|--------------|------------------------|--------------------------------|
| TF-GENE-LN05-B10      | Intel® Atom™ D525 | ICH8M   | Fan             | CRT + LVDS | 18/24b,<br>2CH | SATA x 2<br>CompactFlash™ x 1 | GbE x 2 | UBS2.0 x 7 | 5          | 2                  | Mini-Card x 1     | +12V, AT/ATX | 0°C ~ 60°C             | Touch Controller, SIM, DIO x 8 |
| TF-GENE-LN05-B10-01   | Intel® Atom™ N455 | ICH8M   | Fanless         | CRT + LVDS | 18/24b,<br>2CH | SATA x 2<br>CompactFlash™ x 1 | GbE x 2 | UBS2.0 x 7 | 5          | 1                  | Mini-Card x 1     | +12V, AT/ATX | 0°C ~ 60°C             | Touch Controller, SIM, DIO x 8 |
| TF-GENE-LN05-B10-02   | Intel® Atom™ N455 | ICH8M   | Fanless         | CRT + LVDS | 18/24b,<br>2CH | SATA x 2<br>CompactFlash™ x 1 | GbE x 2 | UBS2.0 x 7 | 5          | 1                  | Mini-Card x 1     | +5V, AT/ATX  | 0°C ~ 60°C             | Touch Controller, SIM, DIO x 8 |
| TF-GENE-LN05-B10-03   | Intel® Atom™ D525 | ICH8M   | Fanl            | CRT + LVDS | 18/24b,<br>2CH | SATA x 2<br>CompactFlash™ x 1 | GbE x 2 | UBS2.0 x 7 | 5          | 1                  | Mini-Card x 1     | +5V, AT/ATX  | 0°C ~ 60°C             | Touch Controller, SIM, DIO x 8 |
| TF-GENE-LN05W1-B10-01 | Intel® Atom™ N455 | ICH8M   | Fanless         | CRT + LVDS | 18/24b,<br>2CH | SATA x 2<br>CompactFlash™ x 1 | GbE x 2 | UBS2.0 x 7 | 5          | 1                  | Mini-Card x 1     | +12V, AT/ATX | WITAS 1 (-20°C ~ 70°C) | DIO x 8                        |
| TF-GENE-LN05W2-B10-01 | Intel® Atom™ N455 | ICH8M   | Fanless         | CRT + LVDS | 18/24b,<br>2CH | SATA x 2<br>CompactFlash™ x 1 | GbE x 2 | UBS2.0 x 7 | 5          | 1                  | Mini-Card x 1     | +12V, AT/ATX | WITAS 2 (-40°C ~ 85°C) | DIO x 8                        |

Note: All specifications are subject to change without notice.