

## GENE-BT06

3.5" SubCompact Board with  
Intel® Atom™ E3845/ E3825  
and Celeron® Processor SoC


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## Overview

Building on one of the most popular form factors in today's computing landscape, the 3.5" GENE-BT06 has everything any in-vehicle solutions has to offer: Soldered connections rather than wired one for sturdiness in high shock/ vibration settings; Wide operable voltages in observation of fluctuating voltages in vehicles; Compactness for easy installation; and different SKUs for users demanding different performance levels.

The CPU is now located at the solder side of the board and is accompanied by a heat spreader. Compared with the use of a heat sink in previous models, this change reduces vertical space needed while still retaining effective heat dissipation, making it more conducive for usage in confined spaces. The CPU, along with other components such as RAMs, is soldered onto the board for a sturdier connection when used in high shock/ high vibration environments.

Observing conditions, such as fluctuating voltages, in vehicles, the board can be powered by a DC voltage with a range of 9 ~ 24V, in addition to the standard input of 12V. A version supporting extended temperature ranges will be forthcoming in the near future.

SKUs featuring dual-core (E3825, N2807) and quad-core (E3845, J1900) CPUs are designed for users demanding various levels of performance. Furthermore, dual display is also provided with the board's VGA, LVDS, and HDMI interface, while the media being played can be stored using any mSATA device, supported by one of the two PCIe slots.

The GENE-BT06 was born out of the needs of this ongoing market trend. The need for infotainment in vehicles is on the rise and the GENE-BT06 is the ideal solution to support this growing trend.

## Applications

- Building
- Factory Automation
- KIOSK
- Medical Equipment
- Test & Measurement
- Transportation

# Features

- Intel® Atom™ E3845/ E3825 and Celeron® Processor SoC
- Onboard DDR3L Memory Max. 4 GB
- CRT, 18/24-bit Dual-Channel LVDS LCD, HDMI (DP Sharded with HDMI/CRT, Optional)
- 2 CH Audio
- SATA 3.0 Gb/s x 1 & mSATA (Sharded with Mini-Card)
- Supports 8-bit Digital I/O, USB2.0 x 3 , USB 3.0 x 1
- RS-232 x 2, RS-232/422/485 x 2
- Mini-Card Slot x 2 (Full-size x 1, Half-size x 1)
- Wide DC Support 9~24V
- Supports TPM (Optional)
- 4/5/8-wire Resistive Touch Screen Controller (Optional)
- Solder Design For System Assembly and Thermal

## Specifications [GENE-BT06]

SYSTEM	
FORM FACTOR	3.5" SubCompact Board
CPU	Intel® Atom™ E3845/E3825
CPU FREQUENCY	Up to 2.0GHz
CHIPSET	Intel® Atom™ series Processor SoC
MEMORY TYPE	Onboard DDR3L 1066/1333
MAX. MEMORY CAPACITY	Up to 4GB
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
POWER REQUIREMENT	Wide DC support 9~24V
POWER SUPPLY TYPE	AT/ATX
POWER CONSUMPTION (TYPICAL)	Intel® E3845, Onboard DDR3L 1600MHz 4G, 0.64A@+12V
DIMENSION (L X W)	5.75" x 4" (146mm x 101.6mm)
OPERATING TEMPERATURE	32°F ~ 140°F (0°C ~ 60°C) or WiTAS 2 (TBD)
STORAGE TEMPERATURE	-40°F ~ 176°F (-40°C ~ 80°C)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing
MTBF (HOURS)	110,000
CERTIFICATION	CE/FCC
DISPLAY	
VGA/LCD CONTROLLER	Intel® Atom™ Processor SoC
VIDEO OUTPUT	CRT+LVDS, HDMI+LVDS , CRT+HDMI
BACKLIGHT INVERTER SUPPLY	18/24-bit dual-channel LVDS LCD
I/O	
ETHERNET	Intel® I211 (or 210), 10/100/1000Base-TX, RJ-45 x 2
AUDIO	High definition audio interface
USB PORT	USB2.0 x 3 , USB 3.0 x 1
SERIAL PORT	RS-232 x 2 , RS-232/422/485 x 2

<b>PARALLEL PORT</b>	SPP/EPP/ECP x 1
<b>HDD INTERFACE</b>	SATA 2.0 x 1
<b>FDD INTERFACE</b>	—
<b>SSD</b>	mSATA (Half-size, shared with Mini-Card)
<b>EXPANSION SLOT</b>	Mini-Card x 1 (Full-size)
<b>DIO</b>	8-bit
<b>SIM</b>	x 1
<b>TPM</b>	x 1
<b>TOUCH</b>	x 1

## Ordering Information [GENE-BT06]

PART NUMBER	GENE-BT06-A11-0001	GENE-BT06-A11-0002	GENE-BT06W2-A11-0001	GENE-BT06W2-A11-0002
CPU	Intel® Atom™ E3825	Intel® Atom™ E3845	Intel® Atom™ E3825	Intel® Atom™ E3845
FAN/ FANLESS	Fanless	Fanless	Fanless	Fanless
MEMORY	Onboard 2GB	Onboard 4GB	Onboard 2GB	Onboard 4GB
DISPLAY	VGA + LVDS	CRT + LVDS LVDS + HDMI HDMI + CRT	VGA + LVDS	CRT + LVDS LVDS + HDMI HDMI + CRT
LVDS	24bit,2CH	24bit,2CH	24bit,2CH	24bit,2CH
STORAGE	SATA x 1 mSATA x 1 (half size)	SATA x 1 mSATA x 1 (half size)	SATA x 1 mSATA x 1 (half size)	SATA x 1 mSATA x 1 (half size)
LAN	GbE x 2	GbE x 2	GbE x 2	GbE x 2
USB	USB 3.0 x 1 USB 2.0 x 3	USB 3.0 x 1 USB 2.0 x 3	USB 3.0 x 1 USB 2.0 x 3	USB 3.0 x 1 USB 2.0 x 3
RS-232	2	2	2	2
RS-232/422/485	2	2	2	2
EXPANSION SLOT	MiniCard x 1 (Full)	MiniCard x 1 (Full)	MiniCard x 1 (Full)	MiniCard x 1 (Full)
POWER	9~24V	9~24V	12V	12V
POWER TEMP	0°C ~ 60°C	0°C ~ 60°C	WTAS 2 (-40°C~85°C)	WTAS 2 (-40°C~85°C)
OTHERS	DIO x 8	Touch Controller, TPM, SIM, DIO x 8	DIO x 8	Touch Controller, TPM, SIM, DIO x 8

## Downloads [GENE-BT06]

 Datasheet

 BIOS

 Driver

 Manual

## Packing List

- Product DVD
- System
- GENE-BT06 with Heatspreader

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