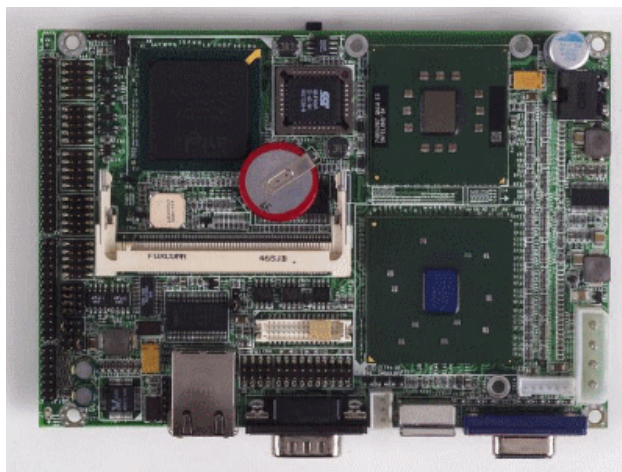


# GENE-8310

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## Intel Celeron M/ Onboard Intel Celeron M Processors at 600MHz and 1GHz

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### Introduction

The GENE-8310 is the third generation of fanless solutions that we have released through their original design. It is more advanced than previous SubCompact Boards, with higher performance and lower power consumption. We believe the GENE-8310 will become one of the best choices for our customers who need a higher requirement in processor ability with excellent power consumption control. The GENE-8310 derives its excellent functionality from several distinctive features:

#### **Superb Performance and Controllable Power Usage**

The Gene-8310 utilizes the newest generation Intel Ultra Low Voltage Celeron processor and chipset. With its low-power consumption platform, the GENE-8310 offers a stable and efficient computing platform which not only exceeds past products but also solves your problem when attempting to balance performance and power consumption. The obvious benefit is that the GENE-8310 is more flexible and can be used widely even in development for a new application field.

#### **Multiple Display Modes**

The previous generation of fanless 3.5" SubCompact Boards can usually provide a basic display mode due to the limitation of board size and power consumption; nevertheless, the GENE-8310 offers diverse display modes based upon the support provided by the Intel platform. It has the best graphics capability among current 3.5" SubCompact Boards. In addition, the GENE-8310 supports CRT, LCD, DVI and TV-out which can meet your requirements. The result is you will never need to worry about the limitations of board size and power consumption using this SubCompact Board for sophisticated graphics output.

#### **Wide Expansion Capability**

Although the GENE-8310 measures only 5.75" x 4", that does not affect its expansion ability because of the presence of an onboard Mini PCI slot. Hence, the GENE-8310 allows a greater variety of expansion interfaces in a very small space. Compared with PC/104 modules, Mini PCI modules are cheaper in price and more helpful for saving system space. The GENE-8310 is the optimum 3.5" Board for expansion capability.

Not all customers have needs that can be easily satisfied by a 3.5" board that only has limited features due to its small-size and fanless operation. The GENE-8310 has been endowed by our engineers with features that can meet the high CPU loads of complex application needs with higher performance and multiple functionality. This SubCompact Board will meet the stringent demands of the embedded market by fulfilling the requirements of faster processor speed with fanless operation, better graphics and small size.

### Features

- Onboard Intel Celeron M 1.3GHz/ Intel Celeron M Processors at 600MHz & 1GHz
- Up to 48-bit Dual Channel LVDS TFT LCD
- 10/100Base-TX Fast Ethernet
- AC97 2 Channel Audio
- Supports Type II CompactFlash
- COM x 2/ USB2.0 x 4/ TV-out/ DVI/ Digital I/O Ports
- +5V Only Operation

### Application

- Vehicle infotainment systems
- Elevator display systems
- Portable devices
- Portable POS
- Building/Factory automation
- Compact information system
- Medical equipment
- Panel PC

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## Specifications

### System

- **Form Factor**  
3.5"
- **Processor**  
Onboard Intel Celeron M Processor 1.3GHz/ Intel Celeron M Processors at 600MHz & 1GHz
- **System Memory**  
200-pin DDR SODIMM x 1, Max. 1GB (DDR266)
- **Chipset**  
Intel 852GM + ICH4
- **I/O Chipset**  
ITE IT8712
- **Ethernet**  
Intel 82562, 10/100Base-TX, RJ-45 connector x 1
- **BIOS**  
AWARD 512KB FLASH ROM
- **Wake On LAN**  
Yes
- **Watchdog Timer**  
Generates a time-out system reset
- **H/W Status Monitoring**  
Supports power supply voltages, fan speed and temperature monitoring
- **Solid Storage Disk**  
Type II CompactFlash slot x 1
- **Expansion Interface**  
Mini PCI x 1
- **Battery**  
Lithium battery
- **Power Requirement**  
+5V/ AT/ ATX
- **Power Consumption (Typical)**  
Intel ULV Celeron 600MHz & 1.3GHz, DDR333 256MB  
AT Power  
For 600MHz: 1.78 A @ 5V  
For 1.3GHz: 3.45 A @ 5V
- **Board Size**  
5.75"(L) x 4"(W) (146mm x 101.6mm)
- **Gross Weight**

- 0.88 lb (0.4 kg)
- **Operating Temperature**  
32oF~ 140oF (0oC ~ 60oC)
- **Storage Temperature**  
-40oF~176oF (-40oC~80oC)
- **Operating Humidity**  
0% ~ 90% relative humidity, non-condensing
- **MTBF (Hours)**  
76,894

### I/O

- **MIO**  
EIDE x 1 (UDMA33 x 1), Keyboard + Mouse x 1, RS-232 x 1, RS-232/422/485 x 1, Parallel x 1
- **IrDA**  
One IrDA Tx/Rx header
- **Audio**  
MIC-in, Line-in, Line-out, CD-in
- **USB**  
Two 5x2 pin headers support 4 USB 2.0 ports (does not support Wake-up function )
- **Digital I/O**  
Supports 8-bit (Programmable)

**Display: Supports CRT/ LCD, CRT/ TV, CRT/ DVI, LCD/ DVI and LCD/ TV Simultaneous/ dual view displays**

- **Chipset**  
Intel 852GM + Chrontel 7009
- **Memory**  
Shared system memory up to 64MB with DVMT
- **Resolutions**  
Up to 1600x1200@32bpp colors for CRT  
Up to 1280x1024@24bpp colors for LCD
- **LCD Interface**  
Up to 48-bit dual channel LVDS
- **TV-out**  
Supports NTSC and PAL standard, S-Terminal and Composite Video
- **DVI**  
Yes

## Ordering Information

### GENE-8310

- **TF-GENE-8310-A11**  
3.5" Board, LV Celeron M 600, LCD-DVI-TV, DDR, LAN, 2 COM, USB2.0, CF, Mini PCI, AT/ATX, Rev. A1.1
- **TF-GENE-8310-A11-01**  
3.5" Board, Celeron M 1.3G, LCD-DVI-TV, DDR, LAN, 2 COM, USB2.0, CF, Mini PCI, AT/ATX, Rev. A1.1
- **TF-GENE-8310-A11-02**  
3.5" Board, UV Celeron M 1.0G, LCD-DVI-TV, DDR, LAN, 2 COM, USB2.0, CF, Mini PCI, AT/ATX, Rev. A1.1

### Accessory Options

- **1702200205**  
Conversion Cable for AT to ATX Power Supply (200 ± 10 mm)
- **TF-PER-C10L-A10**  
Mini PCI 10/100 Base-TX Ethernet Module with Realtek 8100C

- **TF-PER-C10L-A10-01**  
Mini PCI 10/100/1000 Base-TX Ethernet Module with Realtek 8110S
- **TF-PER-C10L-A10-02**  
Mini PCI 10/100 Base-TX Ethernet Module with Intel 82551QM
- **TF-PER-C10L-A10-03**  
Mini PCI 10/100/1000 Base-TX Ethernet Module with Intel 82541GI
- **TF-PER-C30F-A10**  
Mini PCI 3-port IEEE 1394a Module
- **TF-PER-V30C-A10**  
Mini PCI Single Channel Capture Module with Philips SAA7135
- **TF-PER-C40C-A10**  
Mini PCI 2-port RS-232 Module Rev. A1.0
- **TF-PER-C40C-A10-01**  
Mini PCI 4-port RS-232 Module Rev. A1.0