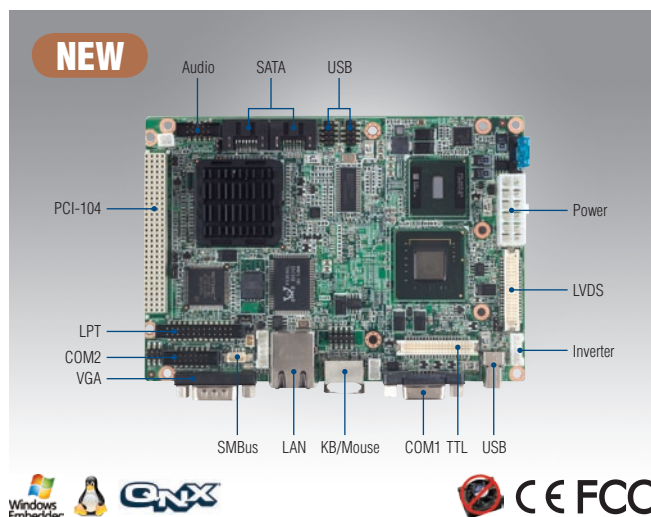


PCM-9361

3.5" Biscuit with Intel® Atom N270/VGA, LVDS, TTL, LAN, USB, SATA, SSD



Features

- Intel Atom N270+ 945GSE+ ICH7M
- Support 18-bit TTL/VGA/36-bit LVDS1/48-bit LVDS2 (including Wide screen)
- Support Giga LAN/HD Audio
- Supports up to 2 COM ports, 5 USB 2.0 ports, 2 SATA Interfaces
- Supports Embedded Software API and Utility
- Supports OS: Win XP embedded, Win XP Pro, WinCE6.0, Linux, QNX

Software APIs:



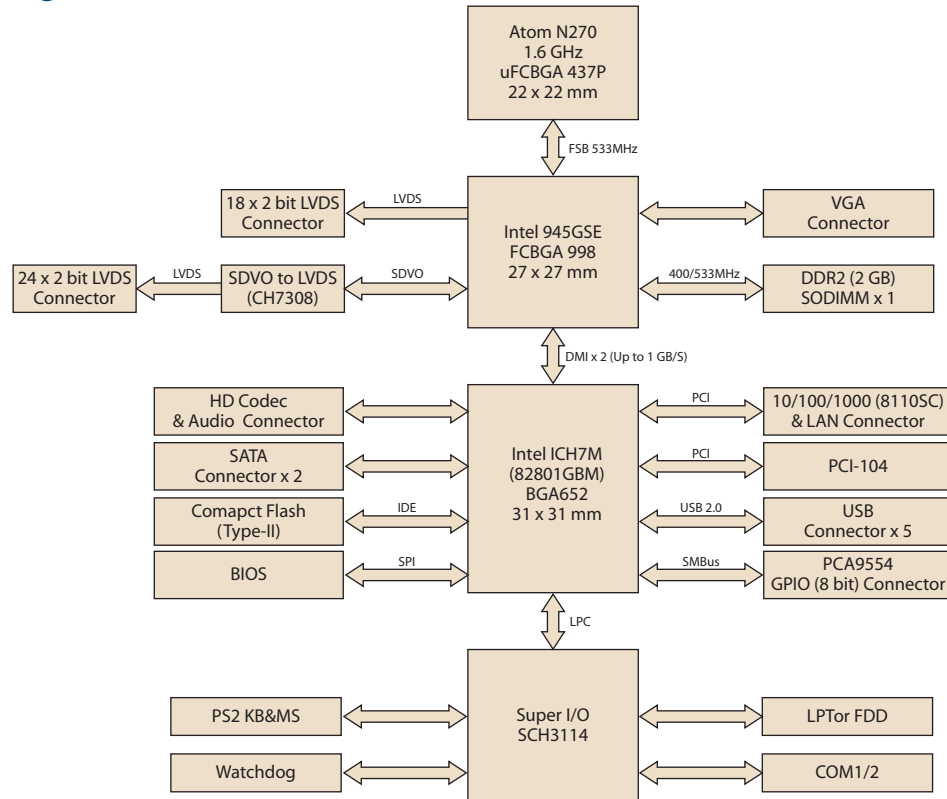
Utility:



Specifications

Processor System	CPU	Intel® Atom™ Processor N270 1.60 GHz
	Front Side Bus	533 MHz
	L2 Cache	512 KB
	Chipset	Intel® 945GSE
	BIOS	Award 4 Mbit
Memory	Technology	DDR2 400/533 MHz
	Max. Capacity	2 GB
	Socket	1 x 200-pin SODIMM
SSD	CompactFlash	Card Type I/II
Coastline I/O	VGA	1
	COM	1 (RS-232)
	RJ-45	1
	USB	1
	K/B, Mouse	1
Internal I/O	RS-232/422/485	1
	K/B	-
	Mouse	-
	USB	4 x USB 2.0
	Audio	High Definition Audio (HD), Lin-in, Lin-out, Mic-in
	GPIO	8-bit general purpose Input/Output
SATA	SMBus	Supported
	Max. Data Transfer Rate	150 MB/s
Expansion Slot	Channel	2
	PCI-104	1
Ethernet	Speed	10/100/1000 Mbps
	Controller	Realtek 8110SC
	Interface	1 x RJ-45
Display	Controller	Intel 945GSE
	VRAM	Optimized Shared Memory Architecture up to 224 MB system memory
	LVDS LCD	LVDS2 wide screen support: EX:1366 x 768 (24-bits), 1440 x 900 (48-bits), 1680 x 1050 (48-bits), 1920 x 1080 (48-bits)
	TTL LCD	1 x 18-bit TTL
	Dual Independent Display	CRT + LVDS, CRT + TTL
Environment	Operation Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	10% ~ 90% relative humidity, non-condensing
Power	Power Type	AT / ATX
	Power Supply Voltage	ATX: +5 V ± 5%, ±12 V ± 5% AT: 5V only to boot up (12 V is optional for LCD inverter and add on card)
	Power Consumption	Typical (WinXP Idle Mode): +5 V @ 1.9 A, +12 V @ 0.07 A Max (Test in HCT): +5 V @ 2.38 A, +12 V @ 0.09 A
	Power Management	APM1.2, ACPI3.0, wake on LAN, and modem ring-in functions
	Battery	Lithium 3 V / 210 mAH
Watchdog Timer	Output	System reset
	Interval	Programmable 1 ~ 255 sec
Physical Characteristics	Dimensions (L x W)	146 x 102 mm (5.7" x 4")
	Weight	0.85 kg (1.87 lb), weight of total package

Board Diagram



Ordering Information

Part No.	CPU	Memory	CRT	LVDS	LVDS2	TTL	LAN	Audio	USB 2.0	RS-232	RS-232/422/485	LPT	KB/MS	Expansion	Thermal Solution	Operating Temp.
PCM-9361FG-S6A1E	Atom N270 1.6G	DIMM	1	NA	NA	1	1 GE	HD	5	1	1	1	1	PCI-104	Passive	0 ~ 60° C
PCM-9361EG-S6A1E	Atom N270 1.6G	DIMM	1	36-bit	NA	NA	1 GE	HD	5	1	1	1	1	PCI-104	Passive	0 ~ 60° C
PCM-9361L-S6A1E (W/O cables)	Atom N270 1.6G	DIMM	1	36-bit	NA	NA	1 GE	HD	5	1	1	1	1	N/A	Passive	0 ~ 60° C
PCM-9361FZ-1GS6A1E	Atom N270 1.6G	1G bundle	1	NA	NA	1	1 GE	HD	5	1	1	1	1	PCI-104	Passive	-20 ~ 80° C
PCM-9361EVG-S6A1E	Atom N270 1.6G	DIMM	1	36-bit	48-bit	NA	1 GE	HD	5	1	1	1	1	PCI-104	Passive	0 ~ 60° C

Packing List

Part No.	Description	Quantity
	PCM-9361 SBC	1
9689000002	Mini Jumper Pack	1
	Startup Manual	1
	Utility CD	1
1700000265	ATX Power Cable	1
1700006291	SATA Cable	1
1700060202	PS/2 Y-Cable	1
1701140201	Second Serial Port Cable	1
1703100121	USB 2 Port Cable	2
1703100152	Audio Cable	1
1700260250	LPT cable	1

Optional Item

Part No.	Description
170000531	LPT to FDD cable

Value-Added Software Services

Software API: An interface that defines the ways by which an application program may request services from libraries and/or operating systems. Provides not only the underlying drivers required but also a rich set of user-friendly, intelligent and integrated interfaces, which speeds development, enhances security and offers add-on value for Advantech platforms. It plays the role of catalyst between developer and solution, and makes Advantech embedded platforms easier and simpler to adopt and operate with customer applications.

Software APIs

Control



GPIO

General Purpose Input/Output is a flexible parallel interface that allows a variety of custom connections. It allows users to monitor the level of signal input or set the output status to switch on/off a device. Our API also provides Programmable GPIO, which allows developers to dynamically set the GPIO input or output status.



SMBus

SMBus is the System Management Bus defined by Intel® Corporation in 1995. It is used in personal computers and servers for low-speed system management communications. The SMBus API allows a developer to interface a embedded system environment and transfer serial messages using the SMBus protocols, allowing multiple simultaneous device control.



I2C

I2C is a bi-directional two wire bus that was developed by Philips for use in their televisions in the 1980s. The I2C API allows a developer to interface with an embedded system environment and transfer serial messages using the I2C protocols, allowing multiple simultaneous device control.

Display



Brightness Control

The Brightness Control API allows a developer to interface with an embedded device to easily control brightness.



Backlight

The Backlight API allows a developer to control the backlight (screen) on/off in an embedded device.

Monitor



Watchdog

A watchdog timer (WDT) is a device that performs a specific operation after a certain period of time if something goes wrong and the system does not recover on its own. A watchdog timer can be programmed to perform a warm boot (restarting the system) after a certain number of seconds.



Hardware Monitor

The Hardware Monitor (HWM) API is a system health supervision API that inspects certain condition indexes, such as fan speed, temperature and voltage.



Hardware Control

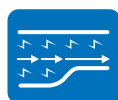
The Hardware Control API allows developers to set the PWM (Pulse Width Modulation) value to adjust fan speed or other devices; it can also be used to adjust the LCD brightness.

Power Saving



CPU Speed

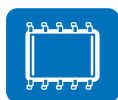
Make use of Intel SpeedStep technology to reduce power consumption. The system will automatically adjust the CPU Speed depending on system loading.



System Throttling

Refers to a series of methods for reducing power consumption in computers by lowering the clock frequency. These APIs allow the user to lower the clock from 87.5% to 12.5%.

Software Utilities



BIOS Flash

The BIOS Flash utility allows customers to update the flash ROM BIOS version, or use it to back up current BIOS by copying it from the flash chip to a file on customers' disk. The BIOS Flash utility also provides a command line version and API for fast implementation into customized applications.



Embedded Security ID

The embedded application is the most important property of a system integrator. It contains valuable intellectual property, design knowledge and innovation, but it is easily copied! The Embedded Security ID utility provides reliable security functions for customers to secure their application data within embedded BIOS.



Monitoring

The Monitoring utility allows the customer to monitor system health, including voltage, CPU and system temperature and fan speed. These items are important to a device; if critical errors happen and are not solved immediately, permanent damage may be caused.



eSOS

The eSOS is a small OS stored in BIOS ROM. It will boot up in case of a main OS crash. It will diagnose the hardware status, and then send an e-mail to a designated administrator. The eSOS also provides remote connection: Telnet server and FTP server, allowing the administrator to rescue the system.



Flash Lock

Flash Lock is a mechanism that binds the board and CF card (SQFlash) together. The user can "Lock" SQFlash via the Flash Lock function and "Unlock" it via BIOS while booting. A locked SQFlash cannot be read by any card reader or boot from other platforms without a BIOS with the "Unlock" feature.