

AIMB-552

Socket 479 Intel® Pentium® M/Celeron® M
MicroATX, VGA/LVDS, 10 COM, & Dual LAN



Features

- Intel® 910GML/915GME chipset supporting 400/533 MHz FSB processor
- Dual channel DDR2 400/533 SDRAM up to 2 GB
- Supports dual display for VGA, LVDS, and DVI (optional)
- Supports 10 serial ports, 8 USB, 2 SATA ports, 2 LAN and CF
- Supports embedded software APIs and utilities

Software APIs:



H/W Monitor



GPIO



Watchdog

Utilities:



BIOS flash



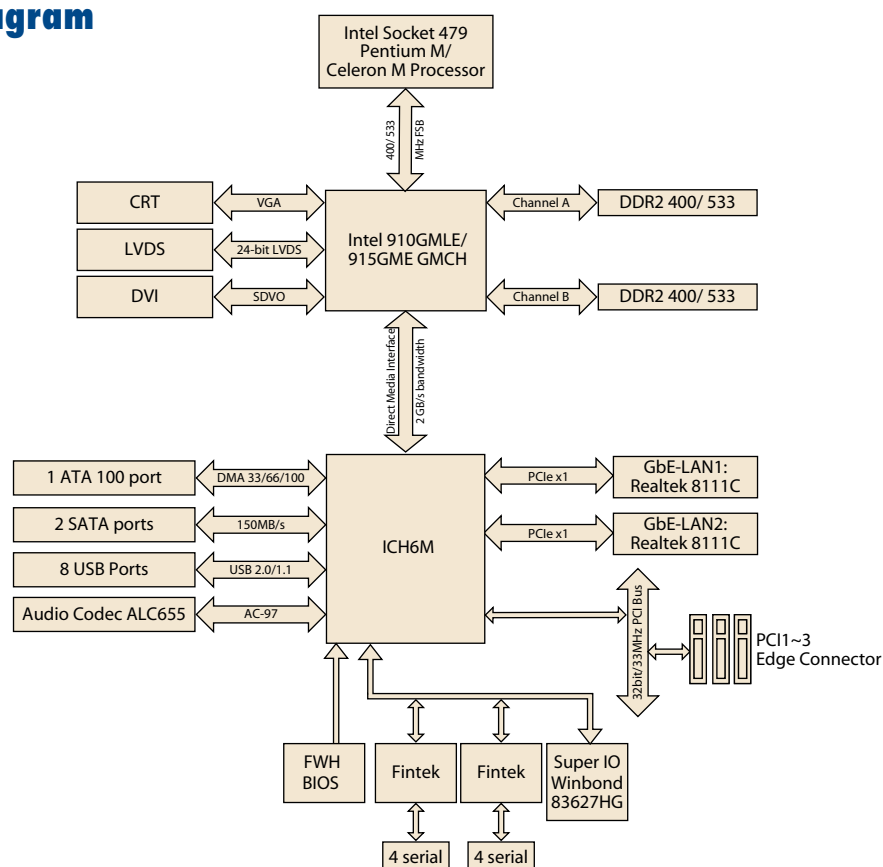
Monitoring

Specifications

Processor System	CPU (90 nm/130 nm)	Intel Pentium M		Intel Celeron M		Intel ULV Celeron M	
	Max. Speed	760 2.0 GHz		370 1.5 GHz		1 GHz on board	
	Front Side Bus	533 MHz		400 MHz		400 MHz	
	L2 Cache	2 MB		1 MB		0 KB	
	Chipset	Intel 915GME/910GML + ICH6M					
	BIOS	Award 4 Mbit, FWH					
Expansion Slot	PCI	32-bit/33 MHz, 3 slots					
Memory	Technology	Dual channel DDR2 400/533 SDRAM					
	Max. Capacity	2 GB					
	Socket	2 x 240-pin DIMM					
Graphics	Embedded	Intel GMA 900 sharing 128 MB system memory					
	LVDS	Single channel 24-bit/dual channel 48-bit LVDS					
	DVI	Chrontel 7307C SDVO Transimtter (optional)					
	Dual display	CRT + LVDS, CRT + DVI, LVDS + DVI					
Ethernet	Interface	10/100/1000 Mbps					
	Controller	GbE LAN1: Realtek RTL8111C, GbE LAN2: Realtek RTL8111C					
	Connector	RJ-45 x 2					
SATA	Max. Data Transfer Rate	150 MB/s					
	Channel	2					
EIDE	Mode	ATA 100/66/33					
	Channels	1 (max. two devices)					
SSD	CompactFlash	CompactFlash Type I/II					
I/O Interface	VGA	1					
	LVDS	1					
	DVI	1 (optional)					
	LAN	2					
	USB	8					
	Audio	2 (Line-out, Mic-in)					
	Serial	10 (2 of RS-232/422/485)					
	Parallel	1 (SPP/EPP/ECP)					
	FDD	1					
	PS/2	2 (1 x keyboard and 1 x mouse)					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 sec/min					
Power Requirements	Power On	Pentium 2.0 GHz PGA (FSB 533), 1GB DDR2 667			Celeron M 1.0 GHz BGA (FSB 400), 1 GB DDR2 533		
		+5 V	+3.3 V	+12 V	+5 V	+3.3 V	+12 V
		2.62 A	0.55 A	1.84 A	3.17 A	0.403 A	0.527 A
Environment		Operating			Non-Operating		
	Temperature	0 ~ 60° C (32 ~ 140° F)			-20 ~ 70° C (-4~150° F)		
Physical Characteristics	Dimensions (W x D)	244 mm x 244 mm (9.6" x 9.6")					

* Intel 910GML only supports FSB 400 processor and DDR2 400 SDRAM

Board Diagram



Ordering Information

Part Number	On board processor	Chipset	DDR2	Display	GbE
AIMB-552G2-S0A1E	Celeron 1 GHz	910GMLE	400	VGA/LVDS	2
AIMB-552G2-00A1E	-	915GME	400/533	VGA/LVDS/ DVI	2

*AIMB-552 cannot be installed in ACP-2000MB chassis

Riser Card

Part Number	Description
AIMB-RP10P-01A1E	1U riser card for 1 PCI expansion

Bracket View



AIMB-552G2-00A1E
AIMB-552G2-S0A1E

Packing List

Part Number	Description	Quantity
1700340640	FDD cable	1
1701400452	IDE HDD cable	1
1700003194	Serial ATA HDD data cable	2
1703150102	Serial ATA HDD power cable	2
1701100300	COM port cable kit	5
9689000068	Jumper pack	1
1960012532T100	I/O bracket	1
-	Startup manual	1
-	Utility CD	1
1750000348	CPU cooler for AIMB-552G2-00A1E	1
1960017368T000	Passive heatsink for AIMB-552G2-S0A1E	1

Optional Accessories

Part Number	Description
1700008461	USB cable with four ports, 30.5cm
1700002204	USB cable with dual ports, 27cm
1700003195	USB cable with dual ports, 17.5cm
1700000821	DVI cables

Embedded OS

OS	Part No.	Description
Win XPE	2070004038	XPE FP2007 AIMB-552 V3.1ENG

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

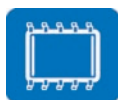
Make use of Intel SpeedStep technology to reduce power consumption. The system will automatically adjust the CPU Speed depending on system loading.



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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Advantech:](#)

[AIMB-552G2-00A1E](#)