NEXCOM International Co., Ltd.

IoT Automation Solutions Business Group

Applied Panel PC

APPC 0840T

User Manual

NEXCOM International Co., Ltd.
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PREFACE

Copyright

Disclaimer

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Acknowledgements

APPC 0840T is a trademark of NEXCOM International Co., Ltd. All other product names mentioned herein are registered trademarks of their respective owners.

Regulatory Compliance Statements

This section provides the FCC compliance statement for Class A devices and describes how to keep the system CE compliant.

Declaration of Conformity

FCC

This equipment has been tested and verified to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area (domestic environment) is likely to cause harmful interference, in which case the user will be required to correct the interference (take adequate measures) at their own expense.

CE

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

RoHS Compliance

NEXCOM RoHS Environmental Policy and Status Update

NEXCOM is a global citizen for building the digital infrastructure. We are committed to providing green products and services, which are compliant with European Union RoHS (Restriction on Use of Hazardous Substance in Electronic Equipment) directive 2011/65/EU, to be your trusted green partner and to protect our environment.

RoHS restricts the use of Lead (Pb) < 0.1% or 1,000ppm, Mercury (Hg) < 0.1% or 1,000ppm, Cadmium (Cd) < 0.01% or 100ppm, Hexavalent Chromium (Cr6+) < 0.1% or 1,000ppm, Polybrominated biphenyls (PBB) < 0.1% or 1,000ppm, and Polybrominated diphenyl Ethers (PBDE) < 0.1% or 1,000ppm.

In order to meet the RoHS compliant directives, NEXCOM has established an engineering and manufacturing task force to implement the introduction of green products. The task force will ensure that we follow the standard NEXCOM development procedure and that all the new RoHS components and new manufacturing processes maintain the highest industry quality levels for which NEXCOM are renowned.

The model selection criteria will be based on market demand. Vendors and suppliers will ensure that all designed components will be RoHS compliant.

How to recognize NEXCOM RoHS Products?

For existing products where there are non-RoHS and RoHS versions, the suffix "(LF)" will be added to the compliant product name.

All new product models launched after January 2013 will be RoHS compliant. They will use the usual NEXCOM naming convention.

Warranty and RMA

NEXCOM Warranty Period

1. NEXCOM makes products in accordance with the Industry standard and, NEXCOM warrants that all her Industry-grade IPC and System products will be free from defect in neither material nor workmanship for twenty-four (24) months from the day of invoice issued.

2. For NEXCOM Panel PC product lines (the APPC, MPPC series), they are also guaranteed against defect in materials and workmanship for the period of twenty-four (24) months in their motherboard design. For 3rd party parts, it follows with original suppliers' standard: 12 months for battery pack and LCD, 24 months for adaptor / add on modules (including GSM module, RFID module, and antenna).

3. If NEXCOM determines customer's warranty claim is valid, NEXCOM will repair or replace product(s) without additional charge for parts and labor. An extended Warranty Program will extend the warranty period of the product accordingly.

Warranty Coverage

The warranty applies only to products manufactured or distributed by NEXCOM and her subsidiaries. This warranty covers all the products/ shipments except for:

1. Any claimed defect, products that have been repaired or modified by persons who have not been authorized by NEXCOM or, products which have been subjected to misuse, abuse, accident, improper installation, or usage not in accordance with the product instruction. NEXCOM assumes no liability as a consequence of such events under the term of this warranty.

   One example is the replacement of Tablet's or Hand-held's LCD display due to scratching stains or other degradation; these will not be covered under this warranty.

2. Damages caused by customers' delivery/shipping of the product or, product failure resulted from electrical power/voltage shock, or, installation of parts/components which are not supplied/approved by NEXCOM in advance.

3. Third-party products:

   a. Software, such as the device drivers,

   b. External devices such as HDD, printer, scanner, mouse, LCD panel, battery, and so on,

   c. Accessory/parts that were not approved by NEXCOM and,

   d. Accessory/parts were added to products after they were shipped from NEXCOM.

Product will be treated as "Out of Warranty " if:

a. It expires the warranted 24 months period from the day it was purchased.

b. It had been altered by persons other than an authorized NEXCOM service person or, which have been subjected to misuse, abuse, accident, or improper installation.

c. It doesn't have the original NEXCOM Serial Number labeling for NEXCOM's warranty period identification or, tracking.

RMA that NEXCOM has determined not to be covered by the warranty will be charged the NEXCOM Standard Repair Fee for the repairing. If a RMA is determined to be not repairable, customer will be notified and product(s) may be returned to customer at their request; a minimum service fee may be charged however.

NEXCOM Return Merchandise Authorization (RMA) Procedure

For the RMA (Return Merchandise Authorization) shipment, customer is responsible for packaging and shipping the product to the designated NEXCOM service sites, with shipping charges prepaid by the customer. The original NEXCOM shipping box should be used whenever possible. NEXCOM shall pay for the return of the product to the customer's location. In case of expedited shipping request, an extra service charge shall be assessed and the customer is responsible for this extra return shipping charge.

1. Customers should enclose the "NEXCOM RMA Service Form" with the returned products.
2. Customers need to write down all the information related to the problem on the " NEXCOM RMA Service Form " when applying for the RMA service; information will help to understand the problem, including the fault description, on-screen messages, and pictures if possible.
3. Customers could send back the faulty product with or without the accessories and key parts such as the CPU and DIMM. If the key parts are included, please be noted clearly within the return form. NEXCOM takes no responsibility for the parts which are not listed in the return form.
4. Customers hold the responsibility to ensure that the packing of defective products is durable enough to be resistant against further damage due to the transportation; damage caused by transportation is treated as " Out of Warranty " under our Warranty specification.
5. RMA product(s) returned by NEXCOM to any location other than the customer registered delivery address will incur an extra shipping charge, the customer is responsible for paying the extra shipping charges, duties, and taxes of this shipment.

Product Repairing

1. NEXCOM will repair defective products covered under this limited warranty that are returned to NEXCOM; if products do prove to be defective, they will be repaired during their warranty period unless other warranty terms have been specified.
2. NEXCOM owns all parts removed from repaired products.
3. NEXCOM will use parts made by various manufacturers in performing the repair.
4. The repaired products will be warranted subjected to the original warranty coverage and period only.
5. For products returned as defective but, proved to be no defect/fault after the RMA process, NEXCOM reserves the right to claim for a NDF (No Defect Found) Service Charge.
6. NEXCOM will issue RMA Report which included Repair Detailed Information to the customer when the defective products were repaired and returned.
7. In addition to the above, NEXCOM may authorize Independent/Third-party suppliers to repair the defective products for NEXCOM.

Out Of Warranty Service

There will be a service charge from NEXCOM for the "Out Of Warranty" product service; they are the Basic Diagnostic Service Fee and the Advanced Component Replacement Fee respectively. And, if the product can not be repaired, NEXCOM will either return the product to the customer or, just scrap it, followed by customer's instruction.

1. Testing and Parts Replacement

   NEXCOM will have the following Handling Charges for those OoW products that returned:

   a. Basic Labor Cost and Testing Fee: as Table listed.

   b. Parts Fee: NEXCOM will charge for main IC chipsets such as the N.B., S.B., Super-IO, LAN, Sound, Memory, and so on.

   c. 3rd-party Device Fee: products replacement for CPU, DIMM, HDD, Chassis, and UPS.

2. Out of Warranty product will have a three months warranty for the fixed issues. If the product failed with different problem within 3 months, they will still incur the service charge of "Out of Warranty".

3. Out of Warranty "products will not be repaired without a signed PI from the customer, the agreement of the repair process.

   Add-on card, 3rd Party Device and board level repair cost higher than new product prices, customer can abandon to sign PI to repair and, please contact with sales to buy new products.

Safety Information

Before installing and using the device, note the following precautions:

- Read all instructions carefully.
- Do not place the unit on an unstable surface, cart, or stand.
- Follow all warnings and cautions in this manual.
- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.
- Avoid using the system near water, in direct sunlight, or near a heating device.
- The load of the system unit does not solely rely for support from the rackmounts located on the sides. Firm support from the bottom is highly necessary in order to provide balance stability.
- The computer is provided with a battery-powered real-time clock circuit. There is a danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Installation Recommendations

Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.

Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:

- A Philips screwdriver
- A flat-tipped screwdriver
- A grounding strap
- An anti-static pad

Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nose pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.

Safety Precautions

1. Read these safety instructions carefully.

2. Keep this User Manual for later reference.

3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.

4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a stable surface during installation. Dropping it or letting it fall may cause damage.

7. The openings on the enclosure are for air convection to protect the equipment from overheating. DO NOT COVER THE OPENINGS.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

9. Place the power cord in a way so that people will not step on it. Do not place anything on top of the power cord. Use a power cord that has been approved for use with the product and that it matches the voltage and current marked on the product's electrical range label. The voltage and current rating of the cord must be greater than the voltage and current rating marked on the product.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.

12. Never pour any liquid into an opening. This may cause fire or electrical shock.

13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.

14. If one of the following situations arises, get the equipment checked by service personnel:
    a. The power cord or plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.
    d. The equipment does not work well, or you cannot get it to work according to the user's manual.
    e. The equipment has been dropped and damaged.
    f. The equipment has obvious signs of breakage.

15. Do not place heavy objects on the equipment.

16. The unit uses a three-wire ground cable which is equipped with a third pin to ground the unit and prevent electric shock. Do not defeat the purpose of this pin. If your outlet does not support this kind of plug, contact your electrician to replace your obsolete outlet.

17. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER. DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

Technical Support and Assistance

1. For the most updated information of NEXCOM products, visit NEXCOM's website at www.nexcom.com.

2. For technical issues that require contacting our technical support team or sales representative, please have the following information ready before calling:
   - Product name and serial number
   - Detailed information of the peripheral devices
   - Detailed information of the installed software (operating system, version, application software, etc.)
   - A complete description of the problem
   - The exact wordings of the error messages

Warning!

1. Handling the unit: carry the unit with both hands and handle it with care.

2. Maintenance: to keep the unit clean, use only approved cleaning products or clean with a dry cloth.

3. CFast: Turn off the unit's power before inserting or removing a CFast storage card.

Conventions Used in this Manual

Warning:
Information about certain situations, which if not observed, can cause personal injury. This will prevent injury to yourself when performing a task.

Caution:
Information to avoid damaging components or losing data.

Note:
Provides additional information to complete a task easily.

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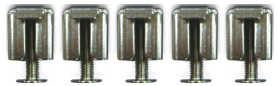
Package Contents

Before continuing, verify that the package you received is complete. Your package should have all the items listed in the table.

Item	Description	Qty
1	PS/2 Y cable	1
2	Panel Mount Kit	5
3	Driver CD	1
4	Touch Pen	1
5	Flat Head for HDD Installation	4
6	Mylar for HDD	1

Note: Package contents may vary depending on your country region, some items may be optional. Please contact your local distributor for more information.

PS/2 Y Cable



Panel Mount Kit

Driver CD

Touch Pen

Flat Head Screw

Mylar for HDD

Ordering Information

The following information below provides ordering information for APPC 0840T.

Barebone

- **APPC 0840T (P/N: 10IA0840T00X0)**
  8" SVGA LED backlight touch panel PC with Intel® Atom™ E3826 1.46 GHz, touch screen, 2GB DDR3L with 2x RS232/422/485

Optional

- **12V, 60W AC/DC power adapter w/o power cord (P/N: 7400060017X00)**
- **PROFINET Master Interface Module: FBI90E-PNM for APPC (P/N: 88IA1932T00X0)**
- **EtherNet/IP Master Interface Module: FBI90E-EP for APPC (P/N: 88IA1932T01X0)**
- **EtherCAT Master Interface Module: FBI90E-ECM for APPC (P/N: 88IA1932T02X0)**
- **PROFIBUS Master Interface Module: FBI90E-PBM for APPC (P/N: 8IA1932T03X0)**
- **DeviceNet Master Interface Module: FBI90E-DNM for APPC (P/N: 8IA1932T04X0)**

Chapter 1: Product Introduction

APPC 0840T

Overview

Key Features

- 4:3 8” SVGA fanless panel computer
- Intel® Atom™ E3826, dual core, low power consumption CPU
- Flush panel by 5-wire touch screen
- Dual GbE/2nd display-VGA/2x RS232/422/485/Line-out
- 3x USB 2.0/1x USB 3.0/1x mini-PCIe socket/1x CFast
- Remote power switch
- DDR3L 2GB/2.5” HDD bracket
- IP65 compliant front panel
- Support fieldbus module
- Mounting support: Panel/Wall/Stand/VESA 75mm x 75mm
- Wide range power input 12~30V DC

Specifications

Panel

- LED size: 8”, 4:3
- Resolution: SVGA 800 x 600
- Luminance: 400cd/m^2
- Contrast ratio: 500
- LCD color: 262K
- Viewing angle: 50(U), 70(D), 70(L), 70(R)
- Backlight: LED

Touch Screen

- 5-wire resistive (flush panel type)
- Touch light transmission: 82%
- Touch interface: USB

System

- CPU: On-board Intel® Atom™ dual core processor E3826, 1.46GHz, 1M L2 Cache
- BIOS: AMI BIOS
- System memory: 1x 204-pin DDR3L SO-DIMM socket, 2GB DDR3L (default), support up to 8GB DDR3L-1066/1333, non-ECC and unbuffered
- Storage Device:
  - 1x external locked CFast socket
  - 1x hard drive bay: optional 1x 2.5” SATA HDD or 1x SATA DOM
- Watchdog timer: Watchdog timeout can be programmed by software from 1 second to 255 seconds and from 1 minute to 255 minutes (Tolerance 15% under room temperature 25°C)
- H/W status monitor: monitoring system temperature, and voltage
- Expansion: 1x Mini-PCIe socket (support optional Wi-Fi, 3.5G module or fieldbus card)

Rear I/O

- Ethernet: 2x RJ45
- 2nd display VGA port: 1x DB15
- Audio port: 1x Line-out
- USB: 3x USB 2.0; 1x USB 3.0
- Power switch
- Remote power switch
- Reset button
- COM #1: RS232/422/485
- COM #2: RS232/422/485
- Fieldbus: (protocol interface optional)

Model	Protocol	Connector
FBI90E-PNM	PROFINET Master	Dual RJ-45
FBI90E-EP	EtherNet/IP Master	
FBI90E-ECM	EtherCAT Master	
FBI90E-PBM	PROFIBUS Master	DB9
FBI90E-DNM	DeviceNet Master	5-pin Phoenix Contact Terminal

Audio

- HD codec: Realtek ALC886-GR
- Audio interface: Line-out/ Line-in (optional)/ Mic-in (optional) audio jack

Ethernet

- LAN chip: dual Intel® I210AT Gigabit LAN
- Ethernet interface: 10/100/1000 Based-Tx Ethernet compatible

Mechanical & Environment

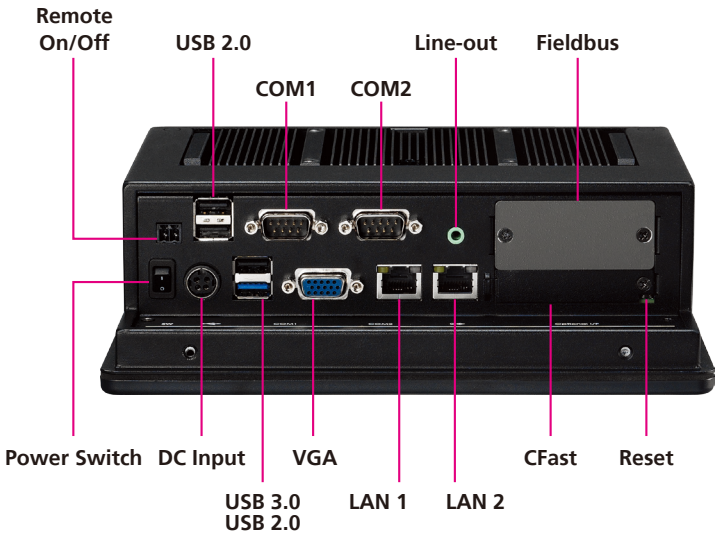
- Color: Pantone Black
- IP protection: IP65 front
- Mounting: panel/ wall/ stand/ VESA 75mm x 75mm
- System with panel mounting kit w/o panel mounting hole
- Power input: 12~30V DC
- Power adapter: Optional AC to DC power adaptor (+12V, 60W)
- Vibration:
  - IEC 68 2-64 (w/ HDD)
  - 1Grms @ sine, 5~500Hz, 1hr/axis (HDD operating)
  - 2Grms @ sine, 5~500Hz, 1hr/axis (CFast operating)
  - 2.2Grms @ random condition, 5~500Hz, 0.5hr/axis (non-operating)
- Shock:
  - IEC 68 2-27
  - HDD: 20G @ wall mount, half sine, 11ms
- Operating temperature: -5°C to 50°C
- Storage temperature: -20°C to 75°C
- Operating humidity: 10%~90% relative humidity, non-condensing
- Dimension: 217.4 x 176.4 x 68.9mm
- Weight: 2.3Kg

Certifications

- CE approval
- FCC Class A

Knowing Your APPC 0840T

Rear Bottom



Remote On/Off Switch
Used to connect a remote to power on/off the system.

USB 2.0
Dual USB 2.0 port used to connect USB 2.0/1.1 devices.

COM 1 and COM 2
Support RS232/422/485 compatible series device through BIOS setting.

Line-out
Used to connect a headphone or a speaker.

Fieldbus
Expansion slot for add-on fieldbus modules.

Power Switch
Press to power-on or power-off the panel PC.

DC Input
Used to plug a DC power cord.

USB 3.0 and USB 2.0 Port
Used to connect the system with USB 3.0/2.0/1.1 devices.

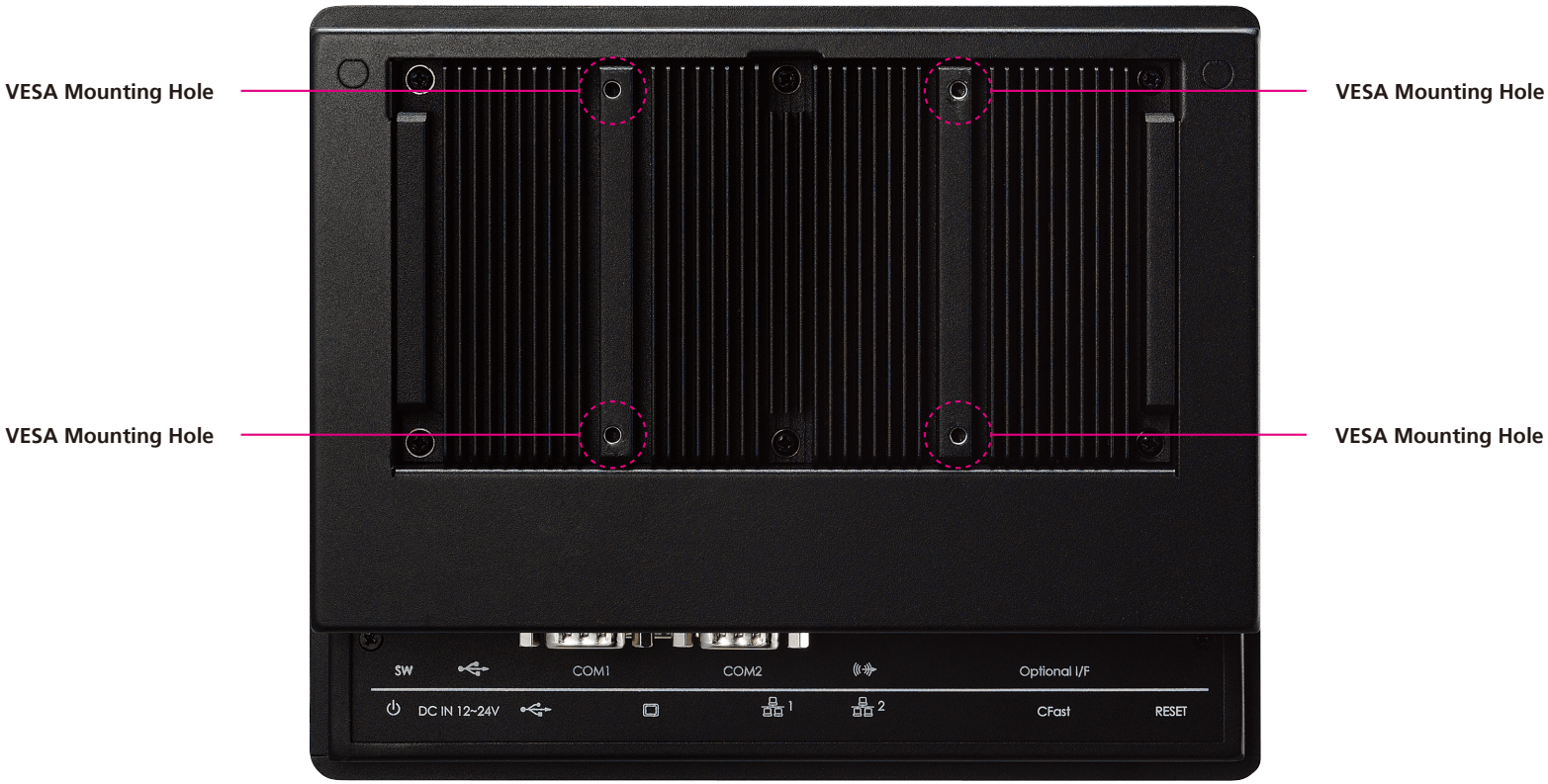
VGA
Used to connect an analog VGA monitor.

LAN 1 and LAN 2
Used to connect the system to a local area network.

CFast Card Socket
Used to insert a CFast card.

Reset Button
Press this button to restart the system.

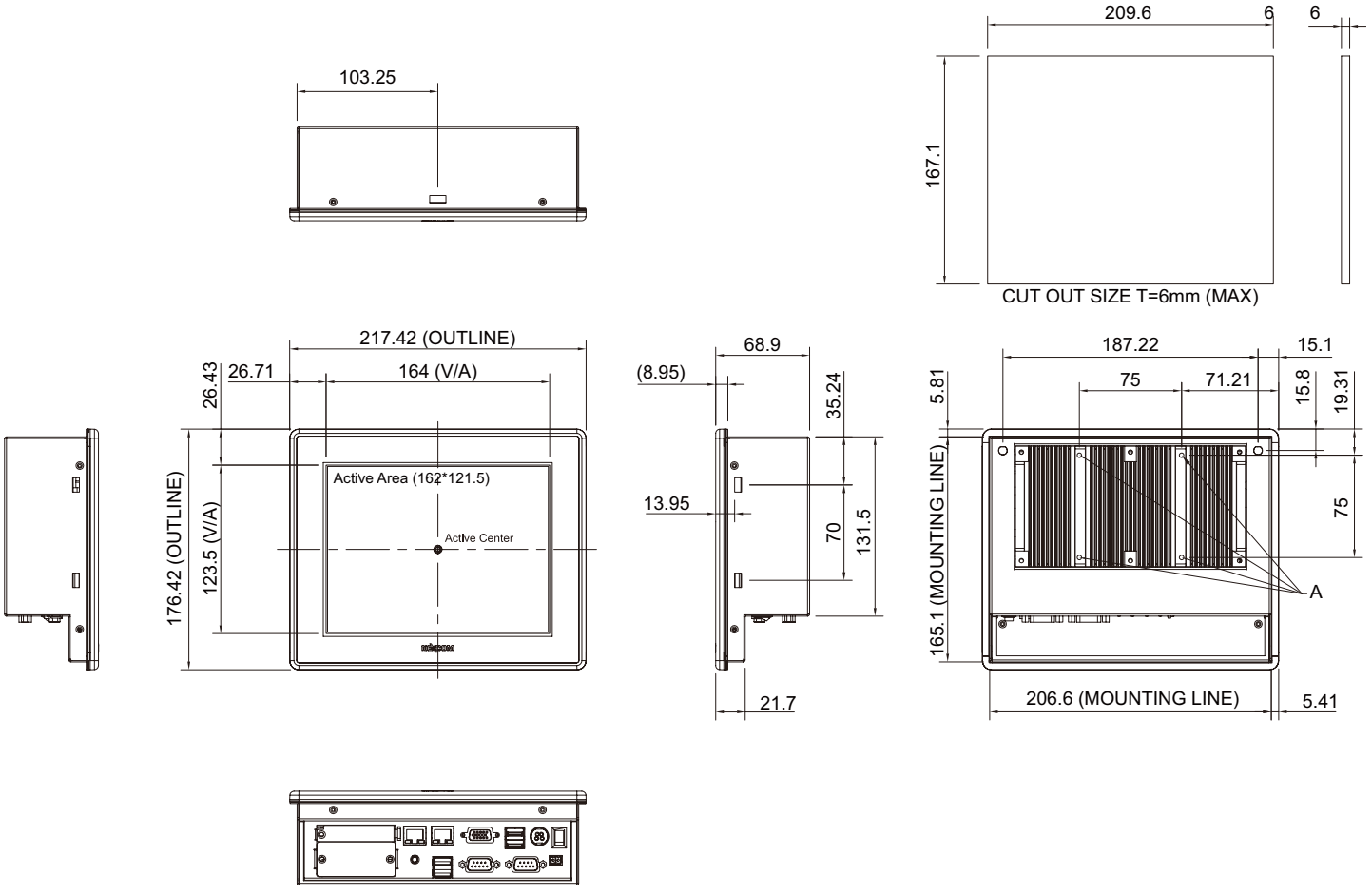
Rear



VESA Mounting Holes

These are the mounting holes for VESA mount (75x75mm)

Mechanical Dimensions



Chapter 2: Jumpers and Connectors

This chapter describes how to set the jumpers and connectors on the motherboard. Note that information in this chapter applies to APPC 0840T.

Before You Begin

- Ensure you have a stable, clean working environment. Dust and dirt can get into components and cause a malfunction. Use containers to keep small components separated.
- Adequate lighting and proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:
  - A Philips screwdriver
  - A flat-tipped screwdriver
  - A set of jewelers screwdrivers
  - A grounding strap
  - An anti-static pad
- Using your fingers can disconnect most of the connections. It is recommended that you do not use needle-nosed pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors.
- Before working on internal components, make sure that the power is off. Ground yourself before touching any internal components, by touching a metal object. Static electricity can damage many of the electronic components. Humid environments tend to have less static electricity than dry environments. A grounding strap is warranted whenever danger of static electricity exists.

Precautions

Computer components and electronic circuit boards can be damaged by discharges of static electricity. Working on computers that are still connected to a power supply can be extremely dangerous.

Follow the guidelines below to avoid damage to your computer or yourself:

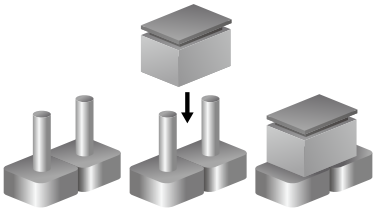
- Always disconnect the unit from the power outlet whenever you are working inside the case.
- If possible, wear a grounded wrist strap when you are working inside the computer case. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal body of any other grounded appliance.
- Hold electronic circuit boards by the edges only. Do not touch the components on the board unless it is necessary to do so. Don't flex or stress the circuit board.
- Leave all components inside the static-proof packaging that they shipped with until they are ready for installation. Use correct screws and do not over tighten screws.

Jumper Settings

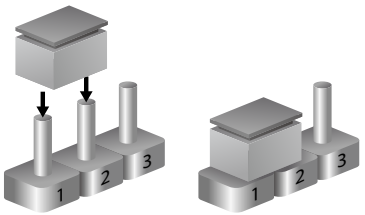
A jumper is the simplest kind of electric switch. It consists of two metal pins and a cap. When setting the jumpers, ensure that the jumper caps are placed on the correct pins. When the jumper cap is placed on both pins, the jumper is short. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is open.

Refer to the illustrations below for examples of what the 2-pin and 3-pin jumpers look like when they are short (on) and open (off).

Two-Pin Jumpers: Open (Left) and Short (Right)

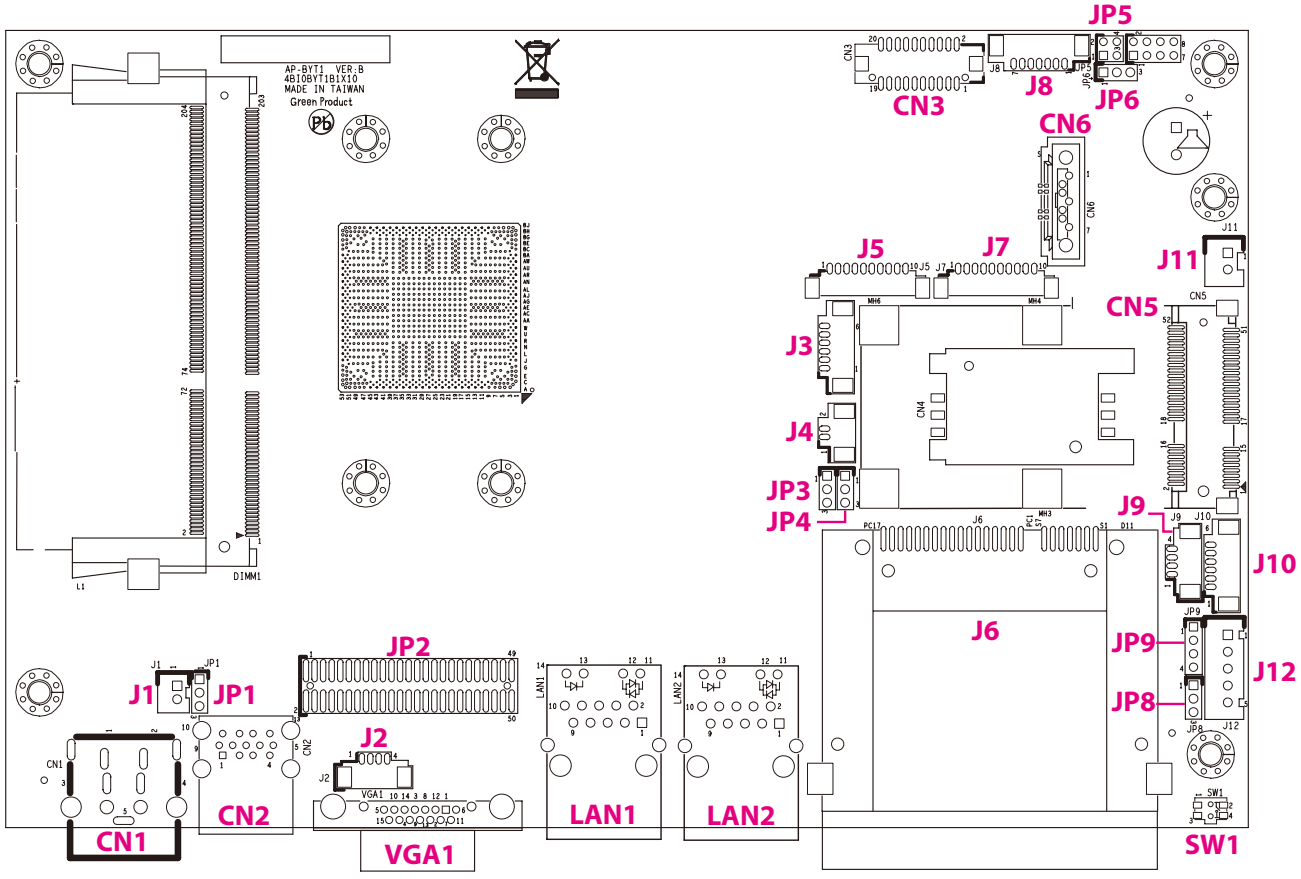


Three-Pin Jumpers: Pins 1 and 2 are Short

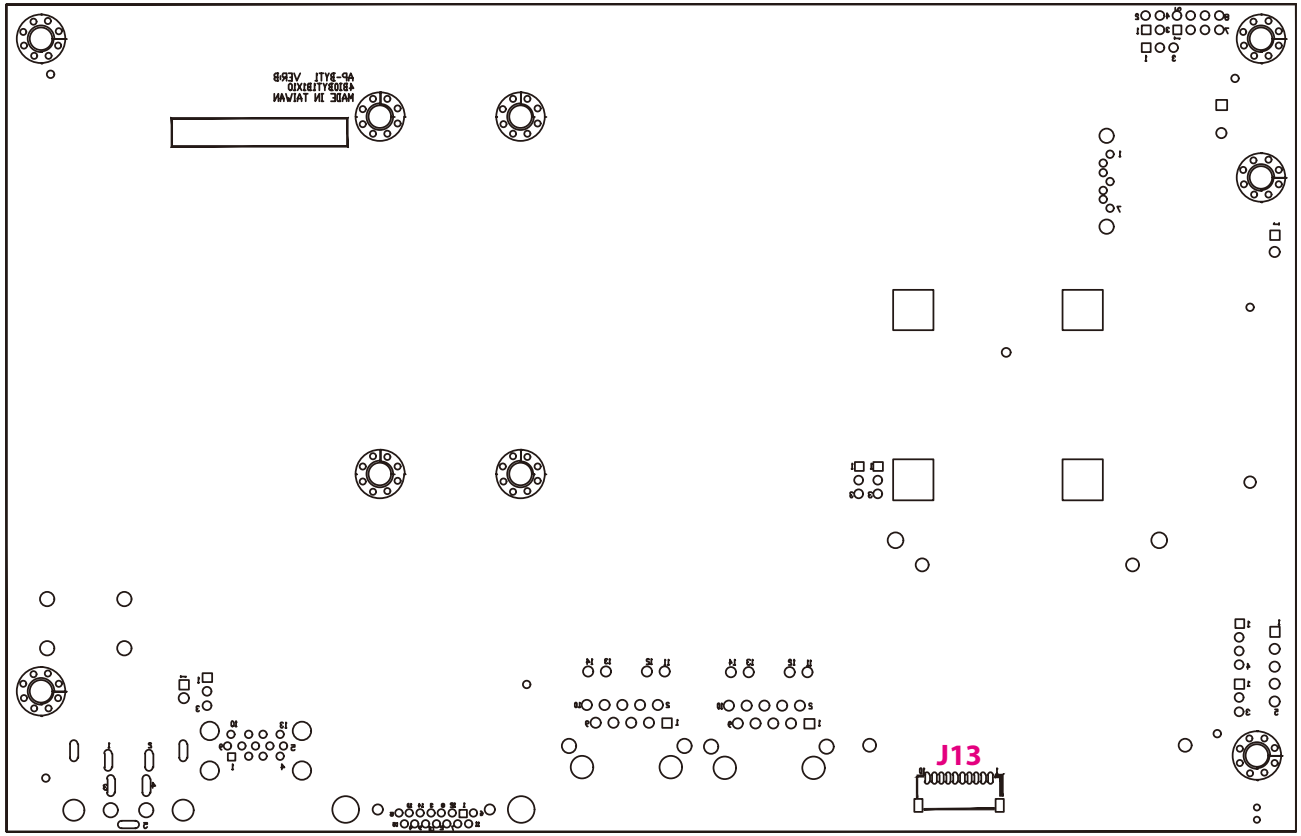


Locations of the Jumpers and Connectors

Top View



Bottom View



Jumpers and DIP Switch Settings

RTC and SRTC Clear Select

Connector type: 1x3 3-pin header, 2.0mm pitch
Connector location: JP4 (RTC) and JP3 (SRTC)

Pin	Settings
1-2 On	Normal
2-3 On	Clear

1-2 On: default

Pin	Definition
1	NC
2	RTC Power
3	GND

AT/ATX Power Select

Connector type: 1x3 3-pin header, 2.0mm pitch
Connector location: JP1

Pin	Settings
1-2 On	AT Mode
2-3 On	ATX Mode

2-3 On: default

Pin	Definition
1	AUTO (AT MODE)
2	PWRBT In
3	Manual (ATX MODE)

Dimming Signal Level Select

Connector type: 1x3 3-pin header, 2.0mm pitch
Connector location: JP6

Pin	Settings
1-2 On	3.3V
2-3 On	5V

1-2 On: default

Pin	Definition
1	VCC3
2	Power for Dimming
3	VCC5

Dimming Type Select

Connector type: 2x2 4-pin header, 2.0mm pitch
Connector location: JP5

Settings	Pin 1-2	Pin 3-4
PWM Mode	ON	OFF
Analog Mode	OFF	ON

Touch 4/5 Wire Select

Connector type: 1x3 3-pin header, 2.0mm pitch
Connector location: JP8

Pin	Settings
1-2 On	5 wire
2-3 On	4 wire

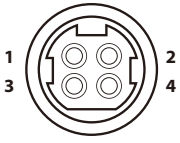
1-2 On: default

Connector Pin Definitions

External I/O Interfaces

DC Jack Connector

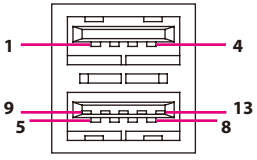
Connector location: CN1



Pin	Definition	Pin	Definition
1	V_IN	2	V_IN
3	GND_IN	4	GND_IN
5	CHASIS_GND	MH1	CHASIS_GND
MH2	CHASIS_GND	MH3	CHASIS_GND
MH4	CHASIS_GND		

USB 3.0 and USB 2.0 Port

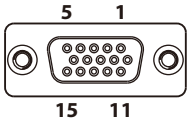
Connector type: USB 3.0 and USB 2.0 port, Type A
Connector location: CN2



Pin	Definition	Pin	Definition
1	VCC5	2	USB 0N
3	USB 0P	4	GND
5	USB3_RX_N	6	USB3_RX_P
7	GND	8	USB3_TX_N
9	USB3_TX_P	10	VCC5
11	USB 1N	12	USB 1P
13	GND	MH1	CHASIS_GND
MH2	CHASIS_GND	MH3	CHASIS_GND
MH4	CHASIS_GND		

VGA Port

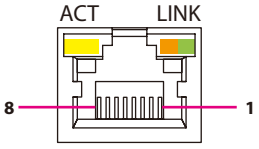
Connector type: DB-15 port, 15-pin D-Sub
Connector location: VGA1



Pin	Definition	Pin	Definition
1	Red	2	Green
3	Blue	4	N/C
5	GND	6	GND
7	GND	8	GND
9	+5V	10	GND
11	N/C	12	DDC Data
13	HSYNC	14	VSYNC
15	DDC Clock	16	N/C

LAN1 Port

Connector type: RJ45 port with LEDs
Connector location: LAN1



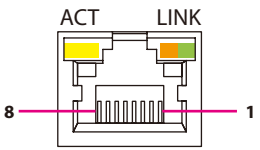
Act	Status
Flashing Yellow	Data activity
Off	No activity

Link	Status
Steady Green	1G network link
Steady Orange	100Mbps network link
Off	10Mbps or no link

Pin	Definition	Pin	Definition
1	LAN1_MDI0P	2	LAN1_MDI0N
3	LAN1_MDI1P	4	LAN1_MDI1N
5	LAN1TCT	6	LAN1TCTG
7	LAN1_MDI2P	8	LAN1_MDI2N
9	LAN1_MDI3P	10	LAN1_MDI3N
11	LAN1_LINK1G#	12	LAN1_LINK100#
13	LAN1_LEDACT#	14	3VSB
MH1	CHASIS_GND	MH2	CHASIS_GND

LAN2 Port

Connector type: RJ45 port with LEDs
Connector location: LAN2



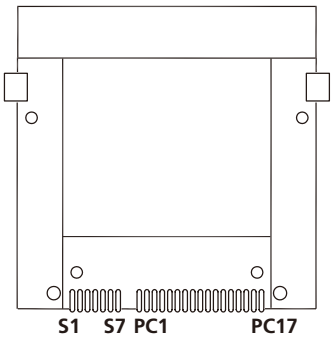
Act	Status
Flashing Yellow	Data activity
Off	No activity

Link	Status
Steady Green	1G network link
Steady Orange	100Mbps network link
Off	10Mbps or no link

Pin	Definition	Pin	Definition
1	LAN2_MDI0P	2	LAN2_MDI0N
3	LAN2_MDI1P	4	LAN2_MDI1N
5	LAN2TCT	6	LAN2TCTG
7	LAN2_MDI2P	8	LAN2_MDI2N
9	LAN2_MDI3P	10	LAN2_MDI3N
11	LAN2_LINK1G#	12	LAN2_LINK100#
13	LAN2_LEDACT#	14	3VSB
MH1	CHASIS_GND	MH2	CHASIS_GND

CFast Card Slot

Connector type: Standard CFast connector
Connector location: J6

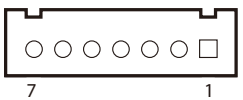


Pin	Definition	Pin	Definition
S1	GND	S2	SATA_TXP2
S3	SATA_TXN2	S4	GND
S5	SATA_RXN2	S6	SATA_RXP2
S7	GND	PC1	CFAST_CDI
PC2	GND	PC3	NC
PC4	NC	PC5	NC
PC6	NC	PC7	GND
PC8	CFAST_LED1_C	PC9	CFAST_LED2_C
PC10	NC	PC11	NC
PC12	NC	PC13	VCC3
PC14	VCC3	PC15	GND
PC16	GND	PC17	CFAST_CDO

Internal Connectors

Inverter Connector

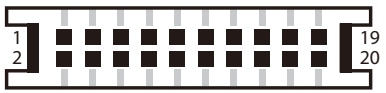
Connector type: 1x7 7-pin header JST, 1.25mm pitch
Connector location: J8



Pin	Definition	Pin	Definition
1	VCC5	2	12V
3	12V	4	BKCTRL
5	GND	6	GND
7	BKLEN		

LVDS Channel A

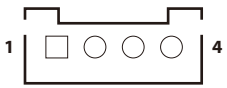
Connector type: 2x10 20-pin header, 1.25mm pitch
Connector location: CN3



Pin	Definition	Pin	Definition
1	NC	2	NC
3	VDD	4	LVDS_DAT0P
5	LVDS_DAT3P	6	LVDS_DAT0N
7	LVDS_DAT3N	8	VDD
9	GND	10	LVDS_DAT1P
11	LVDS_CLK1P	12	LVDS_DAT1N
13	LVDS_CLK1N	14	GND
15	GND	16	+12V
17	LVDS_DAT2P	18	+12V
19	LVDS_DAT2N		

USB Connector

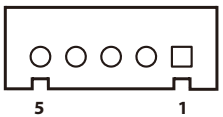
Connector type: 1x4 4-pin header, 1.25mm pitch
Connector location: J2



Pin	Definition	Pin	Definition
1	+5V	2	USB_N
3	USB_P	4	GND

Touch Sensor Connector

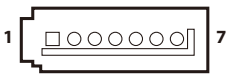
Connector type: 1x5 5-pin header JST, 2.5mm pitch
Connector location: J12



Pin	4-wire	5-wire
1	Bottom	UR (H)
2	Right	LR (X)
3	N/A	Sense (S)
4	Top	UL (Y)
5	Left	LL (L)

SATA Connector

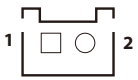
Connector type: Standard Serial ATA 7P (1.27mm, SATA-M-180)
Connector location: CN6



Pin	Definition	Pin	Definition
1	GND	2	TXP0
3	TXN0	4	GND
5	RXN0	6	RXP0
7	GND	8	

SATA DOM Power Connector

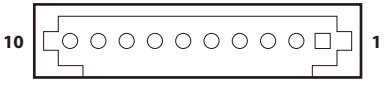
Connector type: 1x2 2-pin header JST, 2.5mm pitch
Connector location: J11



Pin	Definition
1	+5V
2	GND

COM3 Connector

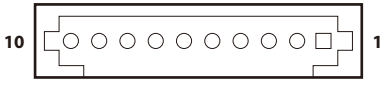
Connector type: 1x10 10-pin header JST, 1.25mm pitch
Connector location: J7



Pin	Definition	Pin	Definition
1	NC	2	COM3_DCD
3	COM3_DSR	4	COM3_RXD
5	COM3_RTS	6	COM3_TXD
7	COM3_CTS	8	COM3_DTR
9	COM3_GND	10	COM3_RI

COM4 Connector

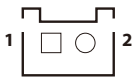
Connector type: 1x10 10-pin header JST, 1.25mm pitch
Connector location: J5



Pin	Definition	Pin	Definition
1	NC	2	COM4_DCD
3	COM4_DSR	4	COM4_RXD
5	COM4_RTS	6	COM4_TXD
7	COM4_CTS	8	COM4_DTR
9	COM4_GND	10	COM4_RI

Power Button

Connector type: 1x2 2-pin header JST, 2.0mm pitch
Connector location: J1



Pin	Definition
1	GND
2	ATXBT#

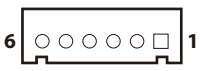
Reset Button

Connector location: SW1

Pin	Definition
1	Reset
2	Reset
3	GND
4	GND

Active LED Connector

Connector type: 1x6 6-pin header JST, 1.25mm pitch
Connector location: J3



Pin	Definition	Pin	Definition
1	PWR_EN	2	5VSB
3	LED_ACT	4	5VSB
5	HDD#	6	NC

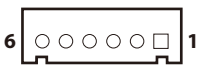
Backlight Control Input Connector

Connector type: 1x4 4-pin header JST, 1.25mm pitch
Connector location: J9

Pin	Definition
1	VCC3
2	MCU_PIRC
3	MCU_BKC
4	GND

Dimming Control Input Connector

Connector type: 1x6 6-pin header JST, 1.25mm pitch
Connector location: J10



Pin	Definition	Pin	Definition
1	VCC3	2	Light sensor input
3	Increased input	4	Decdecreased input
5	NC	6	GND

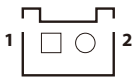
LVDS MCU FW Debug Connector

Connector type: 1x4 4-pin header, 2.0mm pitch
Connector location: JP9

Pin	Definition
1	VCC3
2	MCU_TCK
3	MCU_TDIO
4	GND

Battery Connector

Connector type: 1x2 2-pin header JST, 1.25mm pitch
Connector location: J4



Pin	Definition
1	VBAT
2	GND

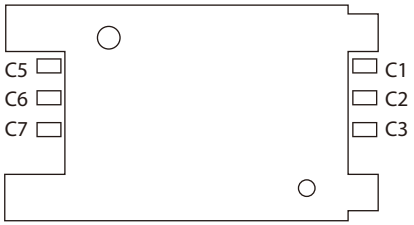
Post Code Debug Connector

Connector type: 1x10 10-pin header, 1.0mm pitch
Connector location: J13

Pin	Definition	Pin	Definition
1	VCC3	2	VCC3
3	LPC_AD0	4	LPC_AD1
5	LPC_AD2	6	LPC_AD3
7	LPC_FRAME#	8	LPC_CLK
9	PLTRST#	10	GND

SIM Card Slot

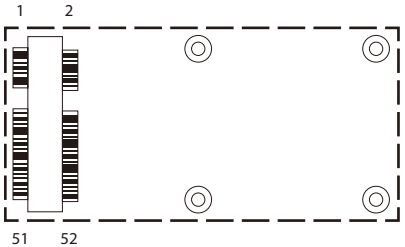
Connector location: CN4



Pin	Definition	Pin	Definition
C1	UIM_PWR	C2	UIM_RST
C3	UIM_CLK	C5	GND
C6	UIM_VCCP	C7	UIM_DAT

Mini-PCIe Slot (Wi-Fi/3G)

Connector location: CN5

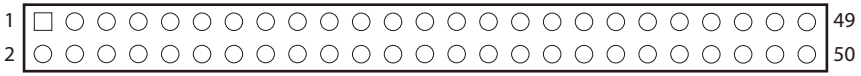


Pin	Definition	Pin	Definition
1	PCIEWAKE	2	3.3V
3	NC	4	GND
5	NC	6	1.5V
7	CLKREQ	8	UIM_PWR
9	GND	10	UIM_DAT
11	PCIECLKN	12	UIM_CLK
13	PCIECLKP	14	UIM_RST
15	GND	16	UIM_VCCP
17	NC	18	GND
19	NC	20	DISABLE
21	GND	22	PLTRSTBF
23	PCIERX4N	24	3.3V
25	PCIERX24P	26	GND

Pin	Definition	Pin	Definition
27	GND	28	1.5V
29	GND	30	SMBCLK
31	PCIETX4N	32	SMBDATA
33	PCIETX4P	34	GND
35	GND	36	USB2N
37	GND	38	USB2P
39	3.3V	40	GND
41	3.3V	42	NC
43	GND	44	NC
45	NC	46	NC
47	NC	48	1.5V
49	NC	50	GND
51	NC	52	3.3V

IO Board Pin Header

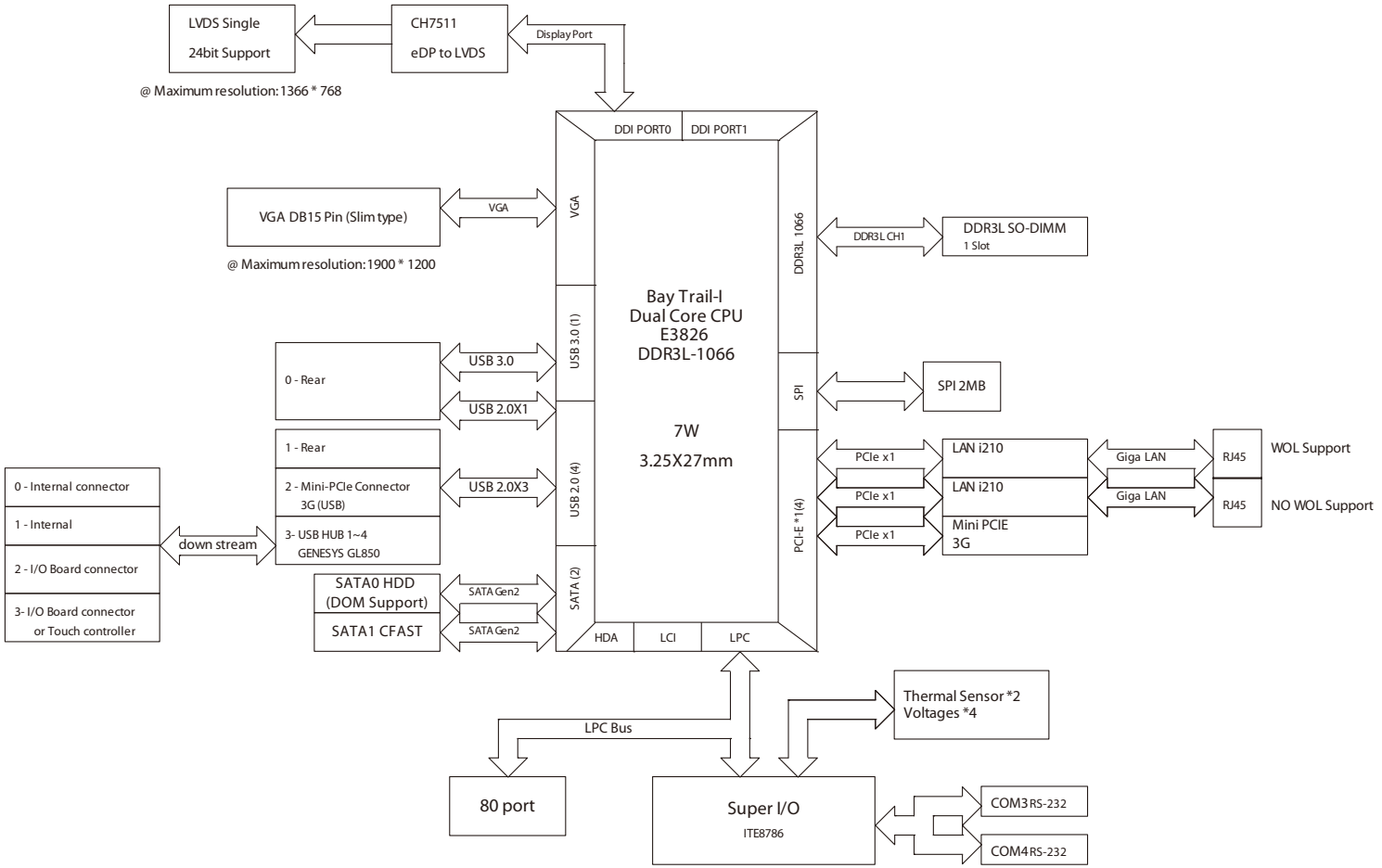
Connector type: 2x25 50-pin header, 1.27mm pitch
Connector location: JP2



Pin	Definition	Pin	Definition
1	5VSB	2	12V
3	3VSB	4	VCC5
5	V1P5	6	VCC5
7	GND	8	VCC3
9	GND	10	SIO_GPI41
11	SPKR	12	ATXBT#
13	HDA_RST#	14	GND
15	HAD_SYNC	16	HUB_USB4P
17	HAD_BIT_CLK	18	HUB_USB4N
19	HAD_SDOUT	20	HUB_USB3P
21	HAD_SDIN	22	HUB_USB3N
23	GND	24	GND
25	SP338EC1M2	26	SP338EC2M2

Pin	Definition	Pin	Definition
27	SP338EC1M1	28	SP338EC2M1
29	SP338EC1M0	30	SP338EC2M0
31	SP338EC1TRME	32	SP338EC2TRME
33	COM1_DCD#	34	COM2_DCD#
35	COM1_RI#	36	COM2_RI#
37	COM1_CTS#	38	COM2_CTS#
39	COM1_DTR#	40	COM2_DTR#
41	COM1_RTS#	42	COM2_RTS#
43	COM1_DSR#	44	COM2_DSR#
45	COM1_TXD	46	COM2_TXD
47	COM1_RXD	48	COM2_RXD
49	SP1_RI	50	SP2_RI

Block Diagram



Chapter 3: System Setup

Installing the Primary SATA Hard Drive

Prior to removing the chassis cover, make sure the unit's power is off and disconnected from the power sources to prevent electric shock or system damage.

1. Locate and remove the mounting screws around the chassis cover, respectively on the back, sides and front.

Mounting screws on the back

Mounting screws on the sides

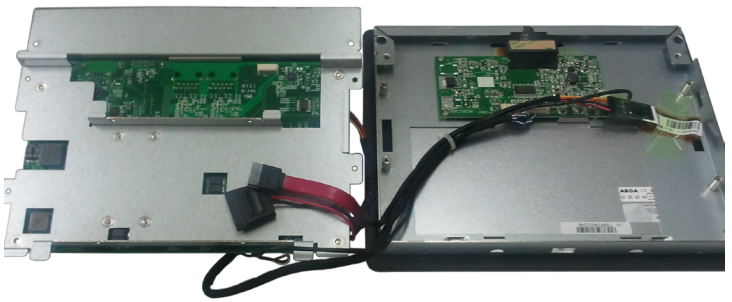
Mounting screws on the front

2. Open the cover.

3. Remove the mounting screws on the I/O bracket.

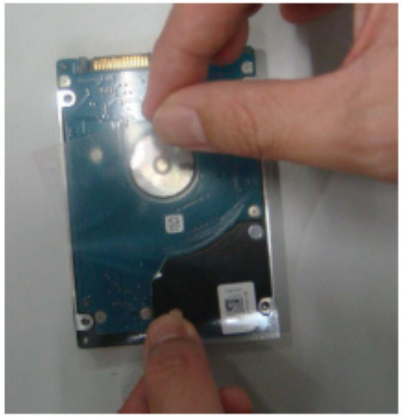
4. Remove the mounting screws on the M/B bracket.

5. Open the M/B bracket.

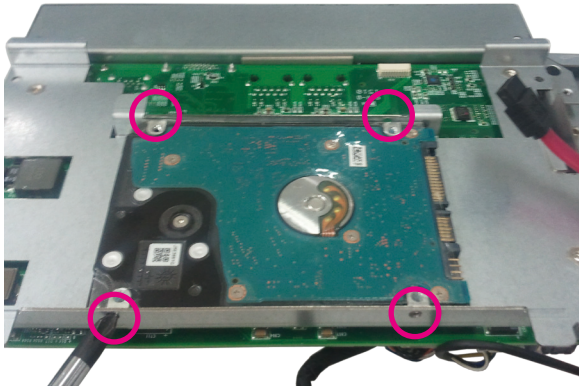


6. Peel off the mylar used to protect the SATA hard drive.

7. Attach the mylar to the surface of the SATA hard drive.



8. Assemble the HDD bay with the SATA hard drive by fixing the mounting screws as marked.

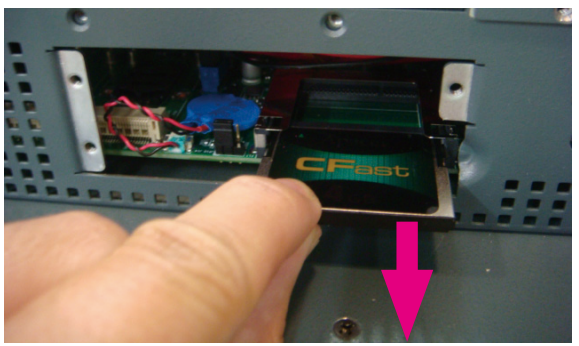


Installing a CFast Card

The CFast card socket is located on the rear top side of the chassis.

1. Remove the mounting screw on the cover.

2. Push the CFast card to install or remove the CFast card.



Installing a Mini-PCIe Module

The Mini-PCIe module package includes the following items:

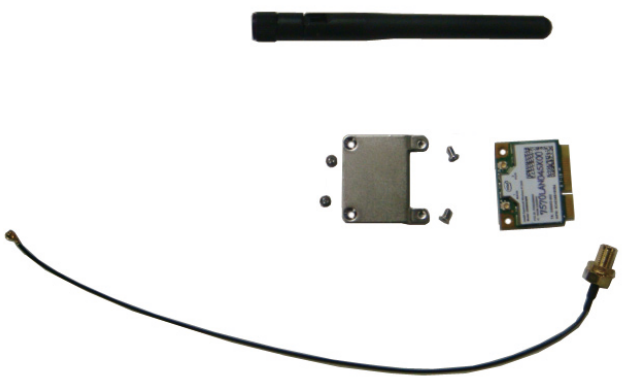
802.11b/g/n wireless mini card module kit with half-size PCB

RF-Cable

Antenna

3.5G module kit with full-size PCB

802.11b/g/n wireless mini card module kit with half-size PCB



Fieldbus Mini-PCIe module

Mini-PCIe Card	Connection Cable	Connector Board	
		 Dual RJ45	PROFINET EtherNet/IP EtherCAT
		 DB9	PROFIBUS
		 5-pin Connector	DeviceNet

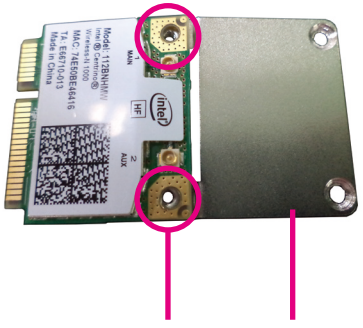
Universal PROFIBUS I/O Bracket

Universal DeviceNet I/O Bracket

Universal PROFINET, EtherNet/IP and EtherCAT I/O Bracket

If you are installing the 802.11b/g/n mini card module (half-size), before proceeding with the installation, please assemble the Wi-Fi module bracket first to full size module by following the instructions below:

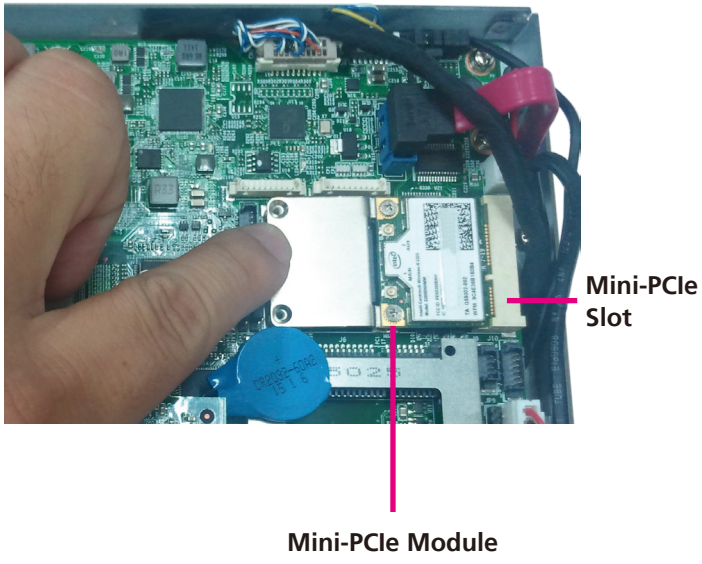
1. Align the mounting holes on the Wi-Fi mini card module to the mounting holes on the Wi-Fi module bracket.



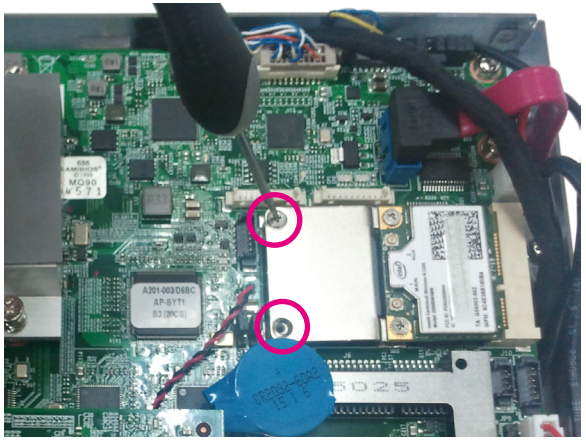
Mounting holes **Wi-Fi module bracket**

2. Tighten screws onto the mounting holes to secure the bracket.

3. Insert the Mini-PCIe module into the Mini-PCIe slot at the 45 degrees angle until the gold-plated connector on the edge of the module completely disappears inside the slot.



4. Secure the module with mounting screws.

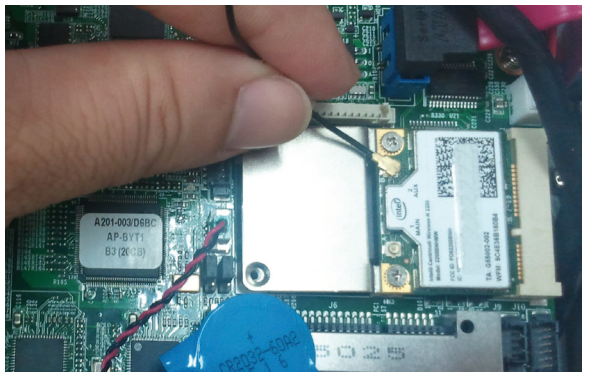


5. Wi-Fi or 3G Mini-PCIe module:

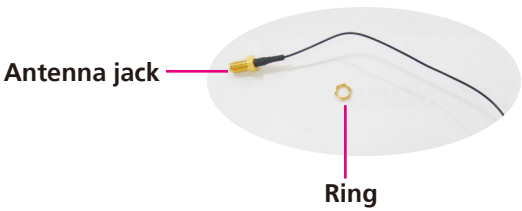
A. Push the antenna hole covers located at the two top corners.

B. Remove the antenna hole covers for installing antennas.

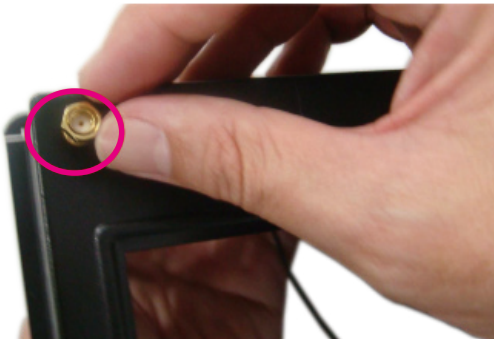
C. Attach one end of the RF cables onto the module.



D. Insert the ring onto the antenna jack end of the cable.



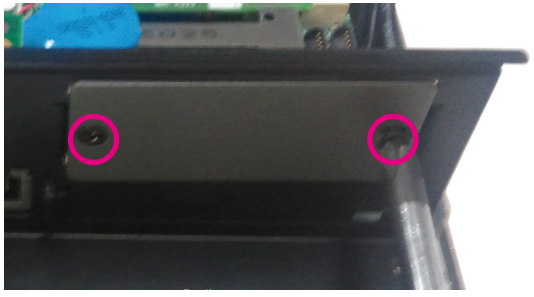
E. Insert the antenna jack end of the cable through the antenna hole, and tighten the ring to secure the antenna jack end of the cable.



F. Connect external antennas to the antenna jacks.

6. Fieldbus Mini-PCIe module.

A. Remove the Fieldbus I/O cover.



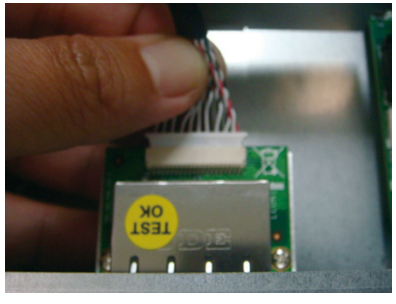
B. Secure the Universal FBI I/O bracket or Special FBI I/O bracket.

C. Plug the FBI Cable to the I/O connector board.

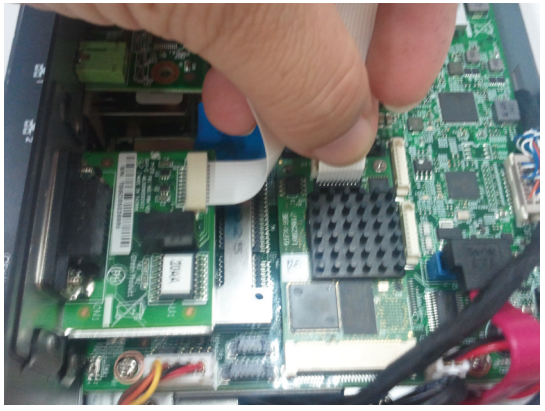
DB9 Connector Board

5-pin Connector Board

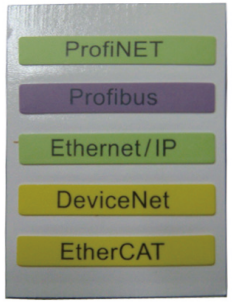
Dual RJ45 Connector Board



D. Plug the FBI Cable to the FBI Mini-PCIe card.



E. Stick the FBI protocol label onto the front cover of the connector board.



Installing a SO-DIMM Memory Module

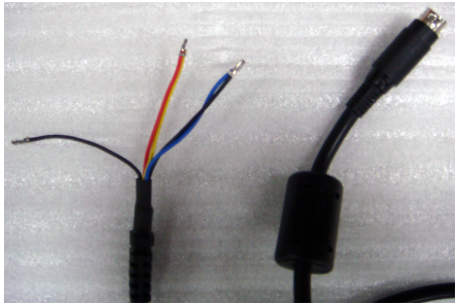
1. Locate the SO-DIMM socket on the left side of the motherboard as marked, where you can install a SO-DIMM module.

2. Insert the module into the socket at an approximately 30 degrees angle. Apply firm even pressure to each end ofthe module until it slips into the socket. The gold-plated connector on the edge of the module will almost completely disappear inside the socket.

3. Push the module down until the clips on both sides of the socket lock into position. You will hear a distinctive"click" sound, indicating the module is correctly locked into position.

Plugging the DC Power Cable

1. Plug the DC 4-pin DIN power jack (male) into the DC 4-pin DIN power jack (female) that is on the system.



2. The table below shows the pin definition of the cable.

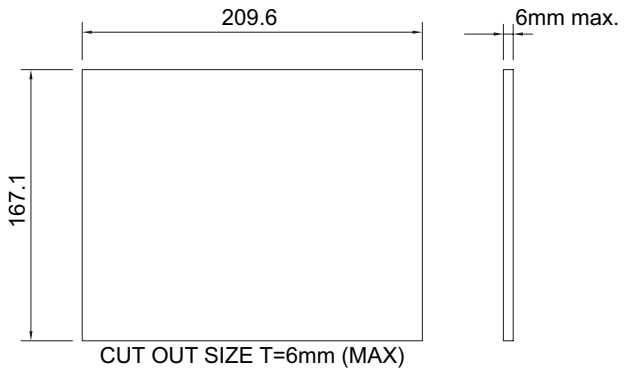
Color	Pin Definition
Black	GND
Red & Yellow	DC+
Blue & Black	DC-

Panel Mounting

1. Select a place on the panel where you will mount the Panel PC.

2. Cut out a shape on the panel that corresponds to the Panel PC's rear dimensions.

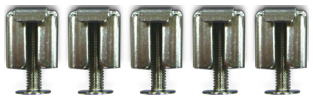
   The thickness of the panel (e.g. steel board, plank, acrylic board, wall, etc.) where you will mount the Panel PC must not exceed 6mm. If the distance between the front bezel and panel mount hole is too wide, it will not fit the panel mount kit.



3. Slide the Panel PC through the hole until it is properly fitted against the panel.

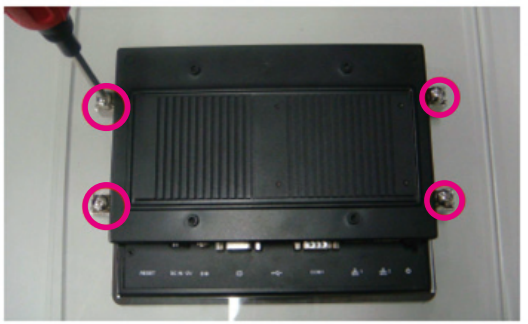
Panel Mount Kit

1. The mounting clamps must be attached along the rear edges of the Panel PC.



Note: The mounting clamps are included in the APPC 0840T Panel Mount Kit.

2. Position the mounting clamps along the rear edges of the Panel PC. The first and second clamps must be positioned and secured diagonally prior to mounting the rest of the clamps. Tighten the clamp's screw until it touches the panel.



Do not overtighten the screws to prevent damaging the Panel PC.

3. The photo below shows the rear view of the Panel PC mounted on the panel.

4. The photo below shows the front view of the Panel PC mounted on the panel.

Chapter 4: BIOS Setup

This chapter describes how to use the BIOS setup program for APPC 0840T. The BIOS screens provided in this chapter are for reference only and may change if the BIOS is updated in the future.

To check for the latest updates and revisions, visit the NEXCOM website at www.nexcom.com.tw.

About BIOS Setup

The BIOS (Basic Input and Output System) Setup program is a menu driven utility that enables you to make changes to the system configuration and tailor your system to suit your individual work needs. It is a ROM-based configuration utility that displays the system's configuration status and provides you with a tool to set system parameters.

These parameters are stored in non-volatile battery-backed-up CMOS RAM that saves this information even when the power is turned off. When the system is turned back on, the system is configured with the values found in CMOS.

With easy-to-use pull down menus, you can configure such items as:

- Hard drives, diskette drives, and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power management features

The settings made in the setup program affect how the computer performs. It is important, therefore, first to try to understand all the setup options, and second, to make settings appropriate for the way you use the computer.

When to Configure the BIOS

- This program should be executed under the following conditions:
- When changing the system configuration
- When a configuration error is detected by the system and you are prompted to make changes to the setup program
- When resetting the system clock
- When redefining the communication ports to prevent any conflicts
- When making changes to the Power Management configuration
- When changing the password or making other changes to the security setup

Normally, CMOS setup is needed when the system hardware is not consistent with the information contained in the CMOS RAM, whenever the CMOS RAM has lost power, or the system features need to be changed.

Default Configuration

Most of the configuration settings are either predefined according to the Load Optimal Defaults settings which are stored in the BIOS or are automatically detected and configured without requiring any actions. There are a few settings that you may need to change depending on your system configuration.

Entering Setup

When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines. These routines perform various diagnostic checks; if an error is encountered, the error will be reported in one of two different ways:

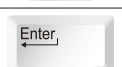
- If the error occurs before the display device is initialized, a series of beeps will be transmitted.
- If the error occurs after the display device is initialized, the screen will display the error message.

Powering on the computer and immediately pressing <Del> allows you to enter Setup.

Press the 

key to enter Setup:

Legends

Key	Function
	Moves the highlight left or right to select a menu.
	Moves the highlight up or down between sub¬menus or fields.
	Exits the BIOS Setup Utility.
	Scrolls forward through the values or options of the highlighted field.
	Scrolls backward through the values or options of the highlighted field.
	Selects a field.
	Displays General Help.
	Load previous values.
	Load optimized default values.
	Saves and exits the Setup program.
	Press <Enter> to enter the highlighted sub¬menu

Scroll Bar

When a scroll bar appears to the right of the setup screen, it indicates that there are more available fields not shown on the screen. Use the up and down arrow keys to scroll through all the available fields.

Submenu

When "▶" appears on the left of a particular field, it indicates that a submenu which contains additional options are available for that field. To display the submenu, move the highlight to that field and press 

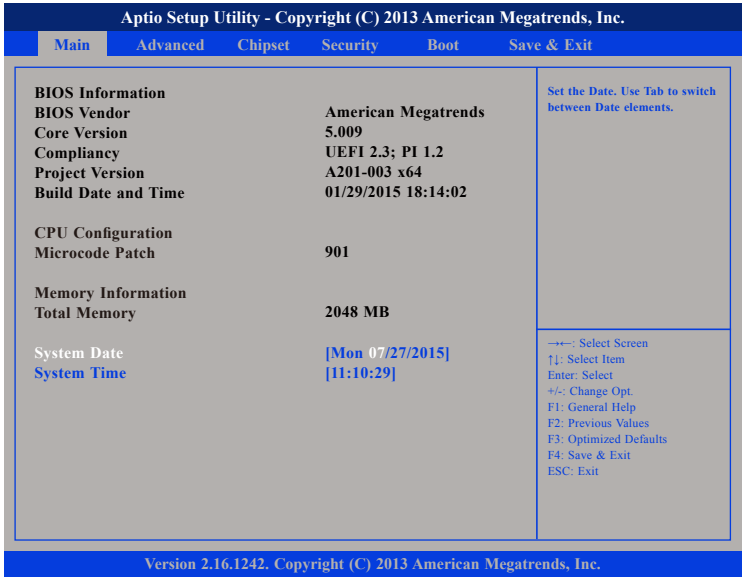
.

BIOS Setup Utility

Once you enter the AMI BIOS Setup Utility, the Main Menu will appear on the screen. The main menu allows you to select from several setup functions and one exit. Use arrow keys to select among the items and press Enter to accept or enter the submenu.

Main

The Main menu is the first screen that you will see when you enter the BIOS Setup Utility.



System Date

The date format is <day>, <month>, <date>, <year>. Day displays a day, from Monday to Sunday. Month displays the month, from January to December. Date displays the date, from 1 to 31. Year displays the year, from 1999 to 2099.

System Time

The time format is <hour>, <minute>, <second>. The time is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Hour displays hours from 00 to 23. Minute displays minutes from 00 to 59. Second displays seconds from 00 to 59.

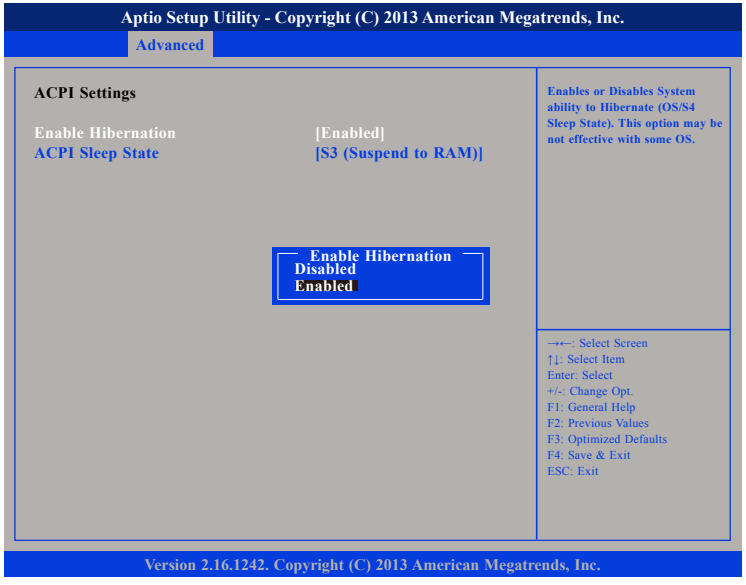
Advanced

The Advanced menu allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference.

Setting incorrect field values may cause the system to malfunction.

ACPI Settings

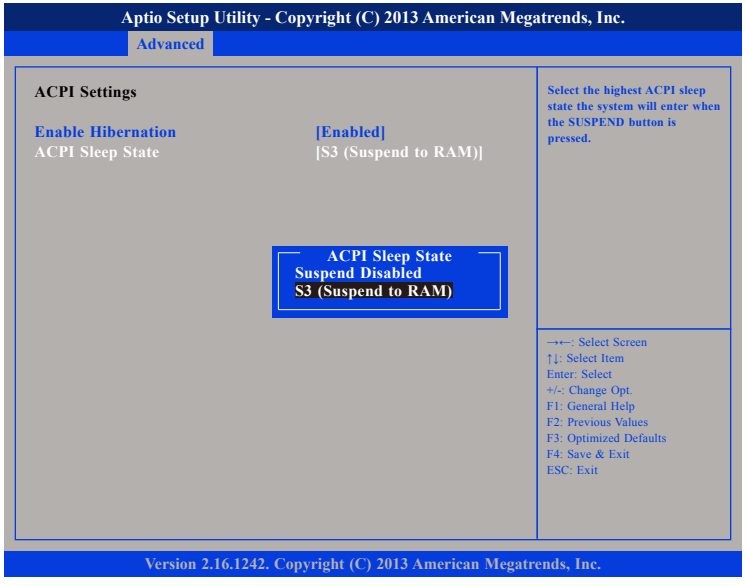
This section is used to configure ACPI Settings.



Enable Hibernation

Enables or disables system ability to hibernate (OS/S4 Sleep State). This option may not be effective with some OS.

ACPI Sleep State



Select the highest ACPI sleep state the system will enter when the suspend button is pressed. The options are Suspend Disabled and S3 (Suspend to RAM).

IT8786E Super IO Configuration

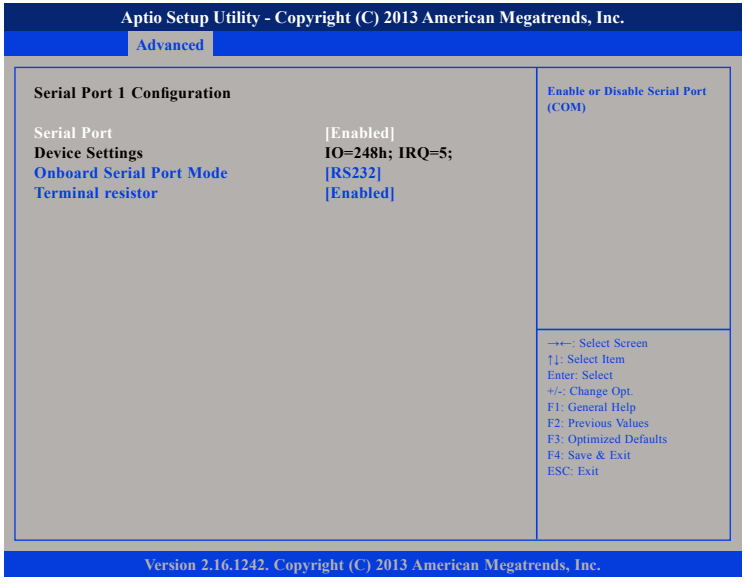
This section is used to configure the serial ports.

Super IO Chip

Displays the Super I/O chip used on the board.

Serial Port 1 Configuration

This section is used to configure serial port 1.



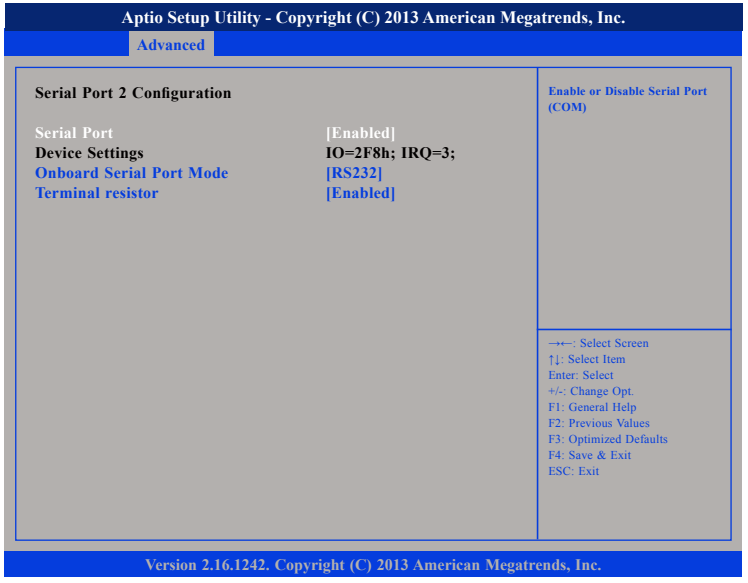
Serial Port
Enables or disables the serial port.

Onboard Serial Port Mode
Select this to change the serial port mode to RS232, RS422, RS485 or RS485 Auto.

Terminal Resistor
Enables or disables the terminal resistor.

Serial Port 2 Configuration

This section is used to configure serial port 2.



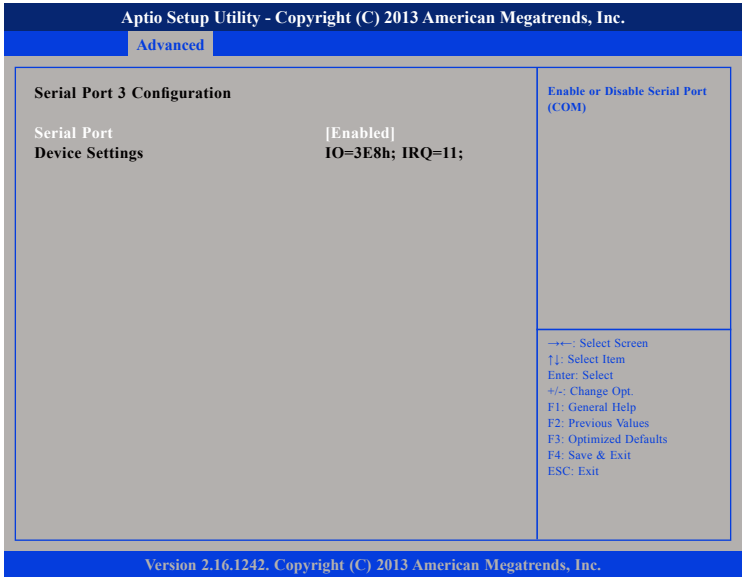
Serial Port
Enables or disables the serial port.

Onboard Serial Port Mode
Select this to change the serial port mode to RS232, RS422, RS485 or RS485 Auto.

Terminal Resistor
Enables or disables the terminal resistor.

Serial Port 3 Configuration

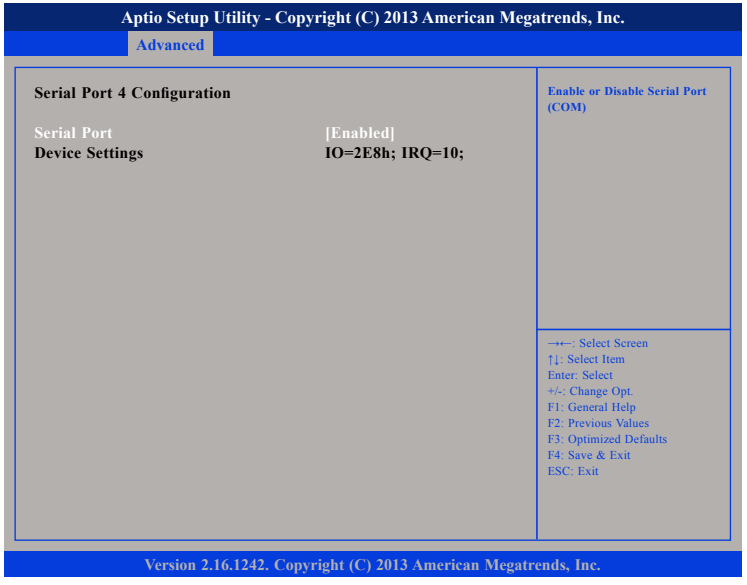
This section is used to configure serial port 3.



Serial Port
Enables or disables the serial port.

Serial Port 4 Configuration

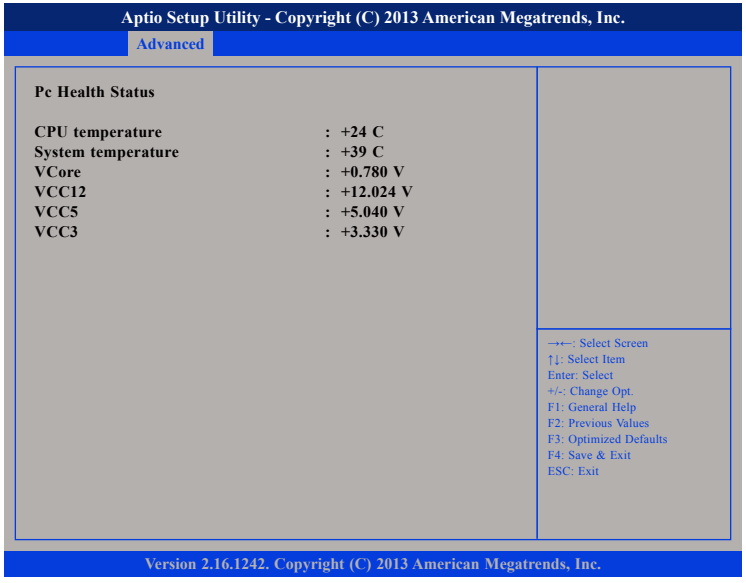
This section is used to configure serial port 4.



Serial Port
Enables or disables the serial port.

Hardware Monitor

This section is used to monitor hardware status such as temperature, fan speed and voltages.



CPU Temperature
Detects and displays the current CPU temperature.

System Temperature
Detects and displays the current system temperature.

VCore
Detects and displays the Vcore CPU voltage.

VCC12
Detects and displays 12V voltage.

VCC5
Detects and displays 5V voltage.

VCC3
Detects and displays 3.3V voltage.

CPU Configuration

This section is used to configure the CPU.

Active Processors Cores

Select the number of cores to enable in each processor package.

Limit CPUID Maximum

The CPUID instruction of some newer CPUs will return a value greater than 3. The default is Disabled because this problem does not exist in the Windows series operating systems. If you are using an operating system other than Windows, this problem may occur. To avoid this problem, enable this field to limit the return value to 3 or lesser than 3.

Execute Disable Bit

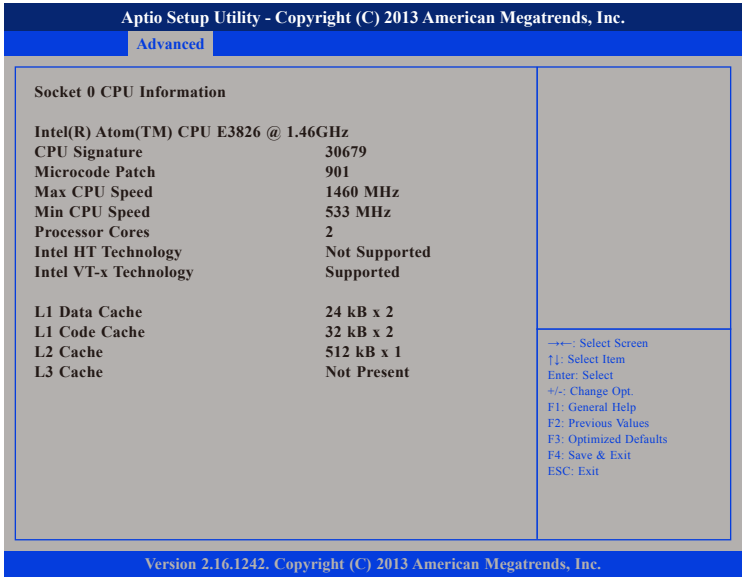
When this field is set to Disabled, it will force the XD feature flag to always return to 0. XD can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1,Windows XP SP2, SuSE Linux 9.2, RedHat Enterprise 3 Update 3).

Intel® Virtualization Technology

Enables or disables Intel Virtualization technology.

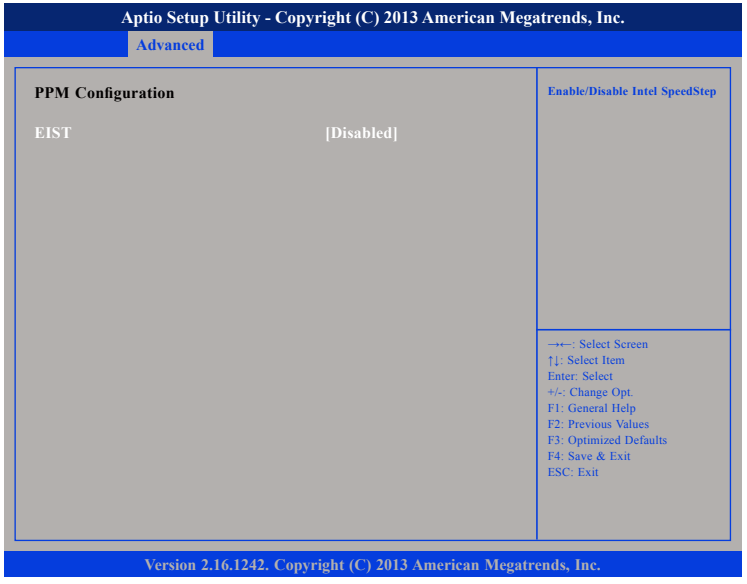
Socket 0 CPU Information

Display information on the CPU installed on socket 0.



PPM Configuration

This section is used to configure the Processor Power Management (PPM) configuration.



EIST

Enables or disables Intel® SpeedStep.

IDE Configuration

This section is used to configure the SATA drives.

Serial-ATA (SATA)
Enables or disables the SATA controller.

SATA Mode
Configures the SATA as IDE or AHCI mode.

IDE This option configures the Serial ATA drives as Parallel ATA physical storage device.

AHCI This option configures the Serial ATA drives to use AHCI (Advanced Host Controller Interface). AHCI allows the storage driver to enable the advanced Serial ATA features which will increase storage performance.

Serial-ATA Port 0
Enables or disables SATA port 0.

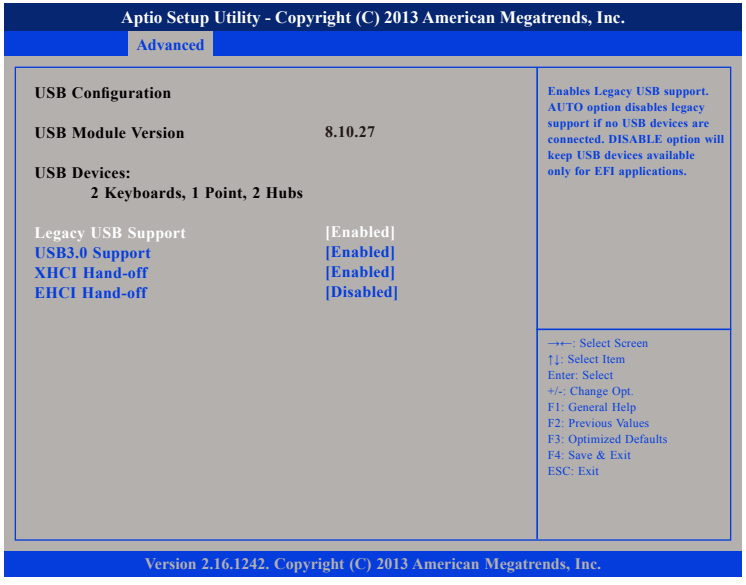
SATA Port0 HotPlug
Enables or disables hot pluggable support on SATA port 0.

Serial-ATA Port 1
Enables or disables SATA port 1.

SATA Port1 HotPlug
Enables or disables hot pluggable support on SATA port 1.

USB Configuration

This section is used to configure the USB.



Legacy USB Support
Enable Enables Legacy USB.
Auto Disables support for Legacy when no USB devices are connected.
Disable Keeps USB devices available only for EFI applications.

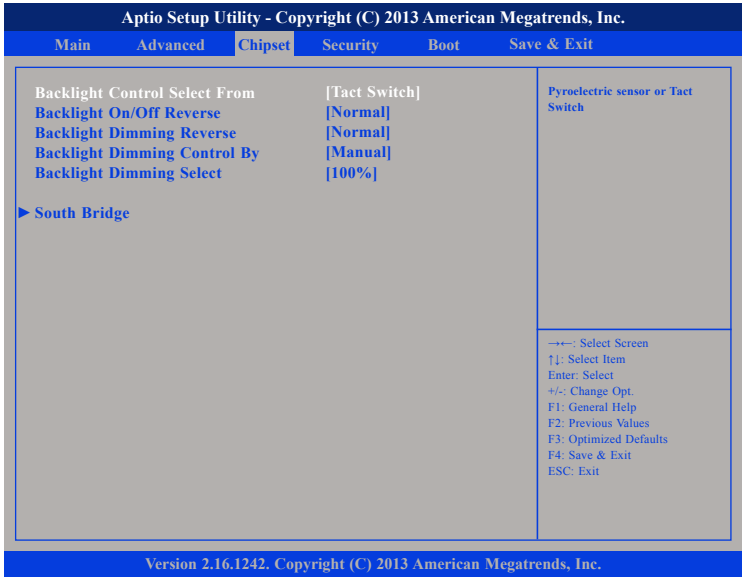
USB3.0 Support
Enables or disables USB 3.0 controller support.

XHCI Hand-off and EHCI Hand-off
This is a workaround for OSs that does not support XHCI hand-off and EHCI Hand-off. The XHCI and EHCI ownership change should be claimed by the XHCI and EHCI driver respectively.

Troubleshooting: When installing Windows 7 from USB, USB 3.0 will not be supported. Please disable XHCI and enable EHCI to allow USB installation of Windows 7.

Chipset

This section gives you functions to configure the system based on the specific features of the chipset. The chipset manages bus speeds and access to system memory resources.



Backlight Control Select From
The available options are Pyroelectric sensor and Tact Switch.

Backlight On/Off Reverse
Enables or disables reverse backlight On/Off. Please configure this option only when changing the panel, otherwise the display may not work.

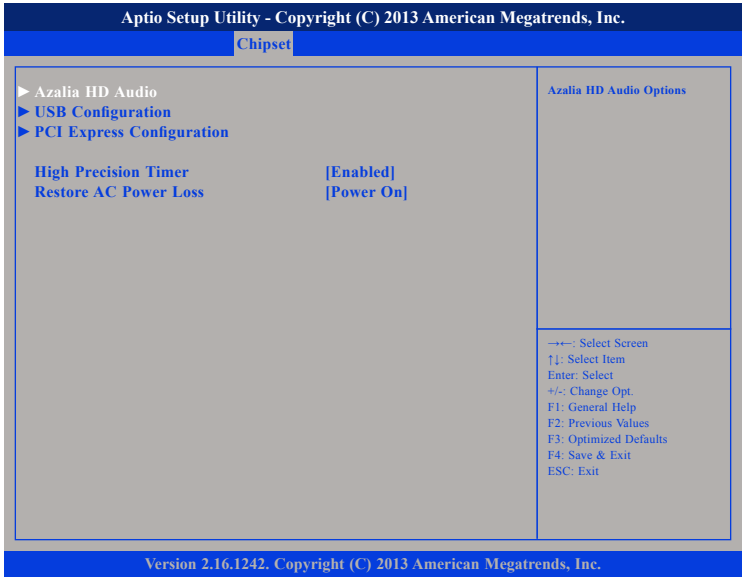
Backlight Dimming Reverse
The available options are PWM & Analog Dimming Reverse and Normal.

Backlight Dimming Control By
The available options are Tact Switch, Manual and Light sensor.

Backlight Dimming Select
Adjusts the brightness of the backlight.

South Bridge
Enters the South Bridge submenu.

South Bridge



High Precision Timer
Enables or disables high precision event timer.

Restore AC Power Loss
Select the AC power state when power is re-applied after a power failure.

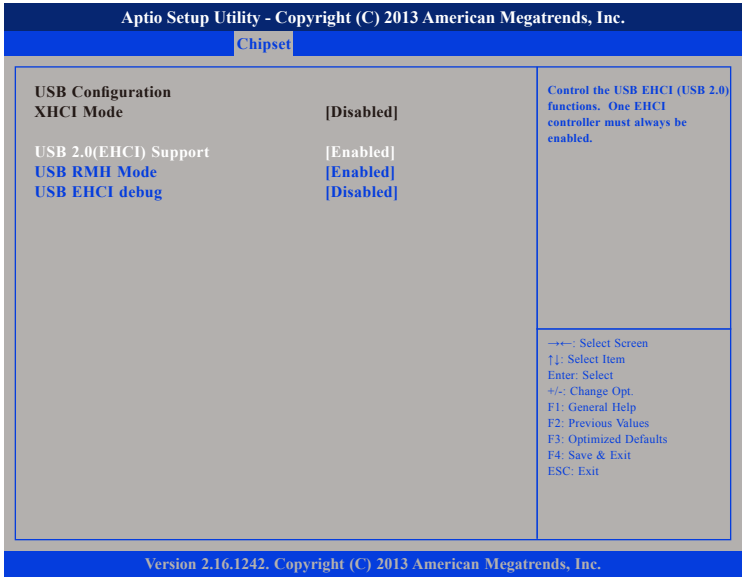
Azalia HD Audio

Azalia
Control detection of the Azalia device.

Disabled	Azalia will be unconditionally Disabled.
Enabled	Azalia will be unconditionally Enabled.

Azalia HDMI Codec
Enables or disables internal HDMI codec for Azalia.

USB Configuration

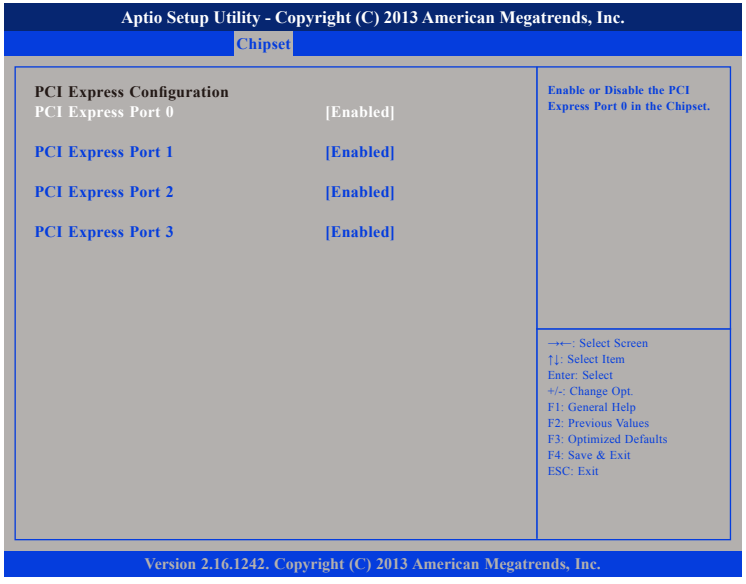


USB 2.0(EHCI) Support
Enables or disables the Enhanced Host Controller Interface (USB 2.0), one EHCI controller must always be enabled.

USB RMH Mode
Enables or disables PCH USB rate matching hubs mode.

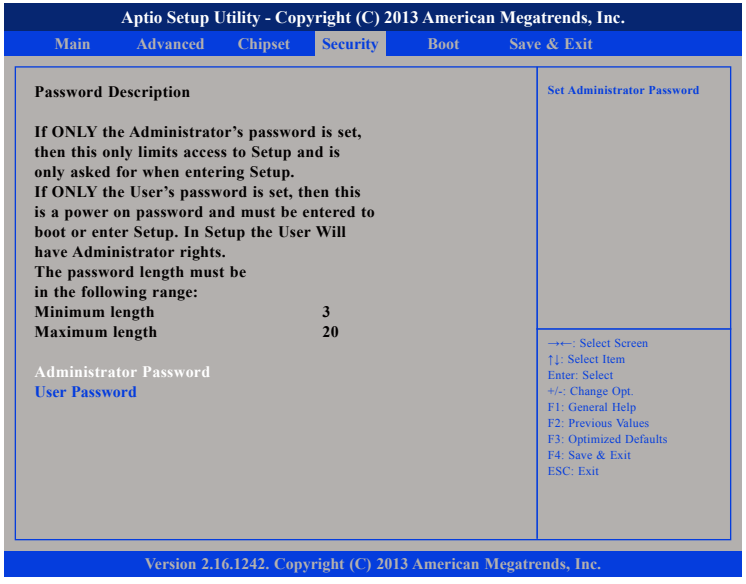
USB EHCI Debug
Enables or disables PCH EHCI debug capability.

PCI Express Configuration



PCI Express Port 0 to PCI Express Port 3
Enables or disables the PCI Express ports 0 to 3 on the chipset.

Security



Administrator Password

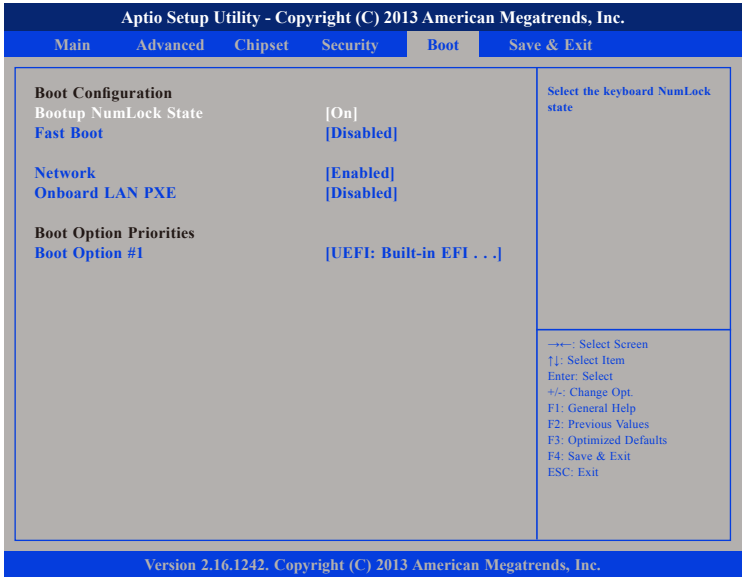
Select this to reconfigure the administrator's password.

User Password

Select this to reconfigure the user's password.

Boot

This section is used to configure the boot features.



Bootup NumLock State

This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on wherein the function of the numeric keypad is the number keys. When set to Off, the function of the numeric keypad is the arrow keys.

Fast Boot

When enabled, the BIOS will shorten or skip some check items during POST. This will decrease the time needed to boot the system.

Network
Controls the execution of UEFI and legacy PXE OpROM.

Onboard LAN PXE
Options to disable onboard LAN PXE ROM or enable it for LAN1 or LAN2 .

Boot Option Priorities
Adjust the boot sequence of the system. Boot Option #1 is the first boot device that the system will boot from, next will be #2 and so forth.

Save & Exit

Save Changes and Reset
To save the changes and reset, select this field then press <Enter>. A dialog box will appear. Confirm by selecting Yes.

Discard Changes and Reset
To exit the Setup utility without saving the changes, select this field then press <Enter>. You may be prompted to confirm again before exiting.

Restore Defaults
To restore the BIOS to default settings, select this field then press <Enter>. A dialog box will appear. Confirm by selecting Yes.

Appendix A: Power Consumption

Power Consumption Management

Purpose

The purpose of the power consumption test is to verify the power dissipation of system, and the loading of power supply.

Test Equipment

1. PROVA CM-07 AC/DC CLAMP METER
2. Burn In Test Ver:6.0

Device Under Test

DUT: sys#1/

Test Procedure

1. Power up the DUT, boot into Windows XP.
2. Entering standby mode (HDD power down).
3. Measure the power consumption and record it.
4. Run Burn-in test program to apply 100% full loading.
5. Before and after test, need to test the system insulation.

Test Data

	+12V	+24V
Full-Loading Mode	1.25A	0.6A
Total	15W	14.4W
Standby S3 Mode	0.08A	0.06A
Total	0.96W	1.44W