

Onyx-158/S

15" LCD PC with
Expansion slot

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Packing List

Before installing your Panel PC, please check if the package contains the following items.

- Onyx-158/S series Panel PC
- CD-ROM
 - Contains User's Manual, Drivers and Utilities
- Accessories
 - Screws bag
 - Jumper packbag
 - ISA Riser card

If any of these items are missing or damaged, you should contact your distributor or sales representative immediately.

Safety & Warranty

1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. 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. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
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 over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

14. If any of the following situations arises, get the equipment checked by service personnel:
- The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the users manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
15. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.

Caution:

Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by the manufacturer.

FCC Safety

Warning!



This device complies with Part 15 FCC Rules.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.**

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Chapter

1

**General
Information**

Introductions

The Onyx-158/S is a compact, All-in-one network compatible PC with full safety approval and features to control a dedicated system with a wide variety of applications. Incorporation of the Onyx-158/S into your system can deliver both cost savings and efficiency improvements.

Common applications include point of sale systems, healthcare, interactive information displays, control/ automation systems, common desktop use, multimedia recreation, and other hospital requirements.

Features:

- 15" high brightness color TFT LCD display
- Aluminum alloy front panel
- All-in-one FC Socket 370 SBC (CPU supports up to Pentium® III 1GHz, FSB 66/100/133MHz)
- Removable anti-vibration 2.5" HDD
- Brightness control and Speaker with volume control on front panel
- Resistive touch screen (Optional)
- UL60950 safety certification

Features of PCM-6898 (All-in-one Socket 370 full-size CPU card)

- Supports Socket 370 based Intel® Pentium® III / Celeron® Processor
- High Speed AGP 4X for VGA display
- One 10/100Base-T Fast Ethernet
- Integrated AC-97 2.1
- Supports CRT and 18/24/36/48-bit TFT panels (Through DVO Module)

Specifications:

- **Construction:** Heavy-duty steel chassis and aluminum alloy front panel
- **Display:** 15" XGA (1024 x 768) color TFT LCD
- **CPU:** Support Socket 370 based Intel® Pentium® III and Celeron® CPU, up to 1GHz
- **Chipset:** VIA VT8604 shared memory up to 32MB SDRAM
- **Memory:** Support up to 512MB
- **Network (LAN):** 10/100 Base-TX Ethernet port
- **Audio:** VIA VT1611/1612, AC 97 2.1 Codec
- **I/O ports:**
 - 2 external serial ports: 1 x RS-232, 1 x RS-232/422/485
 - 1 parallel port (supports EPP/ ECP)
 - 1 PS/2 keyboard and mouse interface
 - Mic in/ Line in/ Line out
- **Disk Drive Housing:** 2.5" HDD, slim FDD and slim DVD-ROM
- **USB connector:** 2 USB ports
- **Mounting:** Desktop stand
 - Optional:** Swivel ARM
- **Expansion slots:** One PCI or ISA slot
- **Power supply:** Universal 90W switching power supply
- **OS Support:** MS DOS, Windows 98/SE, Windows 2000, Windows XP
- **Dimension (W x H x D):** 413 x 334 x 88mm (16.3" x 13.1" x 3.5")
- **Carton Dimension (W x H x D):** 556 x 516 x 335 mm (21.9" x 20.3" x 13.2")
- **Gross Weight:** 11.2Kg; 7.2Kg (without Desktop stand)

LCD Specifications

Display type	15" color TFT LCD
Max. Resolution	1024 x 768
Max. Colors	256K
Dot size (mm)	0.33 x 0.33
Luminance (cd/m²)	250 (TYP)
Viewing angle	160°(H)
	160°(V)
Operating temperature	0°~ 45 (32~113)
Brightness Control	Yes
Back Light MTBF (Hrs)	50,000

Note: All AAEON's LCD products are manufactured with High precision technology. However, in all LCD panels there maybe a small number of defective pixels that do not change color. This is a normal occurrence for all LCD displays from all manufacturers and should not be noticeable or objectionable under normal operation. AAEON qualify the LCD panel following industry standard: total 7 dead pixels on a screen or if there are 3 within 1 inch square area of each other on the display.

Power Supply

- **Input Voltage:** 100~240V AC, 47-63Hz, 3.15A

Environmental Specification

- **Operating temperature:** 0° to 45 (32~122)
- **Storage temperature:** -20° to 60 (-4~140)
- **Storage humidity:** 5 to 90%, non-condensing
- **Vibration:**
 - 10 to 150 Hz, 0.075mm peak to peak (operation)
 - 10 cycles (sweep): 1 oct/min (endurance)
- **Shock:** 15G peak acceleration (11 msec. duration)
- **EMC:** CE/FCC Class A
- **Safety:** UL60950

Touchscreen (optional)

Type: 5/8-wire, analog resistive

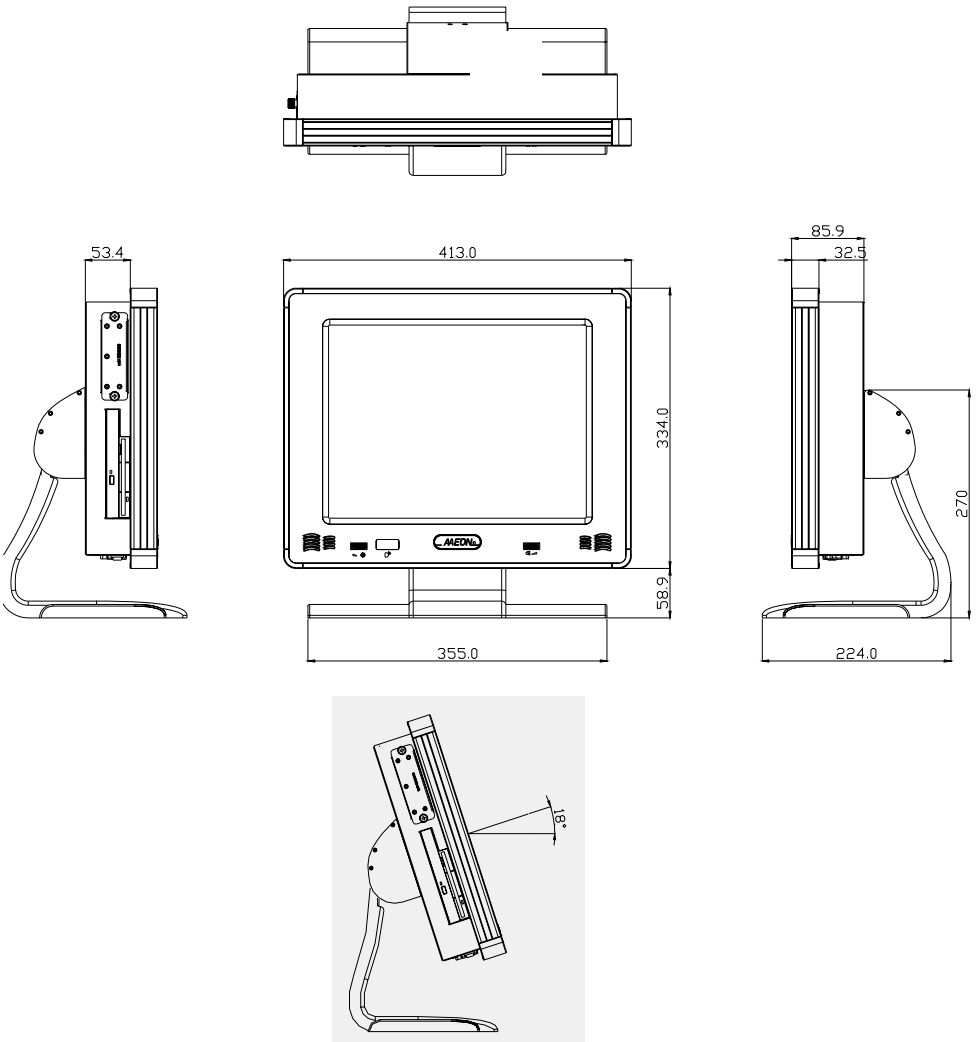
Resolution: 1024 x 768

Light transmission: 75%

Lifetime: 1 million activations

Controller: RS-232 interface

Dimensions



Chapter

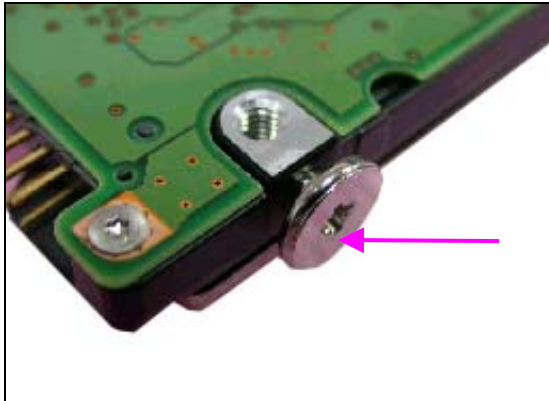
2

Hardware Installation

The panel PC is a PC-based industrial computer that is housed in aluminum alloy front panel and heavy-duty steel chassis. You can install 2.5" HDD easily by removing the side cover of HDD drive bay.

Removing/Installing the HDD Unit

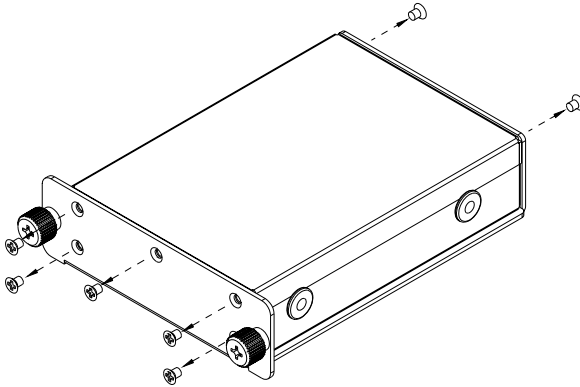
1. Screw the 2.5" HDD on four screws.



2. Cover the four screws with silica gel as diagram.



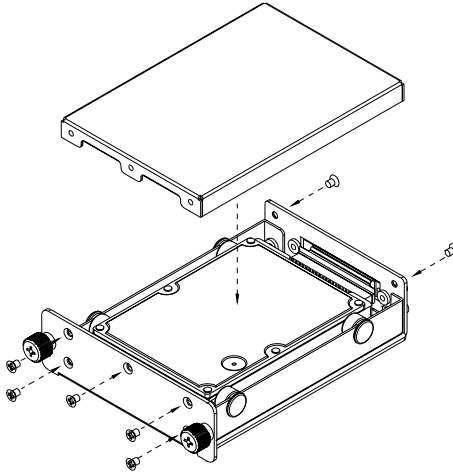
3. Unscrew the 7 attachment screws from the HDD drive bay.



1. Place 2.5" HDD into the drive bay and connect the IDE ribbon cable.



2. Replace the top cover of HDD drive bay and fix it with the 7 attachment screws.

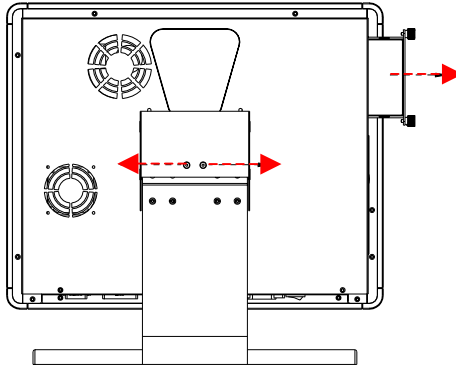


6. Mount the drive bay into the machine by two screws.



Removing the rear maintenance cover

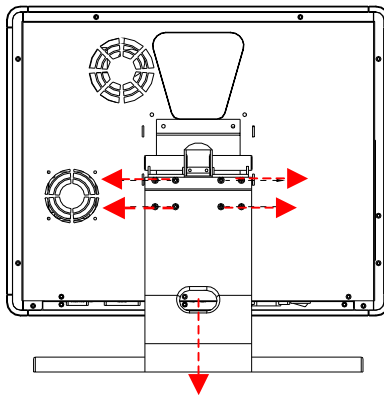
1. Remove the HDD module first then unscrew the two attachment screws from the top cover of the desktop stand.



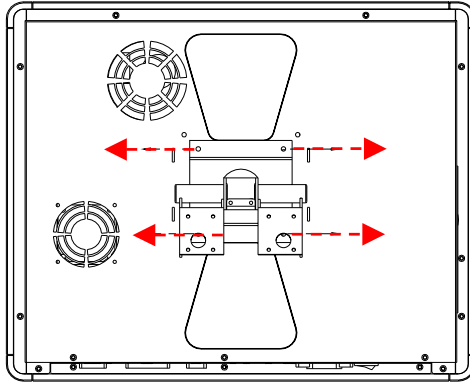
Caution:

Handle the desktop stand with care, since it is made of aluminum and is weight 3kilogram.

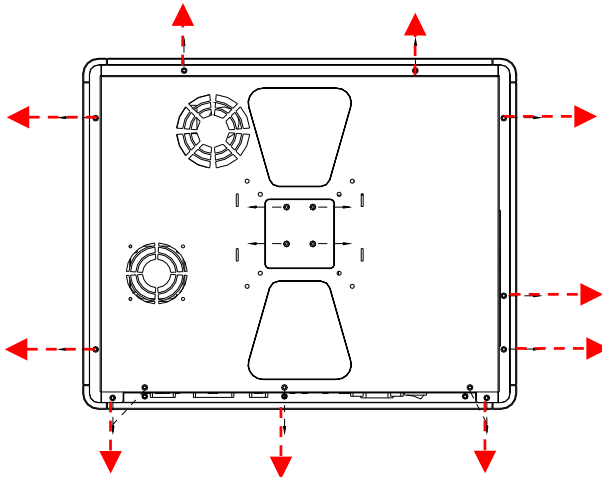
2. Unscrew the four attachment screws then remove the foundation of stand.



3. Remove the stand holder by unscrewing the four attachment screws.



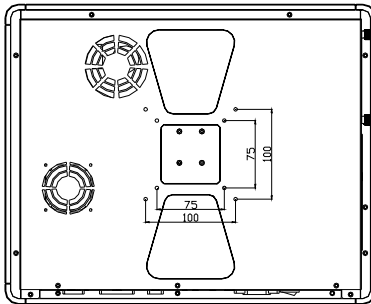
4. Unscrew the ten attachment screws used to hold the rear maintenance cover.



5. Remove the rear maintenance cover.

Mounting Installing

Onyx-158/S is suitable for VESA75/100mm interface pads for arm mounting or desktop stand. Onyx-158/S provides optional mounting kit for VESA75mm.



Desktop Stand (optional mount kit: STAND-158D00)



ARM mounting (ARM-LA0115 is for arm mounting)



Chapter

3

**Jumper
Settings**

Safety precautions

Warning!

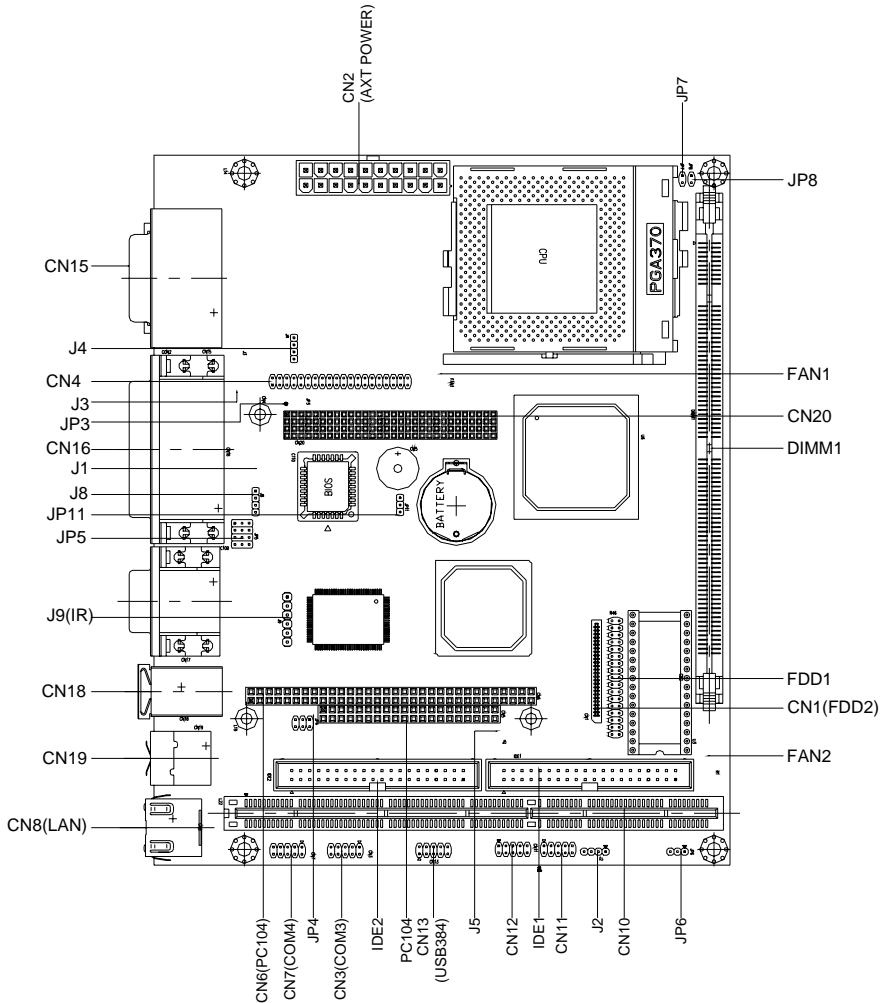
Always completely disconnect the power cord from your chassis whenever you are working on it. Do not make connections while the power is on because sensitive electronic components can be damaged by the sudden rush of power. Only experienced electronics personnel should open the PC chassis.

Caution!

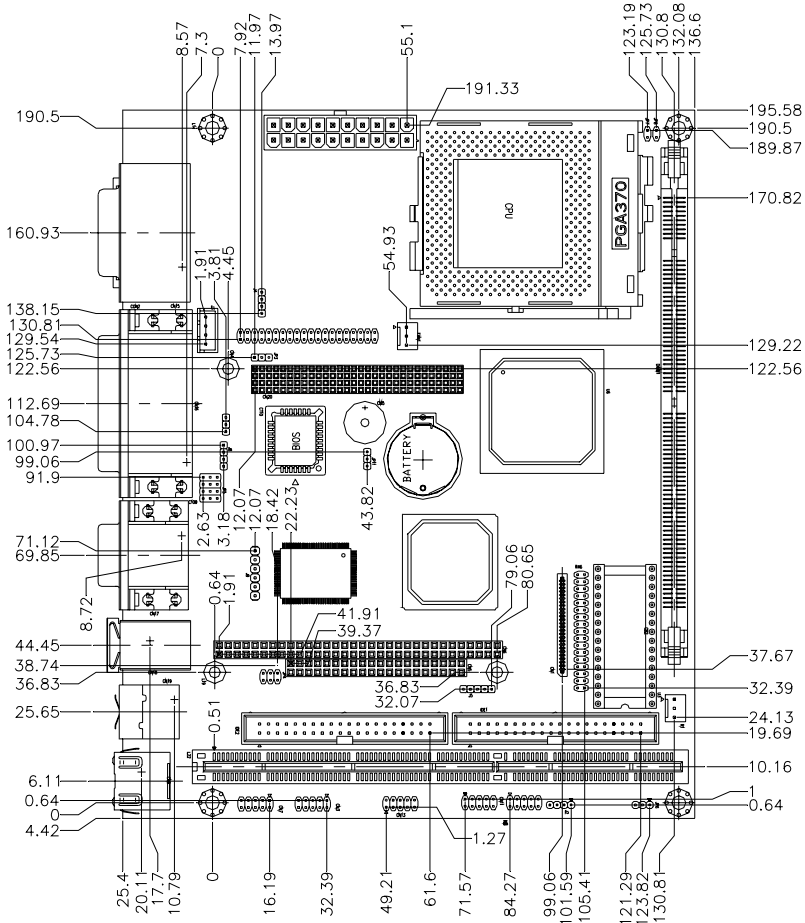
Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis.

CPU Card - PCM-6898 Jumper Setting

Board Layout



Board Dimensions



List of Jumpers

The board has a number of jumpers that allow you to configure your system to suit your application.

The following tables show the function of each of the board's jumpers.

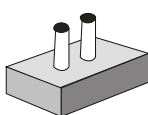
Jumpers

Label	Function
J2	DOC Address Select (D800 default)
J3/4	CD_IN (2.54mm)/CD_IN (2.00mm)
J5	For PCM-3730 LAN Card Wake Up
J9	IrDA Connector
J10	Lineout function for external AMP board
J11	External LAN LED display (optional)
J12 & J13	Enabled/Disabled internal AMP chipset
JP3	VIO Select
JP4&JP5	COM2 RS-232/422/485 Select
JP6 (1-2)	Wake on LAN
JP7&JP8 (On)	Autodetect CPU Frequency
JP9/JP10	CPU Frequency Select
JP11 (2-3)	Clear CMOS

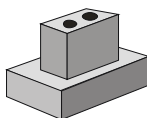
Setting Jumpers

You configure your card to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip.

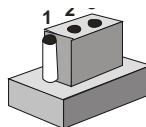
To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.



Open



Closed



Closed 2-3

A pair of needle-nose pliers may be helpful when working with jumpers.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

Generally, you simply need a standard cable to make most connections.

DOC Address Setting (J2)

PIN	Function
1-2, 3-4	Disabled
3-4	DC00
OFF	D400
1-2	D800 *

*Default

Audio Port CD_IN (J3 & J4)**J3-2.54mm****J4-2.00mm**

PIN	Function
1	CD-L
2	GND
3	GND
4	CD_R

For PCM-3730 (J5)

PIN	Function
1	5V_SB
2	GND
3	-RI
4	SMBDT
5	SMBCK

IrDA Connector (J9)

PIN	Function
1	+5V
2	NC
3	IRRX
4	GND
5	IRTX
6	NC

VIO Select (JP3)

You can use JP3 to set the voltage input/output at 5 volts or 3.3 volts.

PIN	Function
2-3	3.3V
1-2	5V *

*Default

Wake On LAN (JP6)

PIN	Function
1-2	Enable
2-3	Disable

*Default

RS-232/422/485 COM2 (JP4,JP5) Setting

PIN	Function
1-2	RS-232 *
3-4	RS-422
5-6	RS-485

PIN	Function
1-2, 4-5, 7-8, 10-11	RS-232 *
2-3, 5-6, 8-9, 11-12	RS-422
2-3, 5-6, 8-9, 11-12	RS-485

*Default

Auto detect CPU Frequency (JP7/JP8)

JP7	JP8	Function
On	On	AUTO

System Frequency (JP9 & JP10)

JP9	JP10	Function
On	On	66MHz
Off	On	100MHz
Off	Off	133MHz or AUTO

Clear CMOS (JP11)

You can use JP11 to clear the CMOS data if necessary. To reset the CMOS data, place a jumper on JP11 (Clear CMOS) for just a few seconds, and then remove the jumper to the (Protect) position.

PIN	Function
2-3	Clear CMOS
1-2	Protect *

*Default

Chapter

4

**BIOS
Installation**

System test and initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors. Non-fatal error messages usually appear on the screen along with the following instructions:

Press <F1> to RESUME

Write down the message and press the F1 key to continue the boot up sequence.

System configuration verification

These routines check the current system configuration against the values stored in the CMOS memory. If they do not match, the program outputs an error message. You will then need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

1. You are starting your system for the first time
2. You have changed the hardware attached to your system
3. The CMOS memory has lost power and the configuration information has been erased.

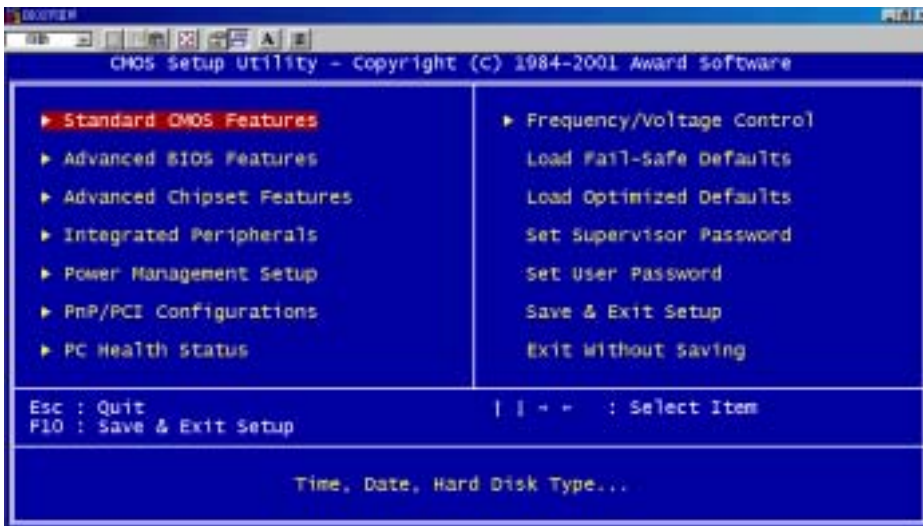
The PCM-6898 CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

Award BIOS setup

Awards BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering setup

Power on the computer and press immediately. This will allow you to enter Setup.



Standard CMOS Features

Use this menu for basic system configuration. (Date, time, IDE, etc.)

Advanced BIOS Features

Use this menu to set the advanced features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals. (Primary slave, secondary slave, keyboard, mouse etc.)

Power Management Setup

Use this menu to specify your settings for power management. (HDD power down, power on by ring, KB wake up, etc.)

PnP/PCI Configuration

This entry appears if your system supports PnP/PCI.

PC Health Status

This menu allows you to monitor the CPU temperature, CPU fan speed, CPU voltage and system voltage for your system.

Frequency/Voltage Control

Use this menu to specify your settings for frequency/ voltage control.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While AWARD has designated the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs.

Set Supervisor/User Password

Use this menu to set User and Supervisor Passwords.

Save and Exit Setup

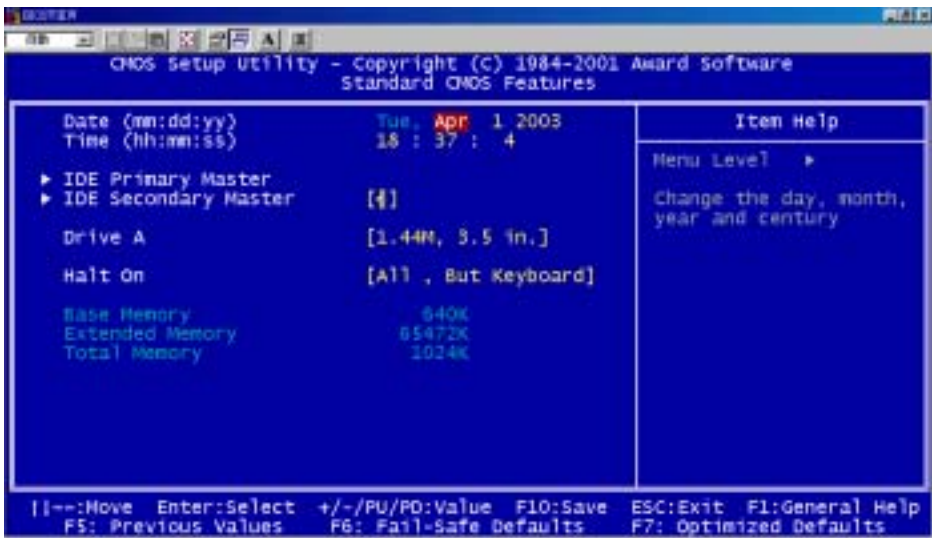
Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

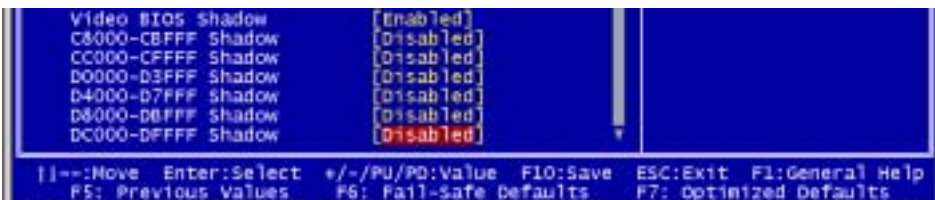
Standard CMOS Features

When you choose the Standard CMOS Features option from the INITIAL SETUP SCREEN menu, the screen shown below is displayed. This standard Setup Menu allows users to configure system components such as date, time, hard disk drive, floppy drive and display. Once a field is highlighted, on-line help information is displayed in the right box of the Menu screen.



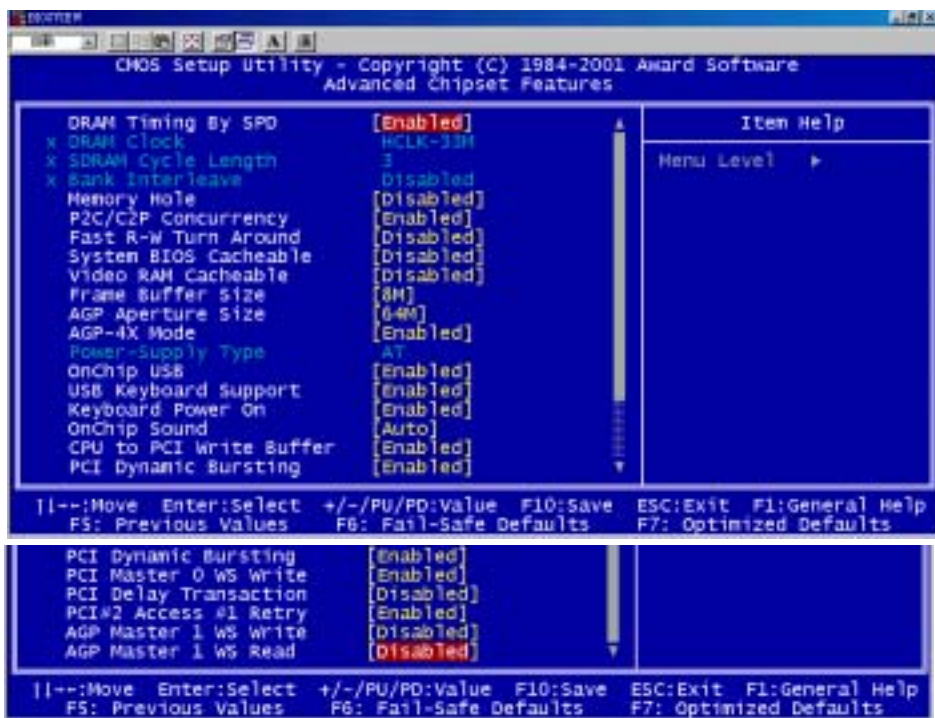
Advanced BIOS Features

By choosing the Advanced BIOS Features option from the INITIAL SETUP SCREEN menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the PCM-6898.



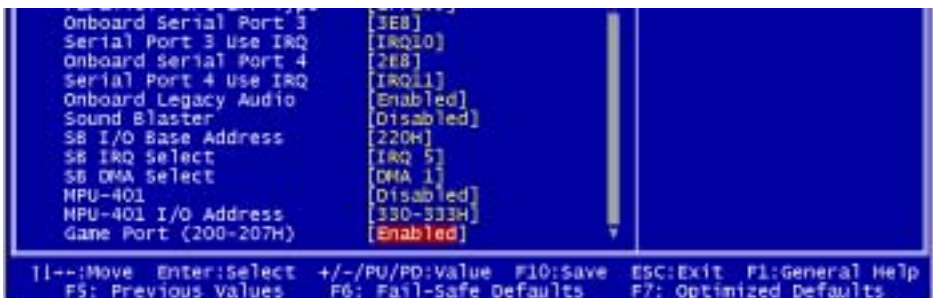
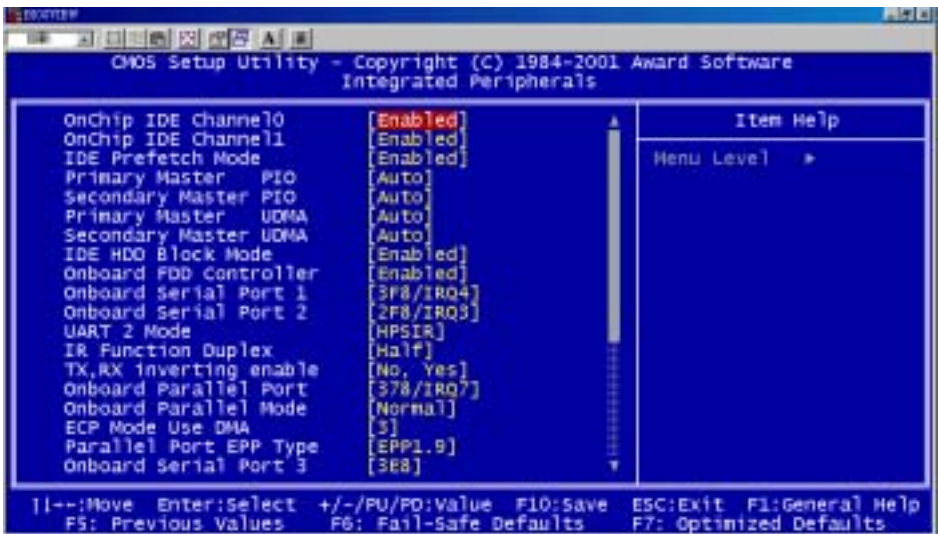
Advanced Chipset Features

By choosing the Advanced Chipset Features option from the INITIAL SETUP SCREEN menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the PCM-6898.



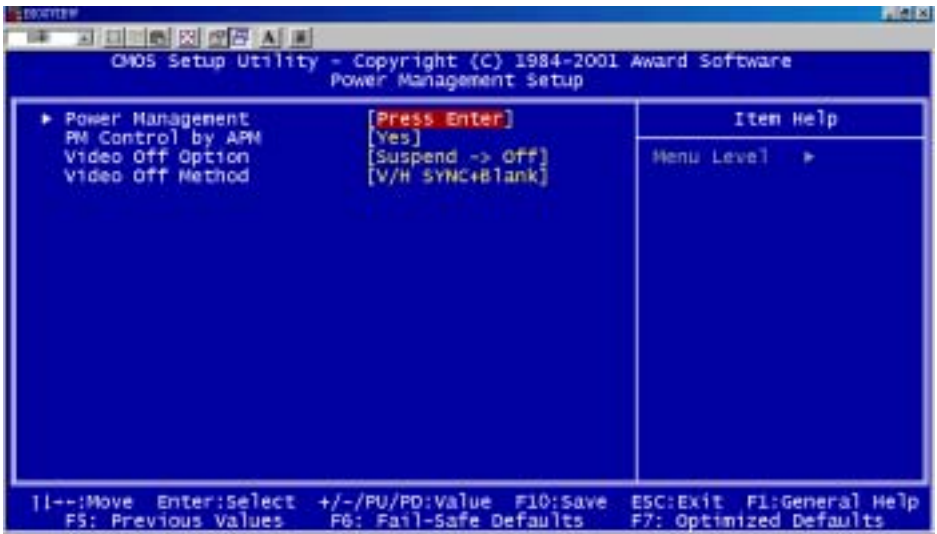
Integrated Peripherals

By choosing the Integrated Peripherals from the INITIAL SETUP SCREEN menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the PCM-6898.



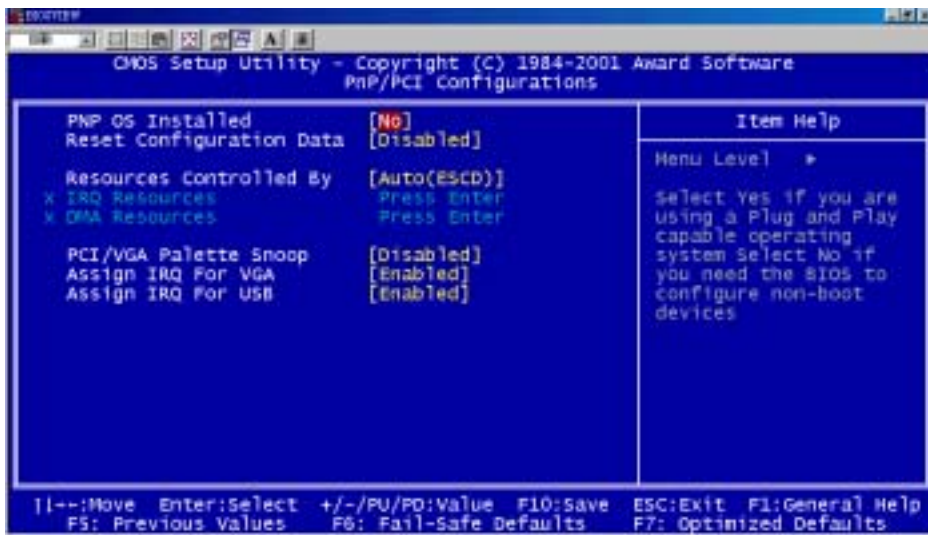
Power management setup

By choosing the Power Management Setup from the INITIAL SETUP SCREEN menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the PCM-6898.



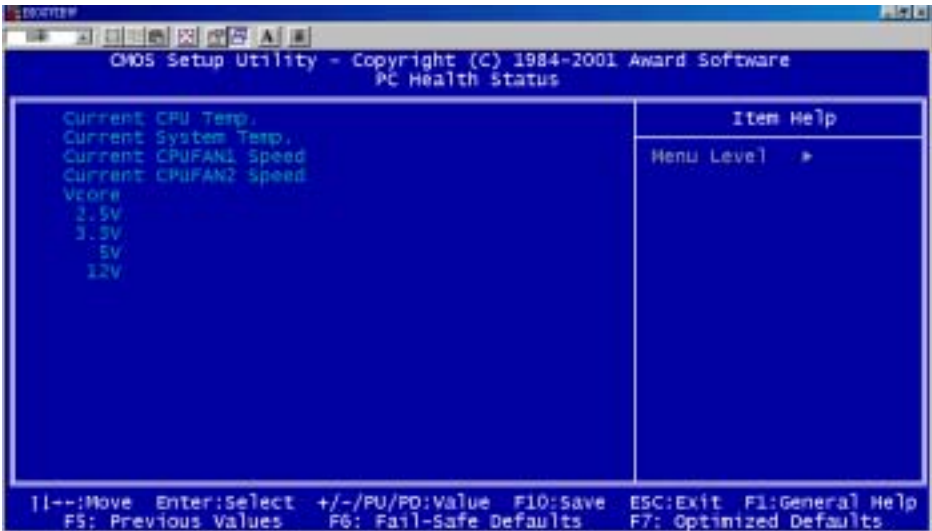
PnP/PCI Configurations

By choosing the PnP/PCI configurations from the Initial Setup Screen menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the PCM-6898.



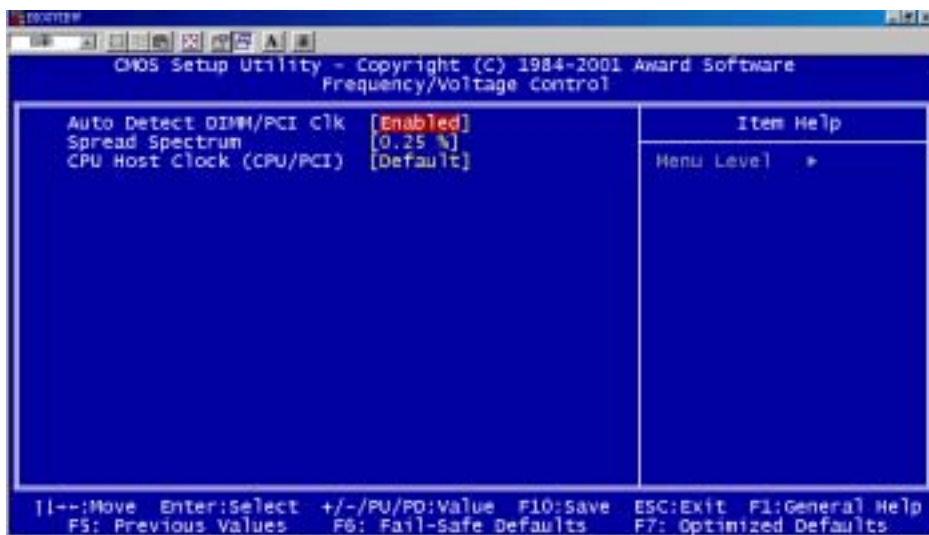
PC Health Status

By choosing the PC Health Status from the Initial Setup Screen menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the PCM-6898.



Frequency/Voltage Control

By choosing the Frequency/Voltage Control from the Initial Setup Screen menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the PCM-6898.



Load Fail-Safe Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Fail-Safe Default (Y/N)?

Pressing "Y" loads the BIOS default values for the most stable, minimal performance system operations.

Load Optimized Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N)?

Pressing "Y" loads the default values that are factory settings for optimal performance system operations

Set Supervisor Password

You can set either SUPERVISOR or USER PASSWORD, or both of them. The difference between the two is that the supervisor password allows unrestricted access to enter and change the options of the setup menus, while the user password only allows entry to the program, but not modify options.

To abort the process at any time, press Esc.

In the Security Option item in the BIOS Features Setup screen, select System or Setup:

System Enter a password each time the system boots and whenever you enter Setup.

Setup Enter a password whenever you enter Setup.

*NOTE: To clear the password, simply press Enter when asked to enter a password.
Then the password function is disabled.*

Save & Exit setup

If you select this option and press <Enter>, the values entered in the setup utilities will be recorded in the chipset's CMOS memory. The microprocessor will check this every time you turn on your system and compare this to what it finds as it checks the system. This record is required for the system to operate.

Exit without saving

Selecting this option and pressing <Enter> lets you exit the Setup program without recording any new values or changing old ones.

Chapter

5

Drivers Installation

The Onyx-158/S comes with a CD, which contains most of drives and utilities of your needs.

There are several ways of installation depending on the driver package under different Operating System application.

If you utilize Windows NT series OS, you are strongly recommended to download the latest version Windows NT Service Pack from Microsoft website and install it before installing any driver.

Please follow the sequence bellow to install the drivers:

Step 1 – Install VIA 4-in-1 Driver

Step 2 – Install VGA Driver

Step 3 – Install Ethernet Driver

Step 4 – Install Audio Driver

Note: For Touchscreen installation please refers to the excel file:

ReadMe_All-Prods-Touch-list.xls to find out your match touchscreen type and follow the installation guide in respective folders.

Applicable for Windows 98/2000/XP

1. Insert the supporting CD-ROM into drive.
2. Click on “**Start**” button and then click on “**Run**” button, find the installation wizard “**setup.exe**” in the following path:
“cd-rom”: \Driver\ CPU Board\ PCM-6898\ Step 1 – Install VIA 4-in-1 Driver”

For Step 2, look for the respective OS folders in the following path:
“cd-rom”: \ Driver\ CPU Board\ PCM-6898\ Step 2 – Install VGA Driver. Under the selected OS folder, find the installation wizard “**Setup.exe**” button.

Again Step 3 & 4, find the installation wizard “**Setup.exe**” button in

the following path:

"cd-rom": \Driver\ CPU Board\ PCM-6898\ Step 3 – Install Ethernet Driver"

"cd-rom": \Driver\ CPU Board\ PCM-6898\ Step 4 – Install Audio Driver"

Press the <Enter> key or click OK to begin the installation.

(Remarks: "cd-rom" means your CD-ROM drive letter)

3. The setup will automatically detect your OS and complete the installation. Simply following the step-by-step instruction.
4. Shut down and restart your system.