WMP-22S

Medical Panel PC

USER'S MANUAL

MAY 21 2024

DCC Controlled

V1.0

Version Change History

Date	Version	Description	Remark
20 May 2024	1.0	First release	

Acknowledgments

- Intel® Celeron processor is registered trademarks of Intel® Corporation.
- IBM, PC/AT, PS/2 are trademarks of International Business Machines Corporation.
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FCC Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 18 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment.
This equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with this user manual, it may cause harmful interference to radio communications.
Note that even when this equipment is installed and used in accordance with this user manual, there is still no guarantee that interference will not occur. If this equipment is believed to be causing harmful interference to radio or television reception, this can be determined by turning the equipment on and off. If interference is occurring, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment to a power outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Warning:

Any changes or modifications made to the equipment which are not expressly approved by the relevant standards authority could void your authority to operate the equipment.

To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

Do not modify this equipment without authorization of the manufacturer.

Avertissement:

Tous les changements ou modifications apportés à l'équipement qui ne sont pas expressément approuvés par l'autorité de normalisation compétente peuvent annuler votre droit d'utiliser l'équipement.

Pour éviter tout risque de choc électrique, cet équipement ne doit être connecté qu'à un réseau d'alimentation avec terre de protection.
Ne modifiez pas cet équipement sans l'autorisation du fabricant.

Warnung:
Jegliche Änderungen oder Modifikationen an diesem Gerät, die nicht ausdrücklich durch die relevante Behörde zugelassen sind, lassen Ihre Berechtigung zum Betrieb des Gerätes erlöschen.

Zur Vermeidung von Stromschlaggefahr darf dieses Gerät nur an eine Stromversorgung mit Schutzerde angeschlossen werden.

Nehmen Sie ohne Zustimmung des Herstellers keine Modifikationen an diesem Gerät vor.

Safety Instructions

Intended use

The WMP-22S is intended to serve as a medical monitor which is designed for general purpose for hospital environment. It shall not be used for life-supporting system.

Intended User profile

The equipment is intended for infant or adults by profession Health care professionals.

Greeting & Setup

Thank you for purchasing the WMP-22S unit. We wish that this unit will be durable and reliable in providing your medical application needs. Please follow the instructions below to ensure the unit continues to have high performance.

Unpacking

After opening the carton, there will be a medical panel PC unit with an accessory box. Examine the contents to see if there are damages to the unit and if all accessories are present.

Setting up

Please read this manual carefully and remember to keep this manual for future reference.

Safety Instructions & Cleaning

The unit has undergone various tests in order to comply with safety standards. Inappropriate use of the open frame unit may be dangerous. Please remember to follow the instructions below to insure your safety during the installation and operating process.

Transporting & Placement of unit

1. When moving the unit on a cart; be very cautious. Quick stops, excessive forces and uneven surfaces may cause the cart to overturn thus risking the unit to fall to the ground.

2. If the medical panel PC unit does fall to the ground, immediately turn the power off and disconnect cords. Then contact a service technician for repairs. Continual use of the unit may result cause a fire or electric shock. Also, do not repair the unit on your own.
3. Having two or more people transporting the display unit is recommended. In addition, when installing the unit by suspending it also requires two or more people.
4. Before suspending the unit, make sure the material used for suspension is sturdy and stable. If not properly suspended, the display unit may fall and cause serious injury to people standing nearby as well as to the unit itself.
5. If you wish to mount the display unit, remember to use only the mounting hardware recommended by the manufacturer.

Electrical and Power Source Related

1. This medical panel PC unit must operate on a power source as shown on the specification label. If you are not sure what type of power supply used in the area, consult your dealer or local power supplier.
2. The power cords must not be damaged. Applied pressure, added heat, and tugging may damage the power cord.
3. The power cord must be routed properly when setup takes place. We advise that this aspect measure is to prevent people from stepping on the cords or while the unit is suspended to prevent flying objects from getting tangled with the unit.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Do not overload the AC outlets or extension cords. Electrical shocks or fires may occur from overloading.
6. Do not touch the power source during a thunderstorm.
7. If your hands are wet, do not touch the plug.

8. Use your thumb and index finger, grip firmly on the power cord to disconnect from the electrical socket. By pulling the power cord, may result in damaging it.
9. If the unit is not going to be in use for an extended period of time, remember to disconnect the unit.
10. The medical panel PC unit uses voltage between 100-240VAC. Connect the unit to a power source with the same numerical value as shown. Please use only the power cord provided by the dealer to ensure safety and EMC compliance.

Various Factors of Environment

1. Do not insert objects into the openings.
2. Do not have liquids seep into the internal areas of the medical panel PC unit.
3. Having liquids seep in or inserting objects into the unit may result in electric shocks from taking and/or short circuiting the internal parts.
4. Do not place the medical panel PC unit in the presence of high moisture areas.
5. Do not install the medical panel PC unit in a wet environment.
6. Do not place near unit near heat generating sources.
7. Do not place the unit in a location where it will come in contact with fumes or steam.
8. Remember to keep the medical panel PC unit away from the presence of dust.
9. If water has flow in or seep in, immediately disconnect the open frame unit. Then contact a service technician for repairs.

Ventilation Spacing

1. Do not cover or block the openings on the top and back sides of the display unit. Inadequate ventilation may cause overheating thus reducing the lifespan of the unit.

2. Unless proper ventilation is present, do not place unit in an enclosed area; such as a built-in shelf. Keep a minimum distance of 10 cm between the display unit and wall.

Operating principle

- A Medical Panel PC has four main components: the arithmetic logic unit (ALU), the control unit, the memory, and the input and output devices (collectively termed I/O). These parts are interconnected by buses, often made of groups of wires.
- The control unit, ALU, and registers are collectively known as a central processing unit (CPU).
- Inside each of these parts are thousands to trillions of small electrical circuits which can be turned off or on by means of an electronic switch. Each circuit represents a bit (binary digit) of information so that when the circuit is on it represents a "1", and when off it represents a "0" (in positive logic representation). The circuits are arranged in logic gates so that one or more of the circuits may control the state of one or more of the other circuits.

Cleaning the unit

1. Remember to turn off the power source and to unplug the cord from the outlet before cleaning the unit.
2. Carefully dismount the unit or bring the unit down from suspension to clean.
3. Please use a dry soft cloth to clean the unit.
4. Take a dry cloth and wipe the unit dry. Remember to avoid having liquids seep into the internal components and areas of the medical panel PC unit.
5. Cleaning unit each time before use.

Error message / Troubleshooting

No power	1. Connect the AC adapter to the computer, and then

	plug it into an AC outlet. 2. Turn on the computer.

Servicing, Repairing, Maintenance & Safety Checks

1. If the unit is not functioning properly, observe the performance level of the display closely to determine what type of servicing is needed.
2. Do not attempt to repair the medical panel PC unit on your own. Disassembling the cover exposes users' to high voltages and other dangerous conditions. Notify and request a qualified service technician for servicing the unit.
3. To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.
4. If any of the following situations occur turn the power source off and unplug the unit. Then contact a qualified service technician.
   (a) A liquid was spilled on the unit or objects have fallen into the unit.
   (b) The unit is soaked with liquids.
   (c) The unit is dropped or damaged.
   (d) If smoke or strange odor is flowing out of the operating unit.
   (e) If the power cord or plug is damaged.
   (f) When the functions of the unit are dysfunctional.
5. When replacement parts are needed for the medical panel PC unit, make sure service technicians use replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. If unauthorized parts are used it may result in starting a fire, electrical shock and/or other dangers.

	ISO 7000-0434: Caution
	ISO 7010-M002: Refer to instruction manual/ booklet. NOTE: On ME EQUIPMENT “Follow instruction for use”.
	IEC 60417 -5009: STAND-BY.
	EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product, or if applicable, follow any agreements made between yourself. The mark on electrical and electronic products only applies to the current European Union Member States.
 YYYY-MM	Date of manufacture

When networking with electrical devices, the operator is responsible for ensuring that the resulting system meets the requirements set forth by the following standards:

– EN 60601-1 (IEC 60601-1)
Medical electrical equipment
Part 1: General requirements for safety

– EN 60601-1-2 (IEC 60601-1-2)
Medical electrical equipment
Part 1-2: General requirements for safety
Collateral standard: Electromagnetic compatibility; Requirements and tests

Accessory equipment connected to the analog and digital interfaces must be in compliance with the respective nationally harmonized IEC standards (i.e. IEC 60950 for data processing equipment, IEC 60065 for video equipment, IEC 61010-1 for laboratory equipment, and IEC 60601-1 for medical equipment.) The unit is for exclusive interconnection with IEC 60601-1 certified equipment in the patient environment and IEC 60XXX certified equipment outside of the patient environment. If in doubt, consult the technical services department or your local representative.

Caution:
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). THIS MAY DAMAGE THE EQUIPMENT.
1) Please do not touch patient and this medical device at the same time
2) The PATIENT is not an intended OPERATOR.
This equipment shall not be used in life support systems.
The user is not to touch SIP/SOPs and the patient at the same time.
Caution – Use suitable mounting apparatus to avoid risk of injury.

Caution - Risk of explosion if battery is replaced by an incorrect type.
Dispose of used batteries according to the instructions.
(If battery pack is not used for 1 month, it is recommended to remove the

battery pack from equipment.)

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70dB (A).

A) Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked "Hospital Only" or "Hospital Grade".

B) Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your particular country.

C) Caution: This adapter Sinpro MPU250A-107 is a forming part of the medical device

D) Only use the power cord with following specification: 16AWG min., type SJT, 125V/10A, UL/CSA listed, length: Max. 3m, hospital grade if for USA/Canada market.

Mise en garde:

NE LAISSEZ PAS CET ÉQUIPEMENT DANS UN ENVIRONNEMENT NON CONTRÔLÉ OERE LA TEMPÉRATURE DE STOCKAGE EST INFÉRIEURE À -20 ° C (-4 ° F) OU SUPÉRIEURE À 60 ° C (140 ° F). CELA POURRAIT ENDOMMAGER L'ÉQUIPEMENT.

1) Veuillez ne pas toucher le patient et ce dispositif médical en même temps

2) Le PATIENT n'est pas un OPÉRATEUR visé.

Cet équipement ne doit pas être utilisé dans les systèmes de survie.

L'utilisateur ne doit pas toucher les SIP / SOP et le patient en même temps.

Attention - Utilisez un appareil de montage approprié pour éviter tout risque de blessure.

Attention - Risque d'explosion si la batterie est remplacée par un type incorrect. Jetez les piles usagées conformément aux instructions.

(Si la batterie n'est pas utilisée pendant 1 mois, il est recommandé de retirer la batterie de l'équipement.)

Le niveau de pression acoustique au poste de l'opérateur selon CEI 704-1: 1982 n'est pas supérieur à 70 dB (A).

A) La fiabilité de la mise à la terre ne peut être obtenue que lorsque

l'équipement est connecté à une prise équivalente marquée «Hospital Only» ou «Hospital Grade».
B) Utilisez un cordon d'alimentation qui correspond à la tension de la prise de courant, qui a été approuvée et conforme aux normes de sécurité de votre pays.
C) Attention : Cet adaptateur Sinpro MPU250A-107 *fait partie intégrante du dispositif médical*
D) Utilisez uniquement le cordon d'alimentation avec les spécifications suivantes : 16AWG min., type SJT, 125V/10A, homologué UL/CSA, longueur : Max. 3 m, qualité hôpital si pour le marché USA/Canada.

Achtung:
LASSEN SIE DIESES GERÄT NICHT IN EINER UNKONTROLLIERTEN UMGEBUNG, IN DER DIE LAGERTEMPERATUR WENIGER ALS -20 °C ODER MEHR ALS 60 °C BETRÄGT. ANDERNFALLS KÖNNTE DAS GERÄT BESCHÄDIGT WERDEN.
1) Bitte berühren Sie den Patienten und dieses medizinische Gerät nicht gleichzeitig
2) Der PATIENT ist kein beabsichtigter OPERATOR.
Dieses Gerät darf nicht in lebenserhaltenden Systemen genutzt werden.
Der Anwender darf SIP/SOPs und Patienten nicht gleichzeitig berühren.
Achtung – Nutzen Sie zur Vermeidung von Verletzungen eine geeignete Montagevorrichtung.

Achtung - Explosionsgefahr, falls der Akku durch einen falschen Typ ersetzt wird. Entsorgen Sie verbrauchte Akkus entsprechend den Anweisungen.
(Falls der Akku voraussichtlich 1 Monat nicht genutzt wird, sollten Sie ihn aus dem Gerät entfernen.)

Der Schalldruckpegel an der Position des Bedieners entsprechend IEC 704-1:1982 beträgt nicht mehr als 70 dB(A).
A) Die Zuverlässigkeit der Erdung kann nur erzielt werden, wenn das Gerät an eine äquivalente Steckdose mit der Kennzeichnung „Nur Krankenhaus“ oder „Krankenhaustauglich“ angeschlossen ist.

B) Verwenden Sie ein Netzkabel, das mit der Spannung der Steckdose übereinstimmt. Es muss zugelassen sein und dem Sicherheitsstandard Ihres jeweiligen Landes entsprechen.
C) Achtung: Das Netzteil Sinpro MPU250A-107 ist Bestandteil des Medizingerätes.
D) Verwenden Sie nur das Netzkabel mit folgender Spezifikation: 16AWG min., Typ SJT, 125V / 10A, UL / CSA aufgeführt, Länge: Max. 3m, Krankenhaus Qualität für USA / Kanada Markt.

Contact & Manufacturer information:

Wincomm Corporation
3F, No.14, Prosperity Road II, Science-Based Industrial Park, Hsinchu, Taiwan 300, R.O.C
TEL: (886) 3 5780000
E-Mail: sales_support@wincomm.com.tw

Importer & Authorized Representative:

ASINFO
55 Avenue Edouard Vaillant, 93310 Le Pré-Saint-Gervais, France
TEL.: +33 01 48 10 11 20
E-Mail: ridha@asinfo.com

Table of Contents

Introduction

Product Description

The WMP-22S Medical Panel PC is based on 12th /13th /14th generation Core i CPU processor, it accommodates one M.2 M.Key 2280 PCIe X 4 SSD and Two up to 96GB DDR5 SODIMM.

The high brightness LCD, Fanless solution, integrated multimedia functions and extensive expansion options make them the perfect platform upon which to build comprehensive lifestyle computing applications.

The WMP-22S includes all the features of a powerful computer into a slim and attractive chassis.

The WMP-22S is compact, Giga LAN and selectable WLAN network compatible PC with full safety and medical approval and features to control a dedicated system with a wide variety of applications. Combining the WMP-22S into your system can achieve both cost-saving and efficient improvements.

Common applications include LIS (Lab Information Systems) and Electronic Medical Record. The WMP-22S are definitely your perfect choices.

Package list

Before you begin installing your Medical Station, please make sure that the following items have been shipped:

- The WMP-22S Medical Panel PC unit
- User's manual, chipset drivers
- Power Adapter x 1 (Mf:Sinpro, type/model: MPU250A-107)
- Power cord – Hospital grade used (US type), or other type in UK, EU…etc.
- Screw x 8 (VESA 100 mm use)

Features

- Anti-bacteria (MRSA) plastic housing
- 21.5" full HD (1920X1080) AHVA Diagnostic Panel
- High performance intel 12th /13th/14th generation Core i CPU (Socket LGA1700)with Q670E chipset
- Supports Dual Channel DDR5 SODIMM up to 96GB
- P.cap Multi-Touch Screen (10 point)
- Supports M.2 M.Key 2280 PCIe X 4 SSD (Support NVMe SSD)
- Supports PCI-E x4 slot
- IP65 at front side
- Low noise Smart fan solution
- Optional Full HD / 4K capture card
- LAN/COM 4KV isolated module (optional order configuration)
- Optional DICOM part 14 compliance solution. (optional order configuration)
- Optional Independent Nvidia A4500 graphic with 16GB dedicated video memory
- Video in port with RGB Color adjustment function
- Support VMD RAID 0,1
- Support 4 display output (include LCD)

Specifications

Hardware Specifications

Display	21.5” 250 nits 1920x1080 AHVA Diagnostic Panel
CPU Support	LGA1700 package 12th /13th /14th generation Intel® Core i7/i5/i3/Pentium/Celeron processor (35W max.)
Disk Drive Space	M.2 M.Key 2280 PCIe X 4 SSD (Support NVMe SSD),3.3Vdc, 3A max. 2nd storage :M.2 B/M Key, (2280) with PCIe x1 PCIe/SATA/USB
Expansion	1. One M.2 Type E slot (optional connect to WiFI module); 2. One M.2 Type B/M slot with PCIe x1 PCIe/SATA/USB slot (optional connect to WiFI module);3.3Vdc, 3A max. 3. One PCI-E x 4 expansion slot (optional connected to Capture card board, for Standard version used only); One PCI-E x 4 slot (Gold finger) (connected to ISO board, for Isolated version used only) or (optional total loaded 5W max, for Standard version used only); 4. MXM J3 slot (optional connect to MXM board or loaded 12Vdc, 0.9A max , for Standard version used only)
Button	Power // Audio adjustment (+)(-) // brightness (+)(-) // LCD on/off // Clean me(auto release after 1 minute)
I/O	**Standard version** USB 3.2 gen II x 4 USB 3.2 (Gen. 2) x1 (Type C ,Support DP 1.4a display output; 5V/3A power output) RS232/RS422/RS485 x 1, RS232 x 1 LAN RJ-45 x 2 (Gigabit Ethernet) Sound:Line-out x 1, and Mic-in x 1 Video output:DP 1.4a x 1 and HDMI 2.0 x 1 Video input:HDMI x 1 (without audio) **Isolated version** USB 3.2 gen II x 4 USB 3.2 (Gen. 2) x1 (Type C ,Support DP 1.4a display LAN RJ-45 x 2 (Gigabit Ethernet) Sound:Line-out x 1, and Mic-in x 1 Video output:DP 1.4a x 1 and HDMI 2.0 x 1

	Video input:HDMI x 1 (without audio) Isolated 4KV RS232/RS422/RS485 x 1 (The isolated ports verified through Dielectric test 4000Vac only) Isolated 4KV LAN RJ-45 x 1 (Gigabit Ethernet)

LCD Specifications

Model Name	WMP-22S
Display Type	21.5” LED
Max. Resolution	1920 x 1080
Contrast Ratio	1000 : 1 (Typ)
Pixel Pitch (um)	247.95(per one triad) x 247.95
Luminance (cd/m2)	250 (TYP)
Viewing Angle	178°(H)
	178°(V)

Cautions:

Continuous displaying fixed pattern may induce image sticking. It’s recommended to use screen saver or moving content periodically if fixed pattern is displayed on the screen.

Précautions:

L'affichage continu d'un motif fixe peut provoquer le collage de l'image. Il est recommandé d'utiliser l'économiseur d'écran ou de déplacer régulièrement du contenu si un motif fixe est affiché à l'écran.

Achtung:

Die kontinuierliche Anzeige fester Muster kann zu eingebrannten Bildern führen. Sie sollten gelegentlich einen Bildschirmschoner oder bewegliche Inhalte nutzen, wenn feste Muster am Bildschirm angezeigt werden.

Power Adapter Specifications

Power	Close-frame
MFR	Sinpro
Type	MPU250A-107
Input Rating	AC 100 ~ 240 V, 2.8 – 1.4A ,47 ~ 63 Hz
Output Rating	DC 19V, 13.15A
MTBF	100,000 hrs operation at 25°C
Classification	Power by Class I certified power adapter. No applied part.
Mode of operation	Continuous operation
System input rating	DC 19V, 9A

Mechanical Specifications

Architecture	Close-frame
Front Bezel	PCT touch screen
Color	Medical-white
Mounting / Holder	VESA 100mm
Construction	3mm ABS + PC TYPE Plastic housing
Dimension	541 mm (H) x 352.9 mm (V) x 74.7 mm (T)
Net Weight	8 kg (w/o power adapter)
Packing Filler	PE

Environmental Specifications

Temperature	Operating: 0~40℃(32°F ~104°F) (Burn-in, not airtight, W/ Battery 0~35℃) (32°F ~95°F) Storage, Transportation: -20°C to 60°C (-4°F ~140°F)
Humidity	Operating: 10% to 90%@ 35°C(95°F), non-condensing Storage, Transportation: 10% to 90%, non-condensing
Vibration	Operating: 5 ~ 17 Hz , Amplitude：0.117 ~ 500Hz , Acceleration：1.0G Non-operating:10~55Hz/0.15g, 55~500Hz/2.0g
Shock	Operating: 15g/0.53 oz, 11 ms, half sine wave Non-operating: 50g/1.76 oz, 11 ms, half sine wave
Altitudes	Operational: up to 3000 m (9842 feet) Shipping: up to 12192 m (40000 feet)
Pressure	700 – 1060 hPa (Operation) 186 – 1060 hPa (Storage) 186 – 1060 hPa (Transportation)
EMI / Safety	CE / FCC / VCCI Class B/EN 60601-1
IP	IPX0 for whole system.

Touch Screen

P.cap touch

Type	Full flat projective capacitive touch panel
Interface	Controller with USB interface, 5V

Resolution	16384*16384
Light Transmission	≧ 87%
Life Time(Hrs)	50000

<table>
<tr><td colspan="3">Guidance and manufacturer’s declaration – electromagnetic emissions</td></tr>
<tr><td colspan="3">The model WMP-22S is intended for use in the electromagnetic environment specified below. The customer or the user of the model WMP-22S should assure that it is used in such an environment.</td></tr>
<tr><td>Emissions test</td><td>Compliance</td><td>Electromagnetic environment – guidance</td></tr>
<tr><td>RF emissions
CISPR 11</td><td></td><td>The model WMP-22S uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.</td></tr>
<tr><td>RF emissions
CISPR 11</td><td></td><td rowspan="4">The model WMP-22S is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.</td></tr>
<tr><td>Harmonic emissions
IEC 61000-3-2</td><td></td></tr>
<tr><td>Voltage fluctuations/
flicker emissions
IEC 61000-3-3</td><td></td></tr>
<tr><td colspan="3">Recommended separation distances between
portable and mobile RF communications equipment and the model
WMP-22S</td></tr>
<tr><td colspan="3">The model WMP-22S is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the model WMP-22S can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the model WMP-22S as recommended below, according to the maximum output power of the communications equipment.</td></tr>
</table>

Rated maximum output power of transmitter W	**Separation distance according to frequency of transmitter** m		
	150 kHz to 80 MHz $d = 1,2\sqrt{P}$	**80 MHz to 800 MHz** $d = 1,2\sqrt{P}$	**800 MHz to 2.7 GHz** $d = 2,3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distanced in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Guidance and manufacturer's declaration – electromagnetic immunity			
The model WMP-22S is intended for use in the electromagnetic environment specified below. The customer or the user of the model WMP-22S should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast	±2 kV for	±2 kV for	Mains power quality

transient/burst IEC 61000-4-4	power supply lines ±1 kV for input/output lines	power supply lines ±1 kV for input/output lines	should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	1 kV line(s) to line(s) 2 kV line(s) to earth	±1 kV line(s) to line(s) ±2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% *U*T (100 % dip in *U*T) for 0.5 cycle 0 % *U*T (100 % dip in *U*T) for 1 cycles 70 % *U*T (30 % dip in *U*T) for 25 cycles 0 % *U*T (100 % dip in *U*T) for 250 cycles	0 % *U*T (100 % dip in *U*T) for 0.5 cycle 0 % *U*T (100 % dip in *U*T) for 1 cycles 70 % *U*T (30 % dip in *U*T) for 25 cycles 0 % *U*T (100 % dip in *U*T) for 250 cycles	Mains power quality should be that of a typical commercial or hospital environment. If the user of the model WMP-22S requires continued operation during power mains interruptions, it is recommended that the model WMP-22S be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or

			hospital environment.

NOTE *U*T is the a.c. mains voltage prior to application of the test level.

Guidance and manufacturer's declaration – electromagnetic immunity

The model WMP-22S is intended for use in the electromagnetic environment specified below. The customer or the user of the model WMP-22S should assure that it is used in such an environment.

Immunity	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2.7 GHz	Vrms V/m	Portable and mobile RF communications equipment should be used no closer to any part of the model WMP-22S, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = 1{,}2\sqrt{P}$ $d = 1{,}2\sqrt{P}$ 80 MHz to 800 MHz $d = 2{,}3\sqrt{P}$ 800 MHz to 2.7 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, [a] should be less than the compliance level in each frequency range. [b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption

and reflection from structures, objects and people.

a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the model WMP-22S is used exceeds the applicable RF compliance level above, the model WMP-22S should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the model WMP-22S.

b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Cleaning/Disinfecting

Steps:

1. Wipe the WMP-22S with a dry clean cloth.

2. Operate with manufacturer's instructions or hospital protocol.

Cautions:

- Do not immerse or rinse the WMP-22S and its peripherals. If you accidentally spill liquid on the device, disconnect the unit from the power source. Contact your Biomed regarding the continued safety of the unit before placing it back in operation.
- Do not spray cleaning agent on the chassis.
- Do not use disinfectants that contain phenol.
- Do not autoclave or clean the WMP-22S or its peripherals with strong aromatic, chlorinated, ketone, ether, or Esther solvents, sharp tools or abrasives. Never immerse electrical connectors in water or other liquids.

Précautions:

● Ne plongez pas et ne rincez pas le WMP-22S et ses périphériques. Si vous renversez accidentellement du liquide sur l'appareil, débranchez l'appareil de la source d'alimentation. Contactez votre Biomed concernant la sécurité continue de l'appareil avant de le remettre en service.

● Ne vaporisez pas d'agent de nettoyage sur le châssis.

● N'utilisez pas de désinfectants contenant du phénol.
● Ne pas stériliser à l'autoclave ni nettoyer le WMP-22S ou ses périphériques avec des solvants forts aromatiques, chlorés, cétoniques, éthérés ou Esther, des outils tranchants ou des abrasifs. Ne plongez jamais les connecteurs électriques dans l'eau ou d'autres liquides.

Achtung:

- Der WMP-22S und seine Peripherie dürfen nicht in Wasser getaucht oder

abgespült werden. Falls Sie versehentlich Flüssigkeiten über dem Gerät verschütten, trennen Sie das Gerät umgehend von der Stromversorgung. Wenden Sie sich zur Bestätigung der Sicherheit des Gerätes an Biomed, bevor Sie es wieder in Betrieb nehmen.

- Sprühen Sie keine Reinigungsmittel auf das Gehäuse.
- Verwenden Sie keine Desinfektionsmittel, die Phenol enthalten.

Der WMP-22S und seine Peripherie dürfen nicht autoklaviert oder mit aggressiven aroma-, chlor-, keton-, ether- oder estherhaltigen Reinigungsmitteln, scharfkantigen Werkzeugen oder Scheuermitteln gereinigt werden. Tauchen Sie die elektrischen Anschlüsse niemals in Wasser oder andere Flüssigkeiten.

Getting Started

System Set Up

The following is a summary of the steps in setting up the system for use.

(1). You can fix the system to a mounting fixture using the screw holes on the sides of the system, use for the system is land scape mode only.

(2). Make any required external connections such as the display, keyboard, and LAN.

(3). Plug the appropriate end of the power cord into the power connector on the rear of the system and the plug to an electrical outlet.

(4). ***Waiting for 3 seconds*** then press the power switch on the front panel of the system once to turn on the system power.

(5). If necessary, run the BIOS SETUP programs to configure the system.

Caution:

In order to boot up system from USB-CD/DVD drive, please connect USB-CD/DVD drive, turn on computer power, keep on pressing "F11" key, go into BIOS quick boot menu, select "USB-CD ROM", WAIT FOR 20 SECONDS, then press enter, system OS will boot up from USB-CD/DVD drive directly.

Mise en garde:

Afin de démarrer le système à partir du lecteur USB-CD / DVD, veuillez connecter le lecteur USB-CD / DVD, allumez l'ordinateur, continuez à appuyer sur la touche "F11", allez dans le menu de démarrage rapide du BIOS, sélectionnez "USB-CD ROM" , ATTENDEZ 20 SECONDES, puis appuyez sur Entrée, le système d'exploitation démarrera directement à partir du lecteur USB-CD / DVD.

Achtung:

Zum Starten des Systems vom USB-CD/DVD-Laufwerk verbinden Sie bitte das USB-CD/DVD-Laufwerk, schalten den Computer ein, halten „F11“ gedrückt, rufen das BIOS auf, navigieren zum Schnellstartmenü, wählen „USB-CD ROM“, WARTEN 20 SEKUNDEN, drücken dann Enter und das Betriebssystem startet direkt vom USB-CD/DVD-Laufwerk.

Notice:

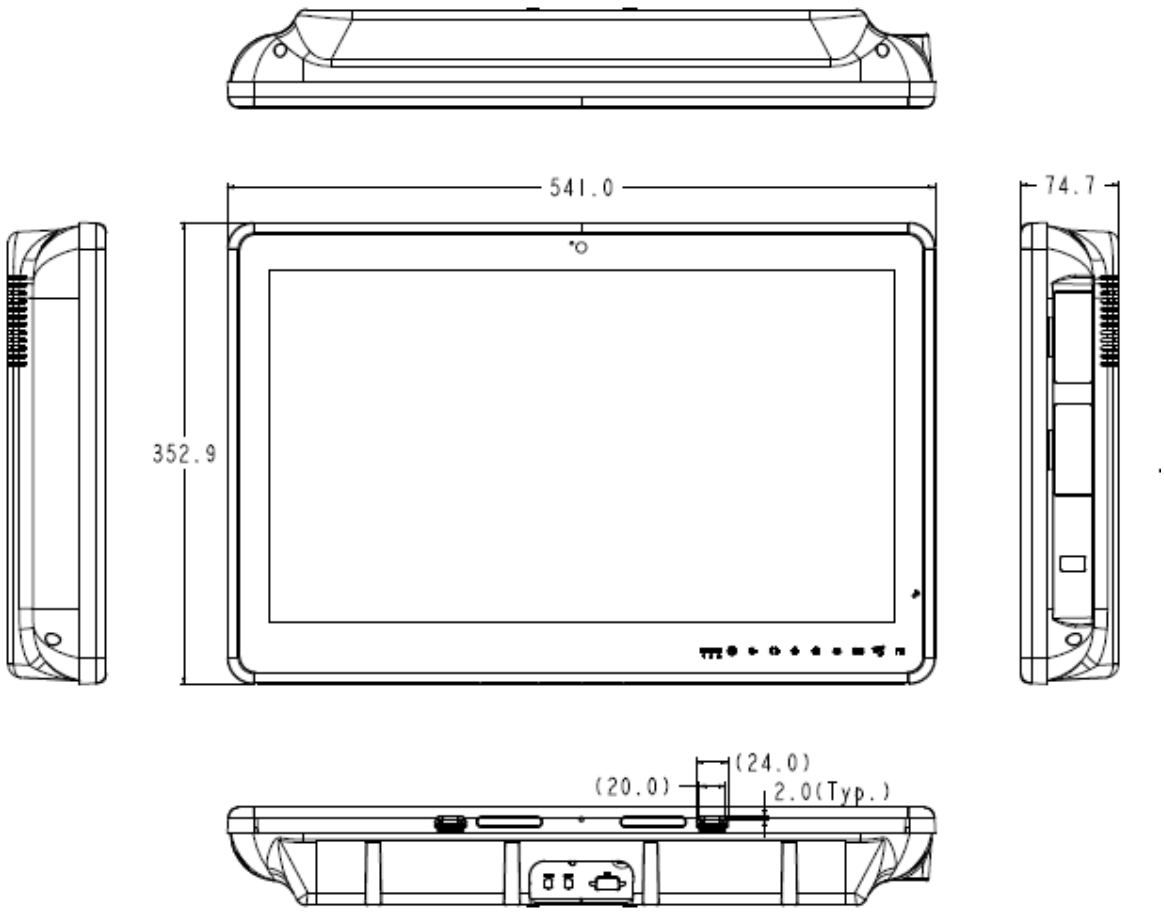
The installation is only to be carried out by manufacturer trained and authorized personnel.

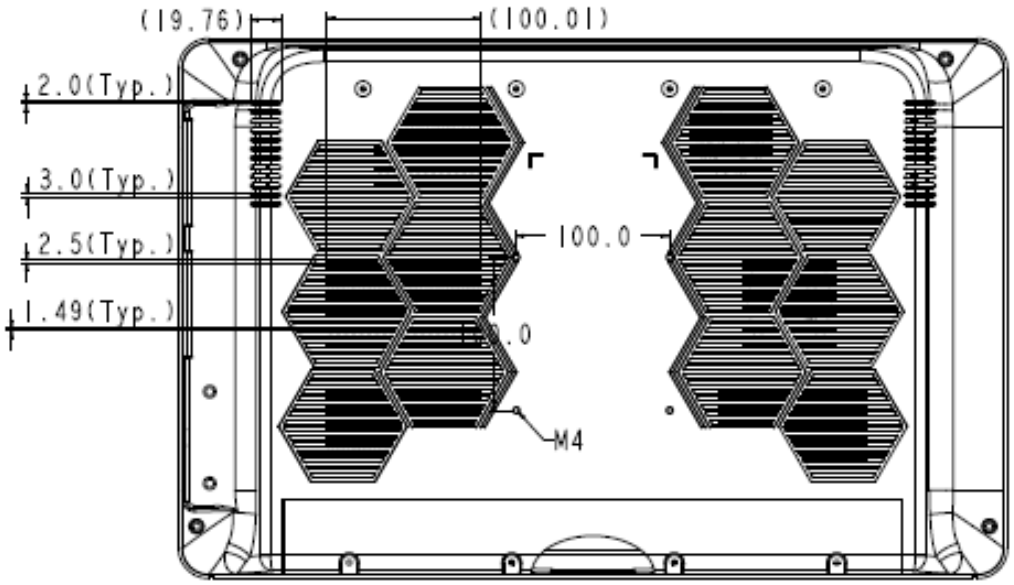
Dimension

WMP-22S

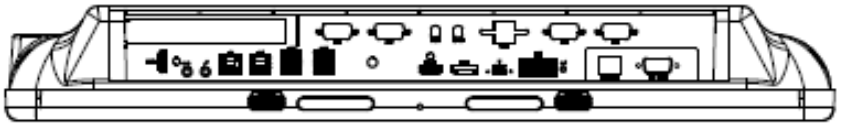
(VESA Mount Screw type: M4)

WARNING: Shall use VESA standardized mounting pad in mounting application.





STD (2COM) IO



ISO 4KV IO

System View

Front View

Webcam (optional)

Hotkey and LED definition at front panel

Located on Touch screen bottom side, from left to right, front view

Hotkey Definitions

Symbols	1	2	3		Symbols									
Indicator	Battery 1 Indicator	Battery 2 Indicator	Battery 3 Indicator		Key Name	Power	Volume Up	Volume Down	Backlight Down	Backlight Up	Reading Light	Backlight On/Off	Clear Me	Function
AC IN		◯ : No battery presents GB : Charging G : Battery is Full GG : Battery is malfunction		PC Mode	PC Off	◯ S: Power on	◯	◯ H10: Cut Battery off	◯	◯	◯ AG S: Reading light On/Off	◯ AG S: Panel of/off	◯ AG H5: Clear Me on/off	◯
					PC ON	B S: Power off H5: Force Power off	B S: Down 1 step H: Down repeat	B S: Up 1 step H: Up repeat	B S: Down 1 step H: Down repeat	B S: Up 1 step H: Up repeat	B AG S: Reading light On/Off H10: CTRL+ALT+DEL keys	B AG S: Panel on/off H3: OSD menu toggle(DICOM mode not support)	B AG H5: Clear Me on/off	B AG S: PC/HDMI IN toggle H3: DICOM on/off
					OSD ON	B	G S: Menu/Enter	G S: Exit	G S: Left/Brightness down	G S: Right/Brightness up	B AG S: Reading light On/Off H10: CTRL+ALT+DEL keys	B AG S: Panel on/off H3: OSD menu toggle(DICOM mode not support)	B AG H5: Clear Me on/off	B AG S: PC/HDMI IN toggle H3: DICOM on/off
AC OUT				HDMI IN	OSD ON	B	G S: Menu/Enter	G S: Exit	G S: Left/Brightness down	G S: Right/Brightness up	B AG S: Reading light On/Off	B AG S: Panel of/off	B AG H5: Clear Me on/off	B AG S: PC/HDMI IN toggle

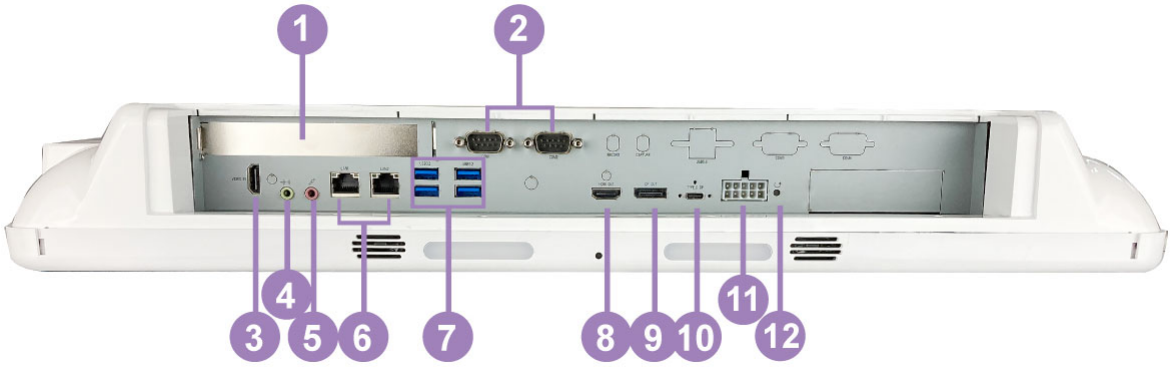
LED color symbols

LED Off:		Fast Green/Blue Toggle:	
Blue:		Blue Blinking:	
Green:		Green Blinking:	
Active Green:		Fast Blue Blinking:	
Fast Green Blinking:			

Key press definition
S: short press
H: Hold key
H3: Hold key for 3 seconds
H5: Hold key for 5 seconds
H10: Hold key for 10 seconds

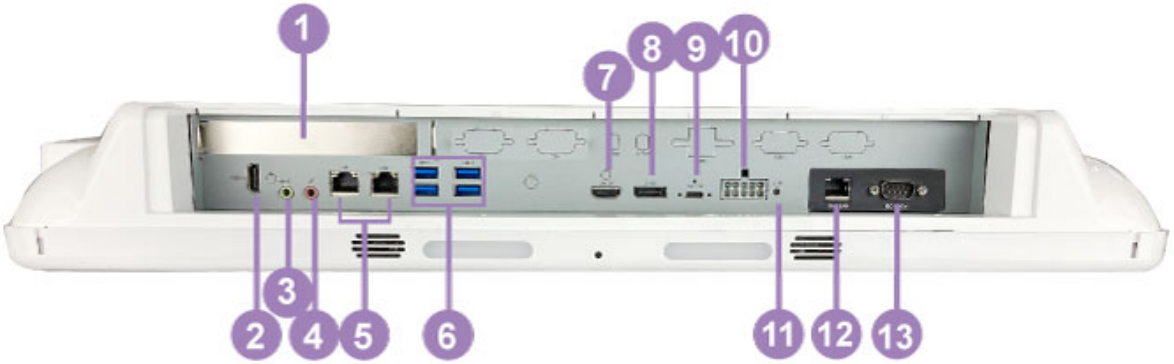
I/O parts

Standard type



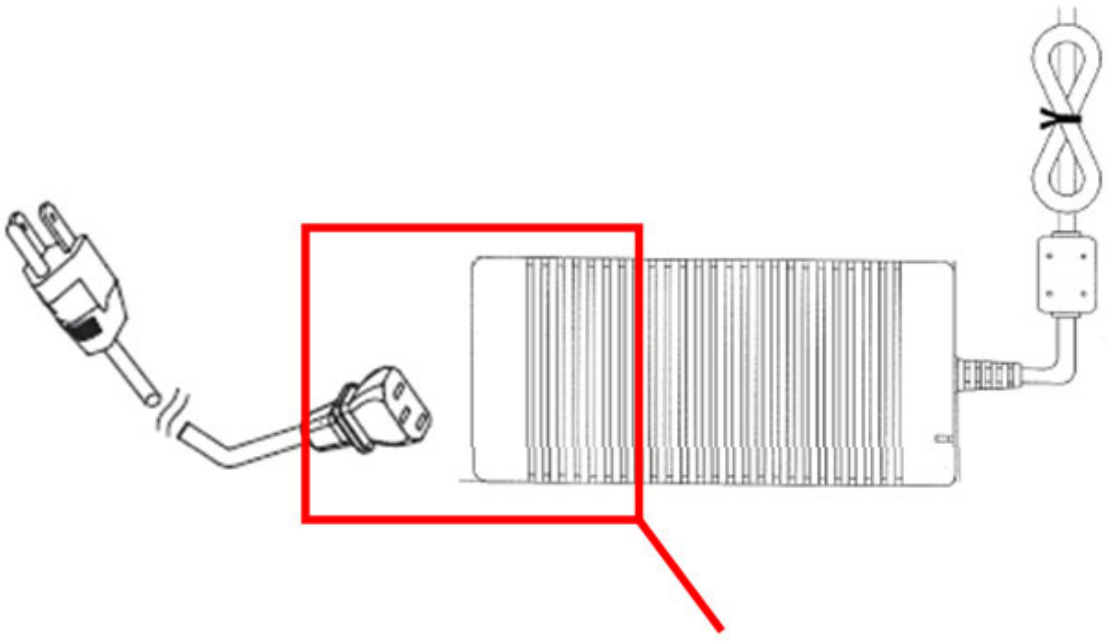
1 PCI-E expansion
2 COM x 2
3 Video-in x1
4 Line-out
5 Microphone-in
6 LAN x 2
7 USB3.2 gen II x 4
8 HDMI out x 1
9 DP out x 1
10 Type C DP x 1
11 DC-in
12 Reset

Isolated type



1 PCI-E expansion
2 Video-in x1
3 Line-out
4 Microphone-in
5 LAN x 2
6 USB3.2 gen II x 4
7 HDMI out x 1
8 DP out x 1
9 Type C DP x 1
10 DC-in
11 Reset
12 iso Lan x 1
13 iso COM x 1

Disconnect Device



Turn off the system:

Turning off WMP-22S properly is important for system reliability.
1. On the start menu, click “Shut down” and select “OK”

Battery Pack Specifications (optional kit)

Battery Model	DR-202-GAL
Battery Type	Lithium-ion 3S-3P
Minimum Capacity	9200 mAh
Nominal Voltage	10.8V
Max. Charge Voltage	12.6 V
Cut Off Voltage	9V
Suggested Charge Current (Max.)	5A
System Continuous Discharging Current (Max.)	10A
The End of Charge Condition	12.6 V
Discharge Protection	16 ± 0.5 A
Charge Protection	6 ± 0.5 A
Self-discharge Rate	< 0.8mA
Dimensions	140mm x 89mm x 19.7mm
Weight	470g
Ambient Temperature	Charge: 0 ~ 45 °C Discharge: -10 ~ 60 °C
Storage Temperature	0～40 °C
Energy	99.36Wh

Alarm!
The battery mode supports a maximum of 100W.
If the system is in battery mode and its power consumption exceeds 100W, posing a risk of potential shutdown.

BIOS Battery status

Battery Full Charge
Status : Full Charge

Battery in Charge

Status :Charging

Battery in Discharge
Status : Discharge

Nonworking Battery
Status : Stand by

Low power Battery
Status : Low Battery

No battery or Battery in very low power state
Status : N/A

Scrap Computer Recycling

If the computer equipment need the maintenance or are beyond repair, we strongly recommended that you should inform us as soon as possible for the suitable solution. For the computers that are no longer useful or work well, please contact with worldwide distributors for recycling.

The worldwide distributors show on the following website:
http://www.wincomm.com.tw/contact.aspx

Note:

Follow the national requirement to dispose unit.

PS1. Expected Service Life: 3.1 years

If the computer has exceeded the Expected Service Life and you want to continue using it, it is recommended to contact the manufacturer/distributors to confirm whether maintenance is required.

PS2.CAUTION:

If any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user is established.

PS3.Notice:

It is recommended to install the appropriate software, if have any question, please contact the manufacturer for further assistance.

Notice: To prevent unauthorized access, it is recommended to install suitable anti-virus software or do not connect to unsafe external networks.

PS4.RTC battery:

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 same (CR2032) type recommended by the manufacturer.
Discard used batteries according to the each nation's instructions.

PS5.Battery pack (optional kit):

It is suggest to recharge the battery pack every 6 months if it is not used.

PS6.Display operation:

The panel is only intended to be used with SIP/SOP facing downward.

BIOS Introduction

The AMI BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports and parallel ports. It also adds virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

BIOS Setup

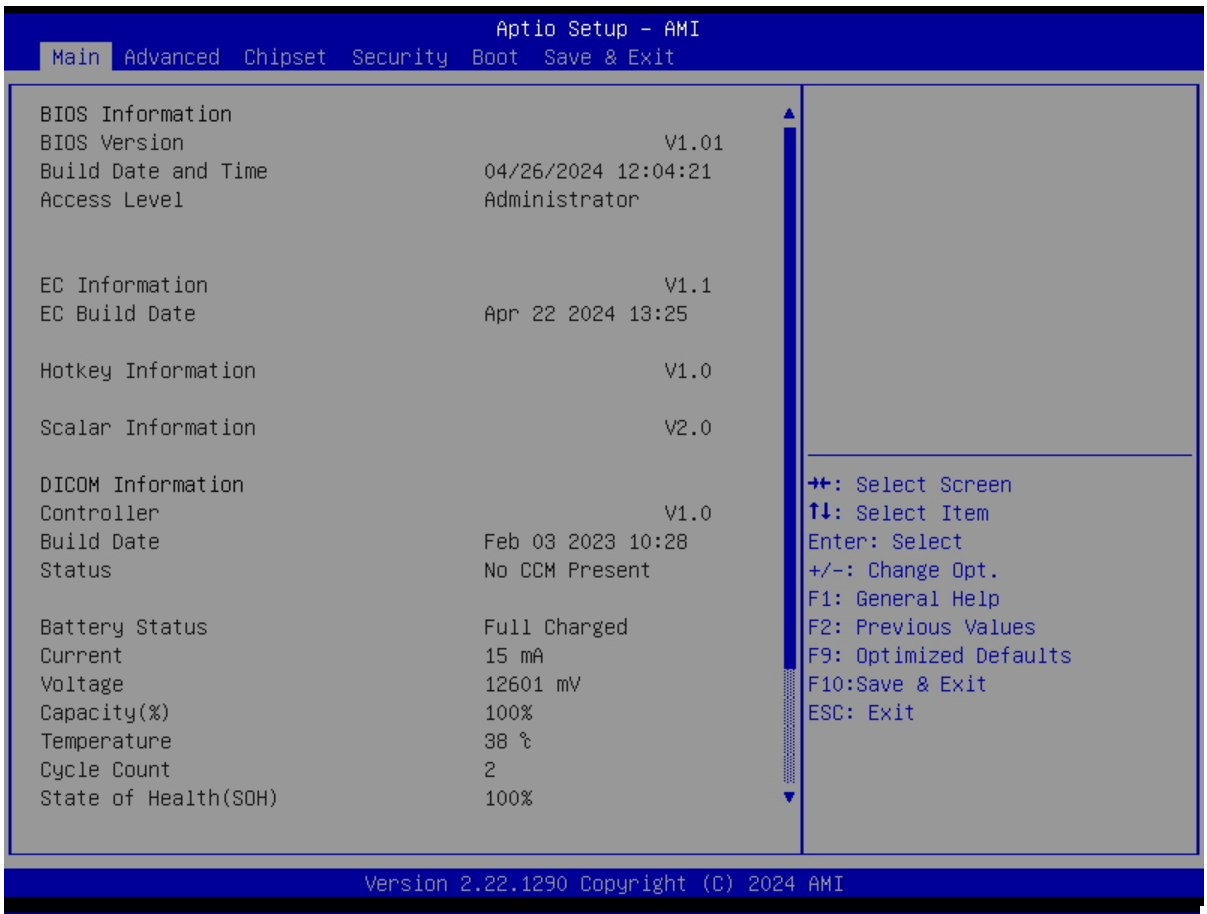
The AMI BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the AMI BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

Press <DEL> to Enter Setup

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

Main


Aptio Setup – AMI
Main Advanced Chipset Security Boot Save & Exit
BIOS Information
BIOS Version V1.01
Build Date and Time 04/26/2024 12:04:21
Access Level Administrator
EC Information V1.1
EC Build Date Apr 22 2024 13:25
Hotkey Information V1.0
Scalar Information V2.0
DICOM Information
Controller V1.0
Build Date Feb 03 2023 10:28
Status No CCM Present
Battery Status Full Charged
Current 15 mA
Voltage 12601 mV
Capacity(%) 100%
Temperature 38 ℃
Cycle Count 2
State of Health(SOH) 100%
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F9: Optimized Defaults
F10:Save & Exit
ESC: Exit
Version 2.22.1290 Copyright (C) 2024 AMI

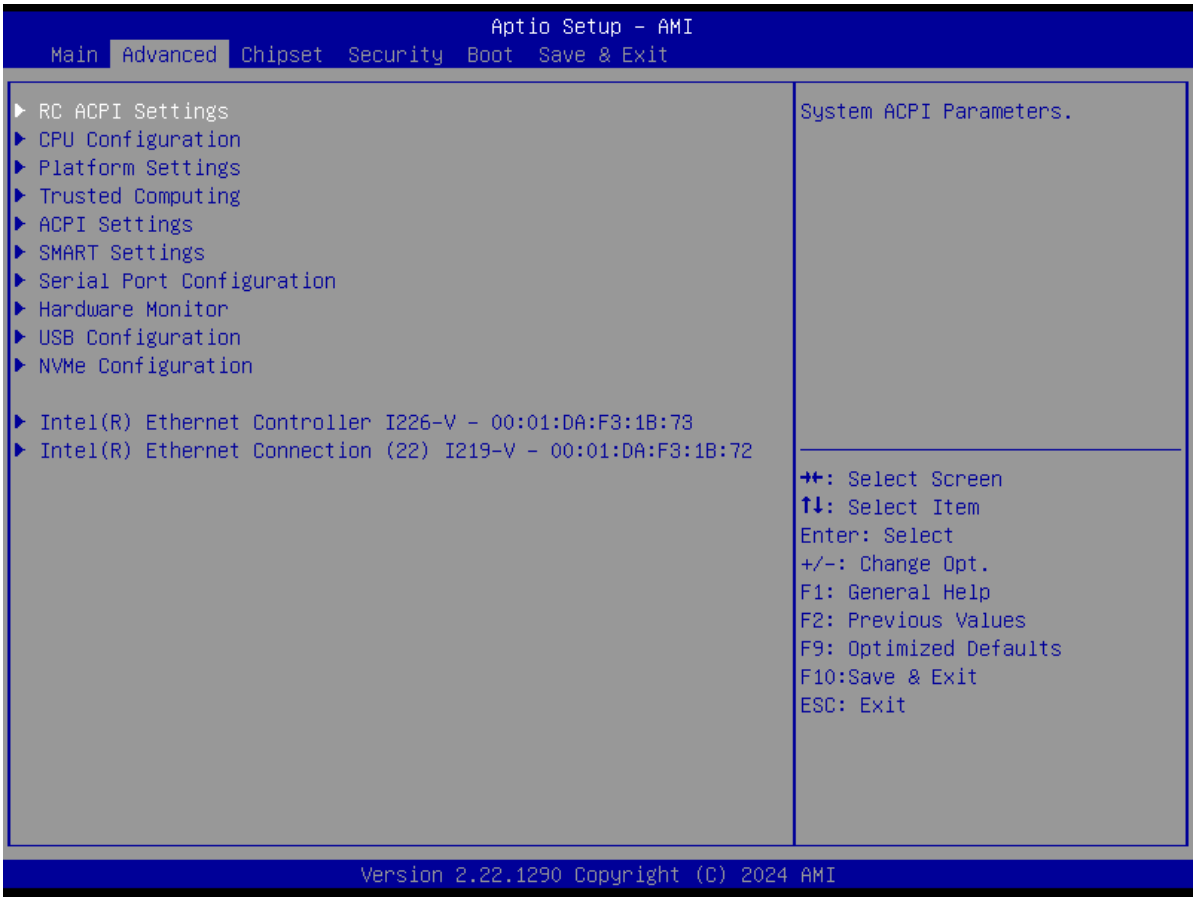

Aptio Setup – AMI
Main Advanced Chipset Security Boot Save & Exit
EC Information V1.1
EC Build Date Apr 22 2024 13:25
Hotkey Information V1.0
Scalar Information V2.0
DICOM Information
Controller V1.0
Build Date Feb 03 2023 10:28
Status No CCM Present
Battery Status Full Charged
Current 16 mA
Voltage 12601 mV
Capacity(%) 100%
Temperature 38 ℃
Cycle Count 2
State of Health(SOH) 100%
System Language [English]
System Date [Thu 04/25/2024]
Set the Date. Use Tab to switch between Date elements.
Default Ranges:
Year: 1998-9999
Months: 1-12
Days: Dependent on month
Range of Years may vary.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F9: Optimized Defaults
F10:Save & Exit
ESC: Exit
Version 2.22.1290 Copyright (C) 2024 AMI

This section provides information on the BIOS information, Embedded controller information and Battery information

System Date
Set the system date. Use the <Tab> key to switch between data elements.

System Time
Set the system time. Use the <Tab> key to switch between time elements.

Advanced



RC ACPI Settings
System ACPI Parameters.
Wake system from S5
Enable or Disable system wake on alarm event. When enabled, system will wake on the hr::min::sec specified

CPU Configuration
CPU Configuration Parameters

Platform Settings
Platform related settings.
Hotkey Beep
Hotkey Beep enable/disable
Boot Beep
Boot Beep enable/disable
CPU Thermal Trip Point
This value controls the temperature of the ACPI Passive Trip Point -the point in which the OS will begin throttling the processor .
Range:45℃~100℃
OS WDT Time
Watch dog timer in minute(S) to reset system if OS hangs up.
Range:1~250 minute(S) 0 means disable
WDT Timeout Action
Action when WDT time out
Lock key click time
Number of seconds to press lock key to (un) active. 1~10
Lock status Hold Time
Number of minutes to keep lock status 0 means lick always.1~100 minutes mean lick hold time
ALS
ALS (light sensor) enable/disable
Panel Maximum Brightness
Panel Maximum Brightness Unit: NITS Range:100~2000
ALS Normalize
Unit:% Range:0~500. 100 Means 100%(eg. time1) 225 Means 225% (eg. time 2.25)
Show/hide hidden items
For debug only.
Show / hide hidden items.
Charging Method
Select charging method as Normal Charging or Fast Charging.

Trusted Computing
Trusted Computing settings
Security Device support
Enables or disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

ACPI Settings
System ACPI Parameters
Enable ACPI Auto Configuration
Enables or Disables BIOS ACPI Auto Configuration.
Enable Hibernation
Enables or Disables System ability to Hibernate (OS/S4 sleep state). This option may not be effective with some operating systems.
ACPI Auto Configuration
Enables or Disables BIOS ACPI Auto Configuration

SMART Settings
System SMART Settings.
SMART Self TEST
Run SMART self Test on all HDDs During POST

Serial Port Configuration
System Super IO Chip Parameters.

Serial Port 1 Configuration
Set Parameters of Serial Port 1 (COMA).
Serial Port
Select an optimal settings for super IO Device.
Function
Select RS232,RS422,RS485 function

Serial Port 2 Configuration

Serial Port
Enable or Disable Serial Port (COMB).

Serial Port 3 Configuration
Serial Port
Enable or Disable Serial Port (COMC).

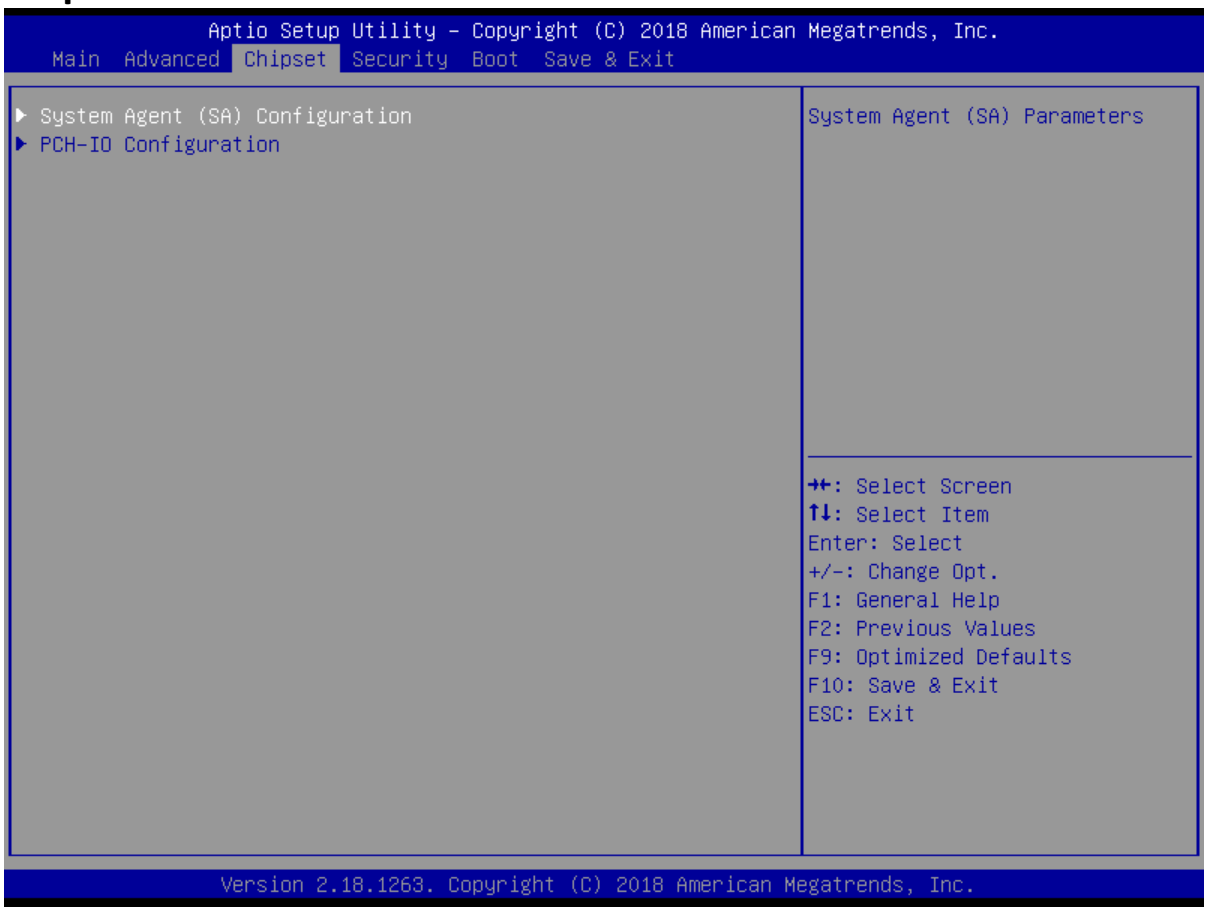
Serial Port 4 Configuration
Serial Port
Enable or Disable Serial Port (COMD).

Hardware Monitor
Monitor hardware status

USB Configuration
USB Configuration Parameters.

NVMe Configuration
NVMe Device Options Settings.

Chipset



System Agent (SA) Configuration
System Agent (SA) Parameters

PCI Express Configuration
PCI Express Configuration Settings

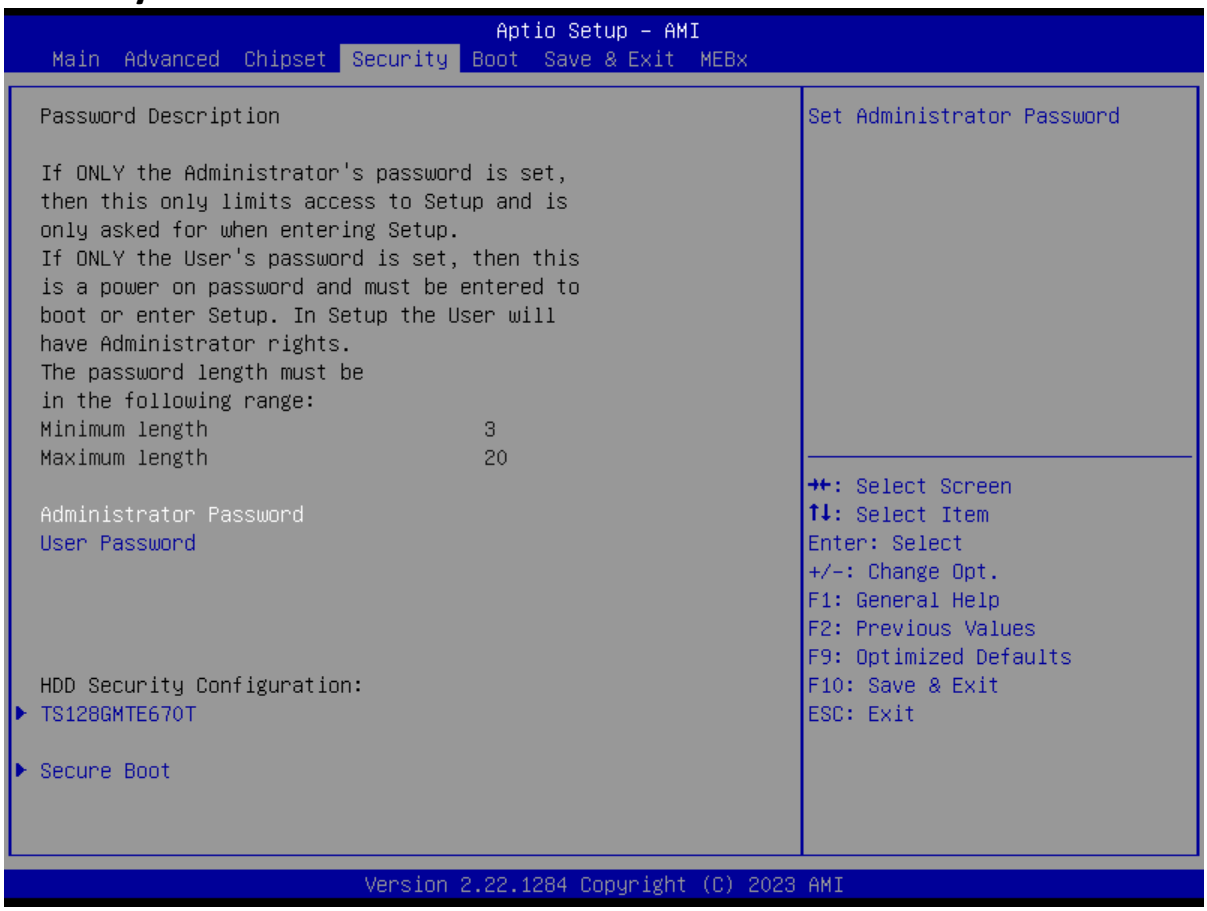
PCH-IO Configuration
PCI Express Configuration
PCI Express Configuration settings
PCI Express Clock Gating
PCI Express Clock Gating Enable/Disable for each root port.

SATA Configuration
SATA Device Options Settings
SATA Controller(s)
Enable/Disable SATA Device

SATA Mode Selection
Determines how SATA controller(s) operate
SATA Test Mode
Test Mode Enable/Disable (Loop Back)

Wake on WLAN Enable
Enable/Disable PCI Express Wireless LAN to wake the system.
State After G3
Specify what state to go to when powr is re-applied after a power failure (G3 state).

Security



Administrator Password
Set Administrator Password.

User Password
Set user Password.

P3：TS128GMTE670T

HDD Security Configuration for selected drive.

Note: User Password is mandatory to enable HDD Security.
It can also be used to unlock the HDD.
If the ‘set User Password ‘ option is hidden, do power cycle to enable the option again

Secure Boot menu

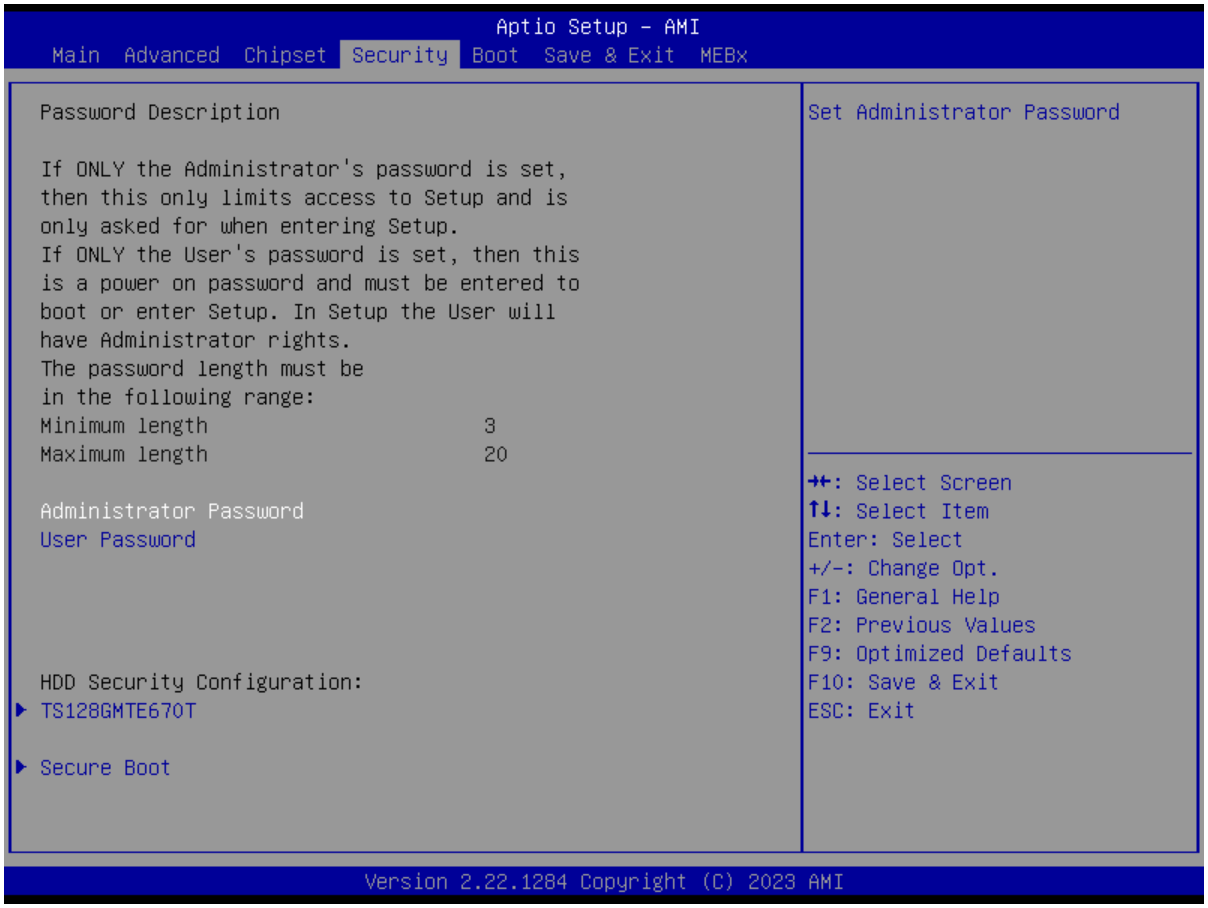
Secure Boot

Secure Boot can be enabled if 1.System running in User mode with enrolled Platform key(PK). 2. CSM function is disabled.

Secure Boot Mode

Secure Boot mode selector. 'Custom' Mode enables users to change Image Execution policy and manage Secure Boot keys.

Boot



Setup Prompt Timeout

Number of seconds to wait for setup activation key.65535(0xFFFF) means indefinite waiting.

BootupNumlock State

Selects the keyboard NumLock state.

Legacy PXE Boot

Legacy PXE Network Boot Enable / Disable.

UEFI PXE Boot

UEFI PXE Network Boot Enable / Disable.

Boot Option #1

Sets the system boot order.

Boot Option #2

Sets the system boot order.

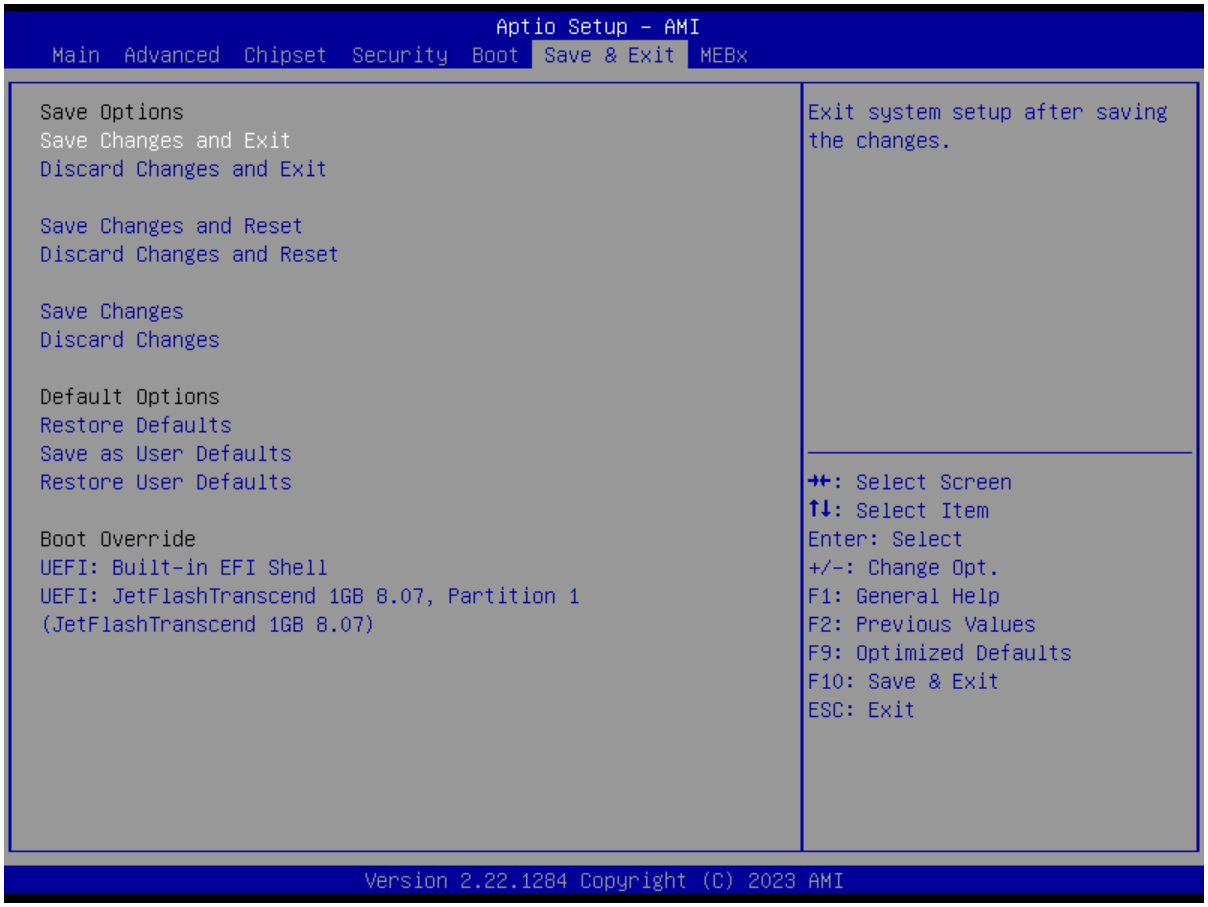
Fast Boot

Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.

New Boot Option

Controls the placement of newly detected UEFI boot options

Save & Exit



Save Changes and Exit

Exit system setup after saving the changes.

Discard Changes and Exit

Exit system setup without saving any changes.

Save Changes and Reset

Reset the system after saving the changes.

Discard Changes and Reset

Reset system setup without saving the changes.

Save Changes

Save the changes done so far to any of setup options.

Discard Changes

Discard the changes done so far to any of setup options.

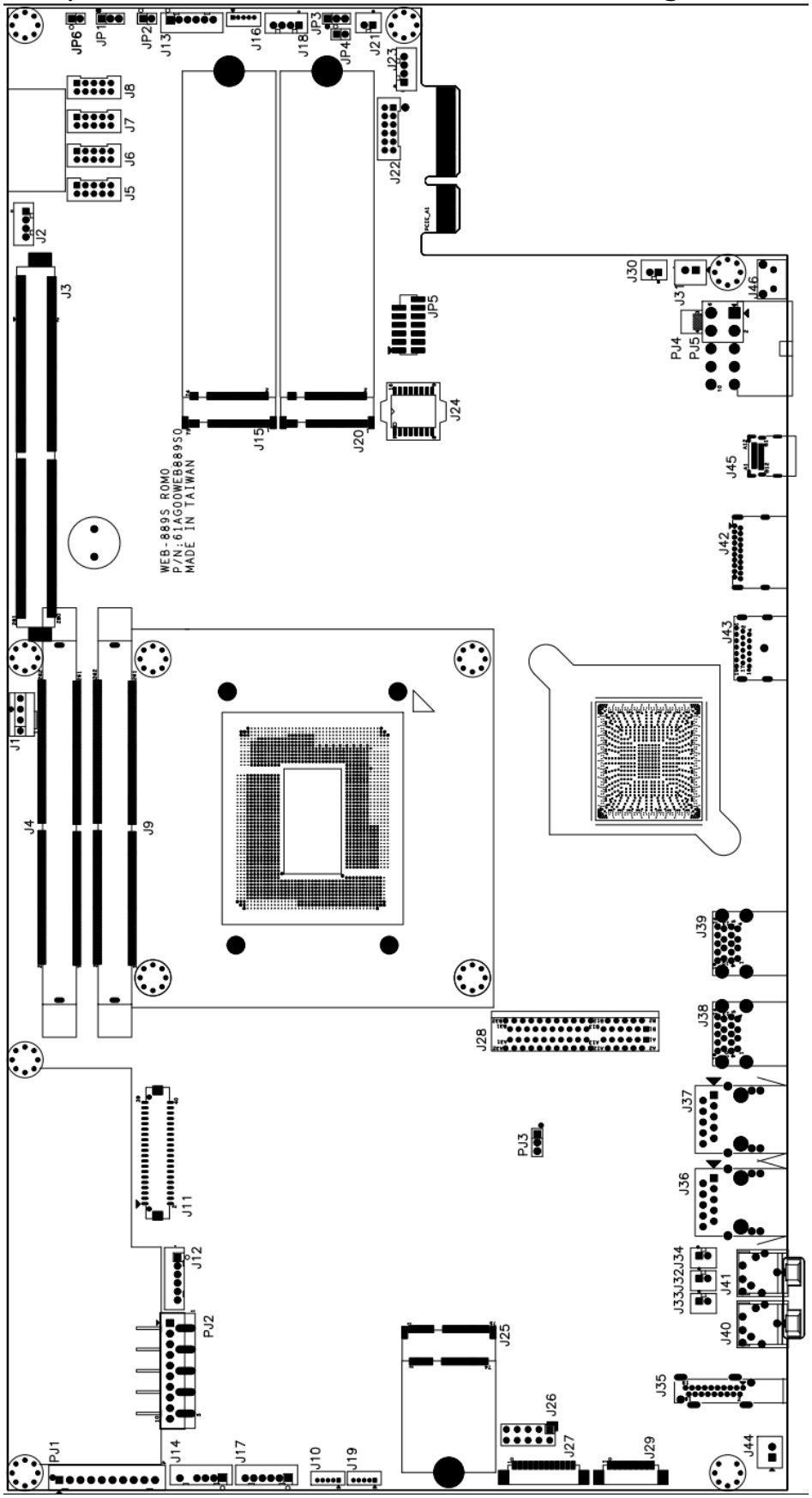
Restore Defaults
Restore/load default values for all the setup options.

Save as User Defaults
Save the changes done so far as User Defaults.

Restore User Defaults

Appendix

Jumper and Connector Definition Block Diagram



This appendix gives the definitions and shows the positions of jumpers, headers and connectors. All of the configuration jumpers on WMP-22S are in the proper position.

JP1 – System selection

Description	Jumper Setting
24” System	***2-3***
22”System	***NC (default)***
19” system	1-2

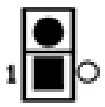
JP2 – PIS Selection

Description	Jumper Setting
Normal	***NC (default)***
PIS	1-2

JP3 – CMOS Clear Selection

Description	Jumper Setting
Normal Open	***1-2 (default)***
CMOS Clear	2-3

JP4 – RTC Register Clear Selection



Description	Jumper Setting
Normal	***NC (default)***
RTC Register Clear	1-2

JP5 –TPM2.0

Pin #	Signal Description	Pin #	Signal Description
1	SPI_TPM_INT#_R	2	+3.3VSB
3	SPI_TPM_CS#	4	PLT_RST#
5	NC	6	NC
7	GND	8	NC
9	SPI_TPM_CLK	10	NC
11	SPI_TPM_MOSI	12	SPI_TPM_MISO
NA	NA	14	NC

JP6 –MXM CLKREQ

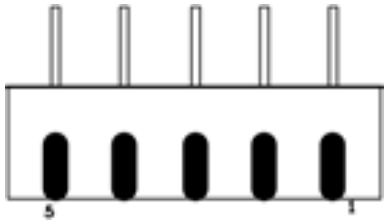
Description	Jumper Setting
Normal	***NC (default)***
A2000	1-2

Connector Definition

PJ1 – Battery Connector

Pin #	Signal Description
1	BATT_V+
2	BATT_V+
3	BATT_V+
4	BAT_CLK
5	BAT_DATA
6	BAT_T
7	GND
8	GND
9	GND
10	GND

PJ2 – Battery Connector

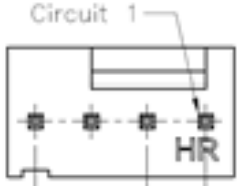


Pin #	Signal Description
1	BATT_V+
2	BAT_CLK
3	BAT_DATA
4	BAT_T
5	GND

PJ5 – DC Adapter In

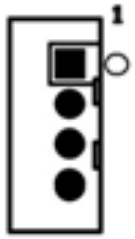
Pin #	Signal Description
1	Ground
2	Ground
3	Ground
4	Ground
5	Ground
6	DC In
7	DC In
8	DC In
9	DC In
10	NC

J1 – CPU PWM FAN



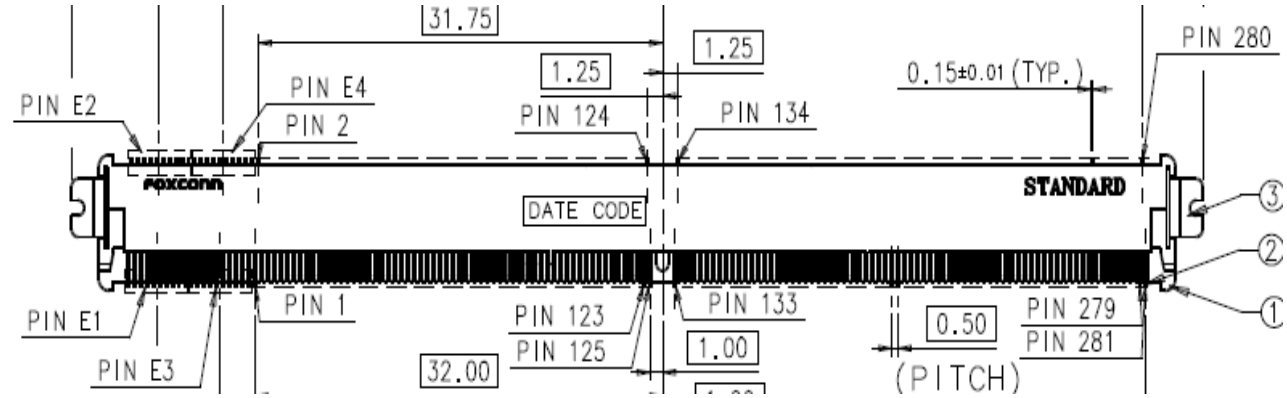
Pin #	Signal Description
1	GND
2	+12VS
3	CPU_FAN_RPM
4	FAN_PWM

J2 – MXM PWM FAN



Pin #	Signal Description
1	MXM_PWM
2	MXM_RPM
3	+12VS
4	GND

J3 – MXM Interface



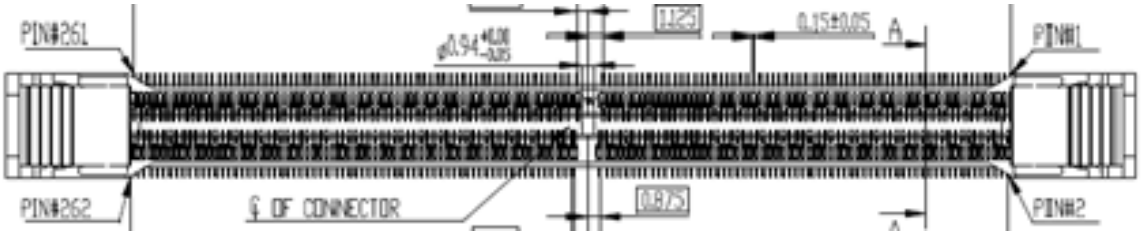
Pin	Signal Name	Pin	Signal Name
E1	PWR_SRC	E2	PWR_SRC
E3	GND	E4	GND
1	5V	2	PRSNT_R#
3	5V	4	WAKE#
5	5V	6	PWR_GOOD
7	5V	8	PWR_EN
9	5V	10	27MHZ_REF
11	GND	12	GND
13	GND	14	LVDS_U_HPD
15	GND	16	JTAG_TESTEN
17	GND	18	PWR_LEVEL
19	PEX_STD_SW#	20	TH_OVERT#
21	VGA_DISABLE#	22	TH_ALERT#
23	PNL_PWR_EN	24	TH_PWM
25	PNL_BL_EN	26	GPIO0
27	PNL_BL_PWM	28	GPIO1
29	HDMI_CEC	30	GPIO2
31	LVDS_L_HPD	32	SMB_DAT
33	LVDS_DDC_DAT	34	SMB_CLK
35	LVDS_DDC_CLK	36	GND
37	GND	38	OEM0
39	OEM1	40	OEM2
41	OEM3	42	OEM4
43	OEM5	44	OEM6
45	OEM7	46	GND
47	GND	48	PEX_TX15#
49	PEX_RX15#	50	PEX_TX15
51	PEX_RX15	52	GND
53	GND	54	PEX_TX14#
55	PEX_RX14#	56	PEX_TX14
57	PEX_RX14	58	GND
59	GND	60	PEX_TX13#
61	PEX_RX13#	62	PEX_TX13
63	PEX_RX13	64	GND
65	GND	66	PEX_TX12#
67	PEX_RX12#	68	PEX_TX12
69	PEX_RX12	70	GND

Pin	Signal Name	Pin	Signal Name
71	GND	72	PEX_TX11#
73	PEX_RX11#	74	PEX_TX11
75	PEX_RX11	76	GND
77	GND	78	PEX_TX10#
79	PEX_RX10#	80	PEX_TX10
81	PEX_RX10	82	GND
83	GND	84	PEX_TX9#
85	PEX_RX9#	86	PEX_TX9
87	PEX_RX9	88	GND
89	GND	90	PEX_TX8#
91	PEX_RX8#	92	PEX_TX8
93	PEX_RX8	94	GND
95	GND	96	PEX_TX7#
97	PEX_RX7#	98	PEX_TX7
99	PEX_RX7	100	GND
101	GND	102	PEX_TX6#
103	PEX_RX6#	104	PEX_TX6
105	PEX_RX6	106	GND
107	GND	108	PEX_TX5#
109	PEX_RX5#	110	PEX_TX5
111	PEX_RX5	112	GND
113	GND	114	PEX_TX4#
115	PEX_RX4#	116	PEX_TX4
117	PEX_RX4	118	GND
119	GND	120	PEX_TX3#
121	PEX_RX3#	122	PEX_TX3
123	PEX_RX3	124	GND
125	GND	126	KEY
127	KEY	128	KEY
129	KEY	130	KEY
131	KEY	132	KEY
133	GND	134	GND
135	PEX_RX2#	136	PEX_TX2#
137	PEX_RX2	138	PEX_TX2
139	GND	140	GND
141	PEX_RX1#	142	PEX_TX1#
143	PEX_RX1	144	PEX_TX1

145	GND	146	GND
147	PEX_RX0#	148	PEX_TX0#
149	PEX_RX0	150	PEX_TX0
151	GND	152	GND
153	PEX_REFCLK#	154	PEX_CLK_REQ#
155	PEX_REFCLK	156	PEX_RST#
157	GND	158	VGA_DDC_DAT
159	JTAG_TDO	160	VGA_DDC_CLK
161	JTAG_TDI	162	VGA_VSYNC
163	JTAG_TCLK	164	VGA_HSYNC
165	JTAG_TMS	166	GND
167	JTAG_TRST#	168	VGA_RED
169	LVDS_UCLK#	170	VGA_GREEN
171	LVDS_UCLK	172	VGA_BLUE
173	GND	174	GND
175	LVDS_UTX3#	176	LVDS_LCLK#
177	LVDS_UTX3	178	LVDS_LCLK
179	GND	180	GND
181	LVDS_UTX2#	182	LVDS_LTX3#
183	LVDS_UTX2	184	LVDS_LTX3
185	GND	186	GND
187	LVDS_UTX1#	188	LVDS_LTX2#
189	LVDS_UTX1	190	LVDS_LTX2
191	GND	192	GND
193	LVDS_UTX0#	194	LVDS_LTX1#
195	LVDS_UTX0	196	LVDS_LTX1
197	GND	198	GND
199	DP_C_L0#	200	LVDS_LTX0#
201	DP_C_L0	202	LVDS_LTX0
203	GND	204	GND
205	DP_C_L1#	206	DP_D_L0#
207	DP_C_L1	208	DP_D_L0
209	GND	210	GND
211	DP_C_L2#	212	DP_D_L1#
213	DP_C_L2	214	DP_D_L1

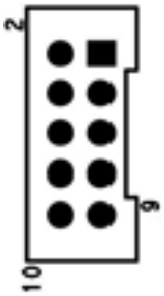
215	GND	216	GND
217	DP_C_L3#	218	DP_D_L2#
219	DP_C_L3	220	DP_D_L2
221	GND	222	GND
223	DP_C_AUX#	224	DP_D_L3#
225	DP_C_AUX	226	DP_D_L3
227	RSVD	228	GND
229	RSVD	230	DP_D_AUX#
231	RSVD	232	DP_D_AUX
233	RSVD	234	DP_C_HPD
235	RSVD	236	DP_D_HPD
237	RSVD	238	RSVD
239	RSVD	240	3V3
241	RSVD	242	3V3
243	RSVD	244	GND
245	RSVD	246	DP_B_L0#
247	RSVD	248	DP_B_L0
249	RSVD	250	GND
251	GND	252	DP_B_L1#
253	DP_A_L0#	254	DP_B_L1
255	DP_A_L0	256	GND
257	GND	258	DP_B_L2#
259	DP_A_L1#	260	DP_B_L2
261	DP_A_L1	262	GND
263	GND	264	DP_B_L3#
265	DP_A_L2#	266	DP_B_L3
267	DP_A_L2	268	GND
269	GND	270	DP_B_AUX#
271	DP_A_L3#	272	DP_B_AUX
273	DP_A_L3	274	DP_B_HPD
275	GND	276	DP_A_HPD
277	DP_A_AUX#	278	3V3
279	DP_A_AUX	280	3V3
281	PRSNT_L#	-	-

J4 / J9 – DDR5 SO-DIMM Interface



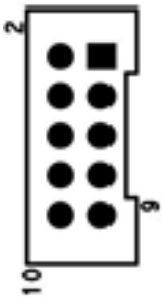
262-Pin DDR5 SODIMM Front						262-Pin DDR5 SODIMM Back					
Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol
1	VIN_BULK	89	V_{SS}	175	CB3_B	2	HSA	90	V_{SS}	176	CB2_B
3	VIN_BULK	91	DQ30_A	177	V_{SS}	4	HSCL	92	DQ31_A	178	V_{SS}
5	RFU	93	V_{SS}	179	DQ0_B	6	HSDA	94	V_{SS}	180	DQ1_B
7	PWR_GOOD	95	CB0_A	181	V_{SS}	8	PWR_EN	96	CB1_A	182	V_{SS}
9	V_{SS}	97	V_{SS}	183	DQ2_B	10	V_{SS}	98	V_{SS}	184	DQ3_B
11	DQ0_A	99	CB2_A	185	V_{SS}	12	DQ1_A	100	DQS4_A_c	186	V_{SS}
13	V_{SS}	101	V_{SS}	187	DM0_B_n	14	V_{SS}	102	DQS4_A_t	188	DQS0_B_c
15	DQ2_A	103	CB3_A	189	V_{SS}	16	DQ3_A	104	V_{SS}	190	DQS0_B_t
17	V_{SS}	105	V_{SS}	191	DQ4_B	18	V_{SS}	106	CS0_A_n	192	V_{SS}
19	DM0_A_n	107	CA0_A	193	V_{SS}	20	DQS0_A_c	108	ALERT_n	194	DQ5_B
21	V_{SS}	109	CA1_A	195	DQ6_B	22	DQS0_A_t	110	CS1_A_n	196	V_{SS}
23	DQ4_A	111	V_{SS}	197	V_{SS}	24	V_{SS}	112	V_{SS}	198	DQ7_B
25	V_{SS}	113	CA2_A	199	DQ8_B	26	DQ5_A	114	CA3_A	200	V_{SS}
27	DQ6_A	115	CA4_A	201	V_{SS}	28	V_{SS}	116	CA5_A	202	DQ9_B
29	V_{SS}	117	V_{SS}	203	DQ10_B	30	DQ7_A	118	V_{SS}	204	V_{SS}
31	DQ8_A	119	CA6_A	205	V_{SS}	32	V_{SS}	120	CA7_A	206	DQ11_B
33	V_{SS}	121	CA8_A	207	DQS1_B_c	34	DQ09_A	122	CA9_A	208	V_{SS}
35	DQ10_A	123	V_{SS}	209	DQS1_B_t	36	V_{SS}	124	V_{SS}	210	DM1_B_n
37	V_{SS}	125	CA10_A	211	V_{SS}	38	DQ11_A	126	CA11_A	212	V_{SS}
39	DQS1_A_c	KEY		213	DQ12_B	40	V_{SS}	KEY		214	DQ13_B
41	DQS1_A_t	127	CA12_A	215	V_{SS}	42	DM1_A_n	128	RFU	216	V_{SS}
43	V_{SS}	129	V_{SS}	217	DQ14_B	44	V_{SS}	130	V_{SS}	218	DQ15_B
45	DQ12_A	131	CK0_A_t	219	V_{SS}	46	DQ13_A	132	CK1_A_t	220	V_{SS}
47	V_{SS}	133	CK0_A_c	221	DQ16_B	48	V_{SS}	134	CK1_A_c	222	DQ17_B
49	DQ14_A	135	V_{SS}	223	V_{SS}	50	DQ15_A	136	V_{SS}	224	V_{SS}
51	V_{SS}	137	CK0_B_t	225	DQ18_B	52	V_{SS}	138	CK1_B_t	226	DQ19_B
53	DQ16_A	139	CK0_B_c	227	V_{SS}	54	DQ17_A	140	CK1_B_c	228	V_{SS}
55	V_{SS}	141	V_{SS}	229	DM2_B_n	56	V_{SS}	142	V_{SS}	230	DQS2_B_c
57	DQ18_A	143	RFU	231	V_{SS}	58	DQ19_A	144	CA12_B	232	DQS2_B_t
59	V_{SS}	145	CA11_B	233	DQ20_B	60	V_{SS}	146	CA10_B	234	V_{SS}
61	DM2_A_n	147	V_{SS}	235	V_{SS}	62	DQS2_A_c	148	V_{SS}	236	DQ21_B
63	V_{SS}	149	CA9_B	237	DQ22_B	64	DQS2_A_t	150	CA8_B	238	V_{SS}
65	DQ20_A	151	CA7_B	239	V_{SS}	66	V_{SS}	152	CA6_B	240	DQ23_B
67	V_{SS}	153	V_{SS}	241	DQ24_B	68	DQ21_A	154	V_{SS}	242	V_{SS}
69	DQ22_A	155	CA5_B	243	V_{SS}	70	V_{SS}	156	CA4_B	244	DQ25_B
71	V_{SS}	157	CA3_B	245	DQ26_B	72	DQ23_A	158	CA2_B	246	V_{SS}
73	DQ24_A	159	V_{SS}	247	V_{SS}	74	V_{SS}	160	V_{SS}	248	DQ27_B
75	V_{SS}	161	CS0_B_n	249	DQS3_B_c	76	DQ25_A	162	CA1_B	250	V_{SS}
77	DQ26_A	163	RESET_n	251	DQS3_B_t	78	V_{SS}	164	CA0_B	252	DM3_B_n
79	V_{SS}	165	CS1_B_n	253	V_{SS}	80	DQ27_A	166	V_{SS}	254	V_{SS}
81	DQS3_A_c	167	V_{SS}	255	DQ28_B	82	V_{SS}	168	CB0_B	256	DQ29_B
83	DQS3_A_t	169	DQS4_B_c	257	V_{SS}	84	DM3_A_n	170	V_{SS}	258	V_{SS}
85	V_{SS}	171	DQS4_B_t	259	DQ30_B	86	V_{SS}	172	CB1_B	260	DQ31_B
87	DQ28_A	173	V_{SS}	261	V_{SS}	88	DQ29_A	174	V_{SS}	262	V_{SS}

J5 – Internal COM1 Serial Port



Pin #	Signal Description		
	RS-232	RS-422	RS-485
1	232_DCD#	TX D-	DATA-
2	232_DSR#	--	--
3	232_SIN	TX D+	DATA+
4	232_RTS#	--	--
5	232_SOUT	RX D+	--
6	232_CTS#	--	--
7	232_DTR#	RX D-	--
8	232_RI#	--	--
9	GND	GND	GND
10	NC / +5VS	NC / +5VS	NC / +5VS

J6 /J7 /J8 – Internal COM2 / 3 / 4 Serial Port



Pin #	Signal Description	Pin #	Signal Description
2	232_DSR#	1	232_DCD#
4	232_RTS#	3	232_SIN
6	232_CTS#	5	232_SOUT
8	232_RI#	7	232_DTR#
10	NA / +5VS	9	GND

J10 / J19 – Internal USB 2.0 Pin Header

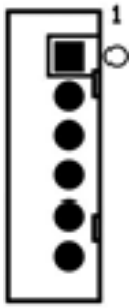
Pin #	Signal Description
1	+5VSB
2	Data -
3	Data +
4	GND
5	GND

J11 – LVDS Interface

Pin #	Signal Description	Pin #	Signal Description
39	GND	40	GND
37	Ground	38	GND
35	A_TXD3+	36	B_TXD3+
33	A_TXD3-	34	B_TXD3-
31	GND	32	GND
29	A_CLK+	30	B_CLK+
27	A_CLK-	28	B_CLK-
25	GND	26	GND
23	A_TXD2+	24	B_TXD2+
21	A_TXD2-	22	B_TXD2-

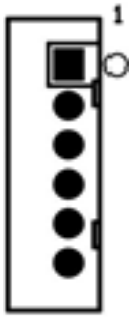
19	GND	20	GND
17	A_TXD1+	18	B_TXD1+
15	A_TXD1-	16	B_TXD1-
13	GND	14	GND
11	A_TXD0+	12	B_TXD0+
9	A_TXD0-	10	B_TXD0-
7	GND	8	GND
5	GND	6	GND
3	+LVDS PWR	4	+LVDS PWR
1	+LVDS PWR	2	+LVDS PWR

J12– LCD Inverter Wafer Header



Pin #	Signal Description
1	+12VS
2	+12VS
3	Backlight Control
4	Backlight Enable
5	GND
6	GND

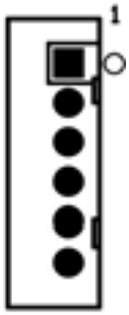
J13 – Internal USB 2.0 Pin Header for PCT Touch



Pin #	Signal Description
1	+5VSB
2	+5VSB

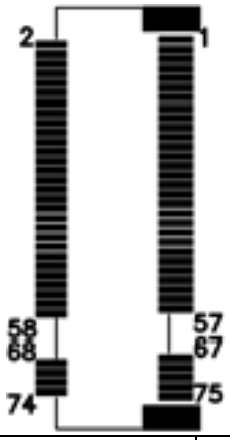
3	Data -
4	Data +
5	GND
6	GND

J14 / J17 – Internal USB 2.0 Pin Header



Pin #	Signal Description
1	+5VSB
2	+5VSB
3	Data -
4	Data +
5	GND
6	GND

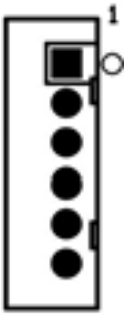
J15 – M.2 M-KEY Connector



Pin #	Signal Description	Pin #	Signal Description
1	GND	2	+3.3VS
3	GND	4	+3.3VS
5	PCIE0_RXN	6	NC
7	PCIE0_RXP	8	NC
9	GND	10	RSVD
11	PCIE0_TXN	12	+3.3VS

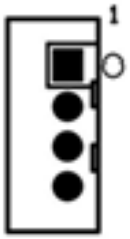
13	PCIE0_TXP	14	+3.3VS
15	GND	16	+3.3VS
17	PCIE1_RXN	18	+3.3VS
19	PCIE1_RXP	20	NC
21	GND	22	NC
23	PCIE1_TXN	24	NC
25	PCIE1_TXP	26	NC
27	GND	28	NC
29	PCIE2_RXN	30	NC
31	PCIE2_RXP	32	NC
33	GND	34	NC
35	PCIE2_TXN	36	NC
37	PCIE2_TXP	38	M2_DVESLP
39	GND	40	NC
41	PCIE3_RXN	42	NC
43	PCIE3_RXP	44	NC
45	GND	46	NC
47	PCIE3_TXN	48	NC
49	PCIE3_TXP	50	PLT_RST#
51	GND	52	NC
53	PCIE_CLKN	54	PCIE_WAKE#
55	PCIE_CLKP	56	NC
57	GND	58	NC
59	NA	60	NA
61	NA	62	NA
63	NA	64	NA
65	NA	66	NA
67	NC	68	RSVD / SUS_CLK
69	NC	70	+3.3VS
71	GND	72	+3.3VS
73	GND	74	+3.3VS
75	GND		

J16 – Internal USB 2.0 Pin Header for Webcam



Pin #	Signal Description
1	+5VSB
2	+5VSB
3	Data -
4	Data +
5	GND
6	GND

J18 – SYS PWM FAN



Pin #	Signal Description
1	SYS_PWM
2	SYS_RPM
3	+12VS
4	GND

J20 – M.2 B_M-KEY Socket

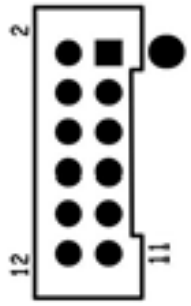
Pin #	Signal Description	Pin #	Signal Description
1	NA	2	+3.3V
3	GND	4	+3.3V
5	GND	6	NA
7	USBD+	8	NA

9	USBD-	10	NA
11	NA	12	**B-key**
13	**B-key**	14	**B-key**
15	**B-key**	16	**B-key**
17	**B-key**	18	**B-key**
19	**B-key**	20	NA
21	NA	22	NA
23	NA	24	NA
25	NA	26	NA
27	GND	28	NA
29	PERN1	30	NA
31	PERP1	32	NA
33	GND	34	NA
35	PETN1	36	NA
37	PETP1	38	DEVSLP
39	GND	40	SMBCLK
41	PERP0	42	SMBDATA
43	PERN0	44	NA
45	GND	46	NA
47	PETN0	48	NA
49	PETP0	50	PERST#
51	GND	52	CLKREQ#
53	REFCLKN	54	PEWAKE#
55	REFCLKP	56	NA
57	GND	58	NA
59	**M-key**	60	**M-key**
61	**M-key**	62	**M-key**
63	**M-key**	64	**M-key**
65	**M-key**	66	**M-key**
67	NA	68	SUSCLK (32kHz)
69	PEDET	70	+3.3V
71	GND	72	+3.3V
73	GND	74	+3.3V
75	NA		

J21 – Battery Socket

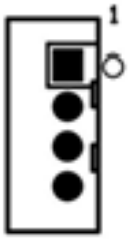
Pin #	Signal Description
1	+BAT
2	GND

J22 – GPIO Connect



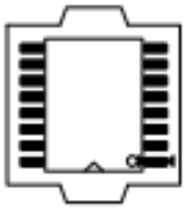
Pin #	Signal Description	Pin #	Signal Description
2	GEN_GPI1	1	GEN_GPO1
4	GEN_GPI2	3	GEN_GPO2
6	GEN_GPI3	5	GEN_GPO3
8	GEN_GPI4	7	GEN_GPO4
10	+5V	9	+5V
12	GND	11	GND

J23 – EC Debug Pin Header



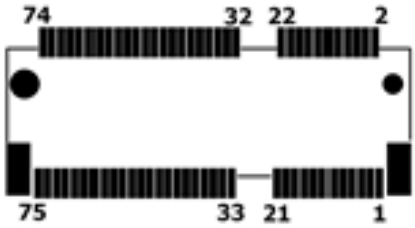
Pin #	Signal Description
1	+3.3VS
2	DBG_SMBCLK
3	DBG_SMBDATA
4	GND

J24 – BIOS Socket



Pin #	Signal Description	Pin #	Signal Description
1	HOLD	9	WP
2	+3.3VSB	10	GND
3	RESET#	11	Reserved
4	Reserved	12	Reserved
5	Reserved	13	Reserved
6	Reserved	14	Reserved
7	CS0#	15	MOSI
8	MISO	16	SCLK

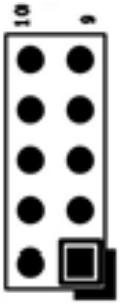
J25 – M.2 E_KEY



Pin #	Signal Description	Pin #	Signal Description
1	GND	2	+3.3V
3	USB_D+	4	+3.3V
5	USB_D-	6	RSVD
7	GND	8	NC
9	NC	10	NC
11	NC	12	NC
13	NC	14	NC
15	NC	16	RSVD
17	NC	18	GND
19	NC	20	NC
21	NC	22	NC
23	NC	24	NA
25	NA	26	NA
27	NA	28	NA
29	NA	30	NA
31	NA	32	NC
33	GND	34	NC
35	PETP0	36	NC
37	PETN0	38	CLINK Reset
39	GND	40	CLINK DATA
41	PERP0	42	CLINK CLK
43	PERN0	44	RSVD

45	GND	46	RSVD
47	REFCLKP0	48	RSVD
49	REFCLKN0	50	NC / SUSCLK
51	GND	52	PERST0#
53	CLKREQ0#	54	BT_DISABLE2#
55	PEWAKE0#	56	W_DISABLE1#
57	GND	58	NC
59	NC	60	NC
61	NC	62	NC
63	GND	64	NC
65	NC	66	RSVD
67	NC	68	RSVD
69	GND	70	RSVD
71	NC	72	+3.3V
73	NC	74	+3.3V
75	GND		

J26 – JTAG For EC

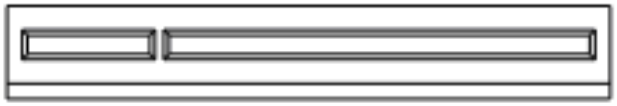


Pin #	Signal Description	Pin #	Signal Description
10	Reserved	9	GND
8	Reserved	7	RST#
6	Reserved	5	+3.3V
4	C2D	3	GND
2	GND	1	+3.3V

J27 – DICOM Connect

Pin #	Signal Description
1	ASIC_RST#
2	+3.3VS
3	+3.3VS
4	CSC_DET#
5	SCK_OUT
6	SDA_OUT
7	GND
8	SPI_PROG
9	SPI_CLK
10	SPI_DO
11	SPI_DI
12	SPI_CS

J28 – PCIE x4 Connector



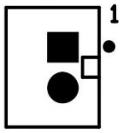
Pin #	Side B	Side A	Pin #	Side B	Side A
1	+12VS	RSVD	17	RSVD	RXN0
2	+12VS	+12VS	18	GND	GND
3	RSVD	+12VS	19	TXP1	RSVD
4	GND	GND	20	TXN1	GND
5	SMBCLK	RSVD	21	GND	RXP1
6	SMBDATA	RSVD	22	GND	RXN1
7	GND	RSVD	23	TXP2	GND
8	+3.3VS_PCIE	RSVD	24	TXN2	GND
9	RSVD	+3.3VS_PCIE	25	GND	RXP2
10	+3.3VSB	+3.3VS_PCIE	26	GND	RXN2
11	PCIE_WAKE#	PLT_RST#	27	TXP3	GND

12	PCIE_CLKRQ#	GND	28	TXN3	GND
13	GND	CLKP	29	GND	RXP3
14	TXP0	CLKN	30	RSVD	RXN3
15	TXN0	GND	31	RSVD	GND
16	GND	RXP0	32	GND	RSVD

J29 – CAP Front Bezel Button

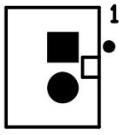
Pin #	Signal Description
1	+5VS_ALWAYS
2	+3.3V_ALWAYS
3	KP_SCL
4	KP_SDA
5	PWR_LED#
6	KP_P_LED#
7	SATA_LED#
8	GND
9	GND

J30 – Power Switch connect



Pin #	Signal Description
1	Power ON
2	GND

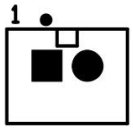
J31, J44 – Reading Light Connector



Pin #	Signal Description

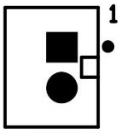
1	+12VSB
2	GND

J32, J33 – RIGHT / LEFT CH for Speaker.



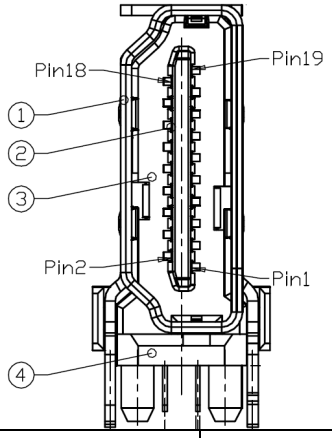
Pin #	Signal Description	
	J33 (LEFT CH)	J32 (RIGHT CH)
1	LOUT+	ROUT+
2	LOUT-	ROUT-

J34 – Internal MIC Connect



Pin #	Signal Description
1	MIC_R/ MIC_L
2	GND

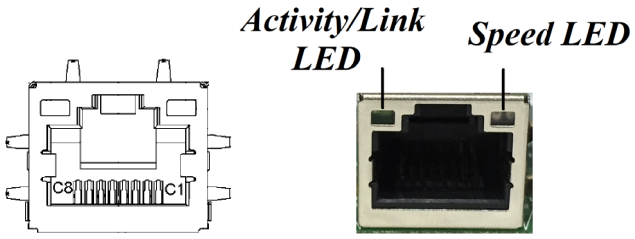
J35 – HDMI Video In



Pin #	Signal Description	Pin #	Signal Description
1	HDMI_TMDSP2	2	GND
3	HDMI_TMDSN2	4	HDMI_TMDSP1
5	GND	6	HDMI_TMDSN1
7	HDMI_TMDSP0	8	GND
9	HDMI_TMDSN0	10	HDMI_TMDS_CLKP
11	GND	12	HDMI_TMDS_CLKN

13	HDMI_CRLS_CEC	14	HDMI_CRLS_RSV
15	HDMI_CRLS_SCL	16	HDMI_CRLS_SDA
17	GND	18	+5V_CRLS_HDMI
19	HDMI_CRLS_HPD		

J36 / J37 –External RJ45 Ethernet Port



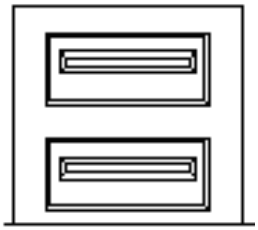
Activity/Link LED

Status	Description
OFF	No Link
Blinking	Data Activity
ON	Link

Speed LED

Status	Description
OFF	10 Mbps
Green	100 Mbps
Orange	1 Gbps

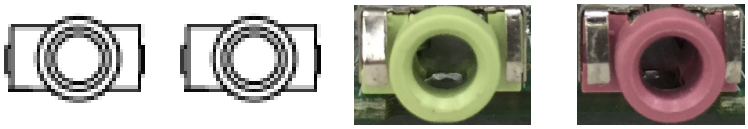
J38,J39 – USB3.0 Port



Pin #	Signal Description	Pin #	Signal Description
1	+5V	10	+5V
2	Data1-	11	Data2-
3	Data1+	12	Data2+
4	GND	13	GND
5	SSRX1-	14	SSRX2-
6	SSRX1+	15	SSRX2+

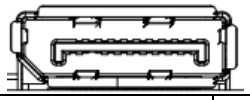
7	GND	16	GND
8	SSTX1-	17	SSTX2-
9	SSTX1+	18	SSTX2+

J40 / J41 – External Audio Phone Jack



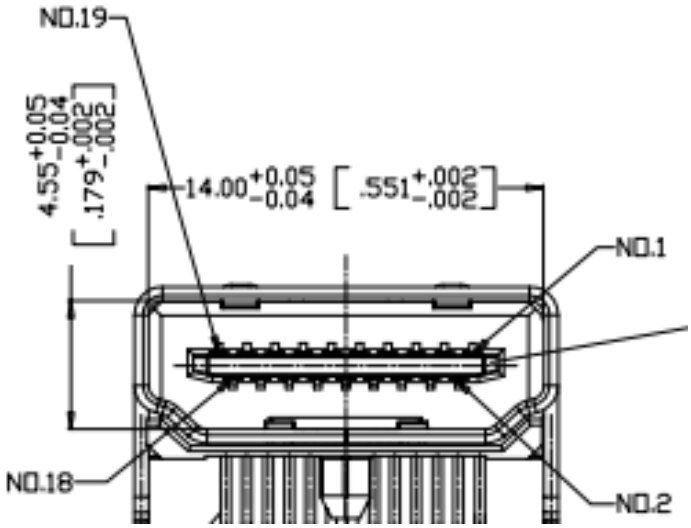
Audio Jack	Signal Description
J40	Line Out (stereo) Green
J41	Microphone (stereo) Pink

J42 – DisplayPort Interface



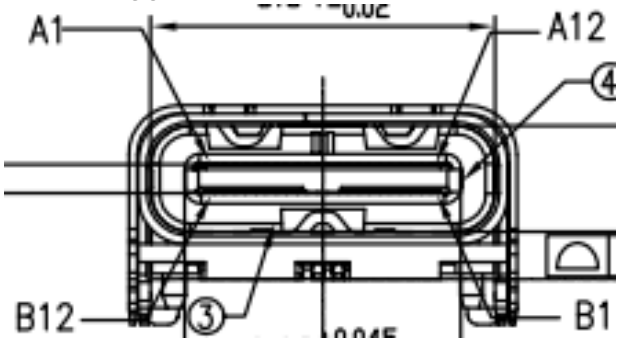
Pin #	Signal Description	Pin #	Signal Description
1	ML_LANE0+	11	GND
2	GND	12	ML_LANE3-
3	ML_LANE0-	13	CONFI G1
4	ML_LAN1+	14	CONGI G2
5	GND	15	AUX_CH+
6	ML_LAN1-	16	GND
7	ML_LANE2+	17	AUX_CH-
8	GND	18	HOT PLUG
9	ML_LANE2-	19	RETURN
10	ML_LANE3+	20	+3.3VS

J43 – HDMI CON



Pin #	Signal Description	Pin #	Signal Description
1	HDMI_CRLS_LANE2_P	2	GND
3	HDMI_CRLS_LANE2_N	4	HDMI_CRLS_LANE1_P
5	GND	6	HDMI_CRLS_LANE1_N
7	HDMI_CRLS_LANE0_P	8	GND
9	HDMI_CRLS_LANE0_N	10	HDMI_CRLS_CLK_P
11	GND	12	HDMI_CRLS_CLK_N
13	NA	14	NA
15	HDMI_CRLS_SCL	16	HDMI_CRLS_SDA
17	GND	18	+5V_CRLS_HDMI
19	HDMI_CRLS_HPD		

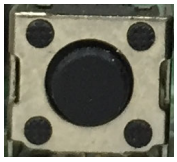
J45 – Type C CON



Pin #	Signal Description	Pin #	Signal Description
A1	GND	B1	GND
A2	TYPEC_TX1+	B2	TYPEC_TX2+
A3	TYPEC_TX1-	B3	TYPEC_TX2-
A4	+VBUS	B4	+VBUS
A5	CC1	B5	CC2

A6	TYPEC_USB+	B6	TYPEC_USB+
A7	TYPEC_USB-	B7	TYPEC_USB-
A8	SBU1	B8	SBU2
A9	+VBUS	B9	+VBUS
A10	TYPEC_RX2-	B10	TYPEC_RX1-
A11	TYPEC_RX2+	B11	TYPEC_RX1+
A12	GND	B12	GND
MT1	GND	MT2	GND
MT3	GND	MT4	GND
MT5	GND	MT6	GND
MT7	GND	MT8	GND

J46 – Reset Button



Pin #	Signal Description
1	SYS_RESET#
2	GND
3	GND
4	GND

PCIE X4 Golden Finger for ISO Interface

Pin #	Side B	Side A	Pin #	Side B	Side A
1	ISOUSB_SELECT	GND	17	GND	LPC_FRAME#
2	GND	GND	18	GND	LPC_AD0
3	PCIE1_RXN	NC	19	+3.3VSB	LPC_AD1
4	PCIE1_RXP	NC	20	+3.3VSB	LPC_AD2
5	GND	GND	21	+5VSB	LPC_AD3
6	PCIE1_TXN	NC	22	+5VSB	USB_OC#
7	PCIE1_TXP	NC	23	+5VSB	COM_GPO1
8	GND	GND	24	+5VSB	COM_GPO2
9	PCIE1_CLKN	USBPP	25	+5VSB	COM_GPO3
10	PCIE1_CLKP	USBPN	26	GND	GND
11	GND	GND	27	GND	+3.3VS
12	PCIE_WAKE#	USB_PWREN	28	GND	+3.3VS
13	PCIE1_CLKRQ#	GND	29	GND	GND

14	PLT_RST#	LPC_UART24M	30	GND	GND
15	GND	GND	31	GND	GND
16	GND	SERIRQ	32	ISO_DET#	GND