User Manual

StealthTouch-M5 with ATOM models

For StealthTouch-M5 system with Part Number:
"EM……."
"EA……."
"EQ……."

If you need further assistance, use one of the following:
Website:
http://www.pioneerpos.com
(Download VGA, Network, Audio, Touch screen, & OPOS drivers. Obtain RMA Forms)

Pioneer POS Support line:
Call (909) 468-9757 Ext. 172

Product by

PioneerPOS, INC.
www.pioneerpos.com
888.468.9757

Important Note

1) This manual is intended for StealthTouch-M5 system with Serial Number starts with “5M”.
2) This manual is intended for StealthTouch-M5 system with Part Number:
“EM…….”
“EA…….”
“EQ…….”

Disclaimer

Information in this document is subject to change without notice. PioneerPOS shall not be liable for technical or editorial errors in this document.

Target Audience

This Manual is written for technically qualified personnel. It is not intended for general audiences.

Warranty Exclusions

The warranty will not apply to damages caused by:
Unauthorized modification or abuse.
Improper or inadequate maintenance by customer.

Conventions

The following conventions are used in this manual:

[Warning]
A WARNING message indicates a potential for personal injury or death.

[Caution]
A CAUTION message indicates potential damage to hardware or loss of data

[Note]
A NOTE contains additional important information to help you in servicing the system.

Table of Contents

Introduction

PioneerPOS StealthTouch-M5 system is a touch screen system that is a perfect fit for space-constrained applications such as restaurant, hospitality, information service, medical, and the likes. PioneerPOS manufactures All-in-One touch screen systems with built-in PC, as well as touch monitor with different sizes.

About this guide

This manual is intended to be use as a reference for field service as well as workshop repair. It is prepared to our best to represent the current version of our production. In our effort to continuously our product, there may be changes that are not represented in this manual. Please contact us directly if further assistance is required.

Please have the Serial Number and Part Number Ready before contacting our support line so they can assist you efficiently.

System Specification

Display	15” LCD, Active matrix TFT, 1024 x 768
Touch Screen Option	Resistive, Intellitouch SAW, Infrared, 3M Capacitive
Processor	Intel Atom 1.6GHz
Memory	512MB, Maximum memory support: 2GB SODIMM
Storage	Hard Drive, Solid-state Disk, or Compact Flash
CD/DVD	Internal (optional)
Operating System	XP Prof, WePOS, POS Ready, XP embedded, Windows 7, Linux
Network/Ethernet	10/100/1000 BaseT
Wi-Fi (wireless)	RF 802.11 a/g/n (optional)
Serial Port	4
USB 2.0	6
PoweredUSB, +12 volts	1
PoweredUSB, +24 volts	1
Parallel Port	Optional
Cash Drawer Port	1 (can be connected to 2 cash drawer with adapter cable)
Compact Flash Reader	Optional
Speakers	2 Watts, Stereo (optional)
Mounting Options	Standard: Desktop Base Option: Wall or VESA mount (please call for part#)
Security Lock	Bolted (4mm screw), or Kensington MicroSaver
Bezel Color	Standard: Black Option: Dark Grey
Dimensions (with Base)	With Base: 14.6 x 13.0 x 10.4 inches / 380 x 373 x 269 mm Wallmount: 14.6 x 12.3 x 3.3 inches / 380 x 312 x 85 mm
Weight	With Base: 22 lbs / 10 kgs Wallmount: 11 lbs / 5 kgs
Operating Temperature	0C to 40C
Operating Humidity	20% to 80%
Power Supply	External, 150W, AC 100-240V
Agency Approvals	FCC A, CE, UL
Built-in Printer (optional)	3” Thermal, 23 lines/sec, 80mm paper Driver: Epson ESC, OPOS
Integrated Add-ons	Magnetic stripe or Barcode slot reader Fingerprint /Biometric reader (DigitalPersona) Rear customer display or 10" LCD Barcode scanner (omni-directional) Proximity RFID reader Privacy Filter

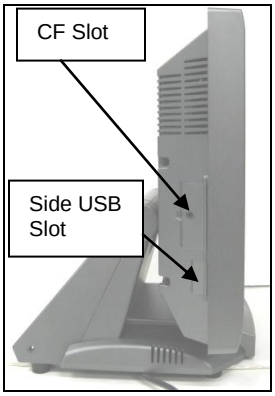
Section A: Getting started with StealthTouch-M5 system

Chapter 1: Identifying controls, ports, and peripherals

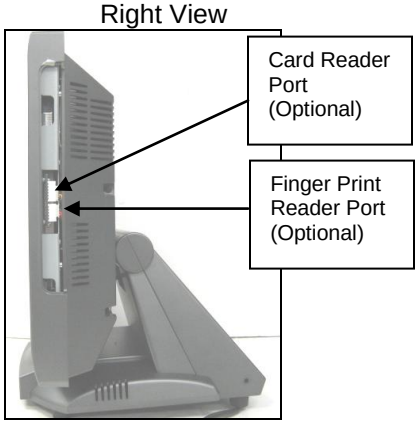
1.1 Identifying controls and ports

Front View

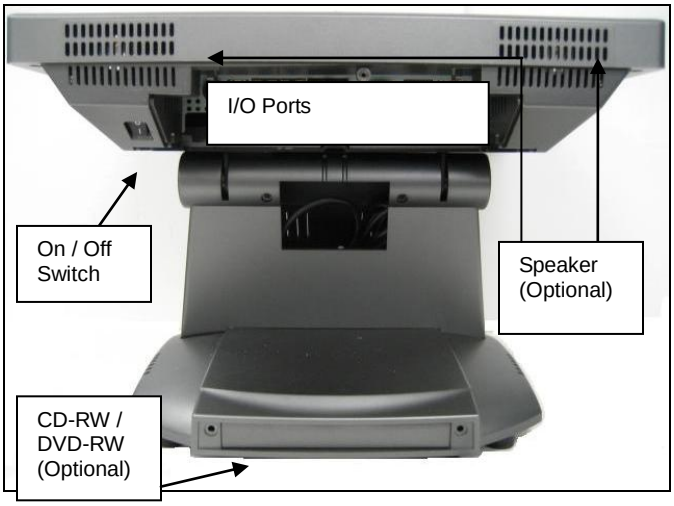
Left View



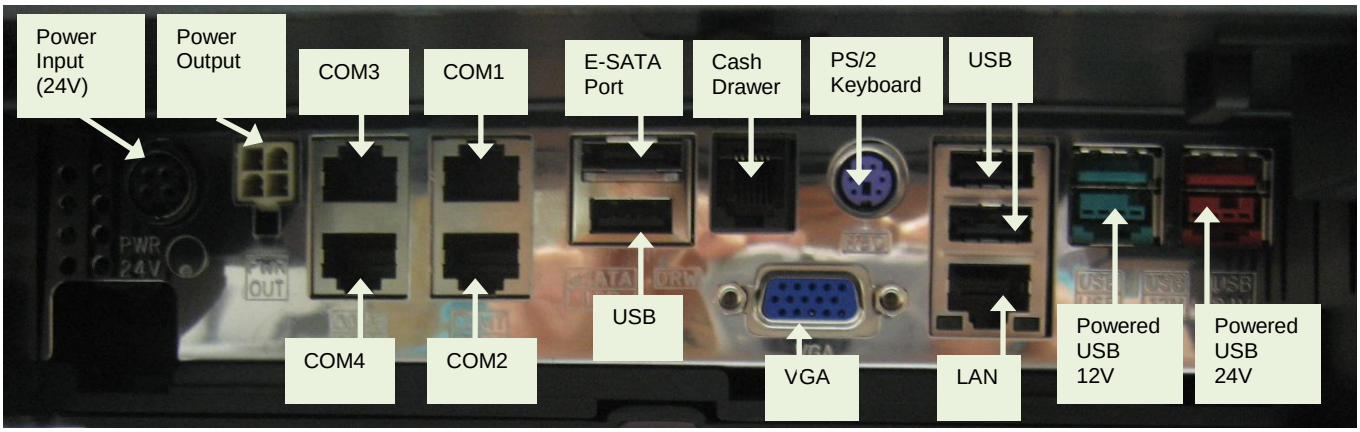
Right View



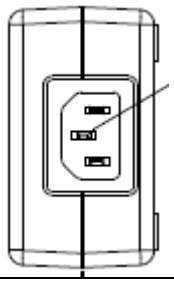
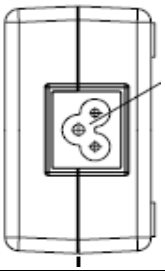
I/O Panel View

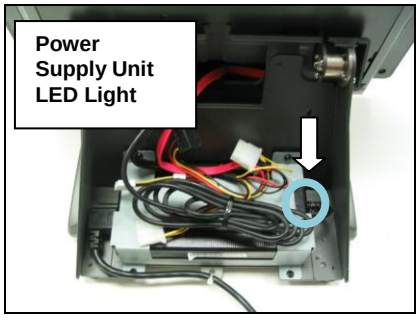


I/O Ports



Power Supply Unit (AC Adapter)

Part Number	Description	Illustration
"STLH-PSFSP150"	Dimension: 171mm x 40mm x 72 mm Output DC Cable Length: 1.8m Power LED : YES (blue) Power Input : AC 100-240V, 2A, 50-60Hz Power Output : DC Power 24V, 5.0A Max Power : 150W	 
"STLH-PSFSP120"	Input AC Socket Type: IEC 320 C6 Type Dimension: 167mm x 65mm x 37mm Output DC Cable Length: 1.8m Power LED : YES (green) Power Input : AC 100-240V, 2A, 50-60Hz Power Output : DC Power 24V, 5.0A Max Power : 120W	 



Common Add-on Peripherals:

MSR (Magnetic Card Reader)
Magnetic card reader, Track 1-2, Keyboard Wedge.
Part Number: 46-D21000

MSR (Magnetic Card Reader) and/or Fingerprint Reader

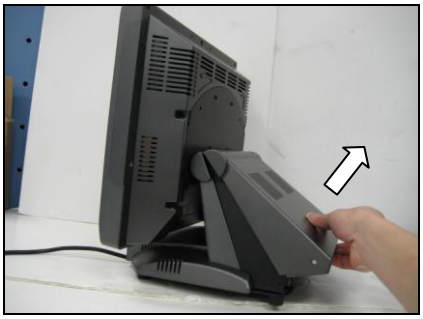
Part Number: 46-D21F01

Customer Display
Integrated Rear Customer Display
Part Number: 46-RARJ-XXX (XXX: Emulation)

Chapter 2: Setting up PioneerPOS system

2.1 Connecting power

If your system comes with a base, you just need to locate the power cord and plug it to a surge protector or uninterruptible power supply (UPS) Unit.
[Caution] Do not plug in the unit directly into a wall outlet. Lightning or power surge may damage the system. Always connect the power through a surge protector or uninterruptible power supply (UPS) unit.

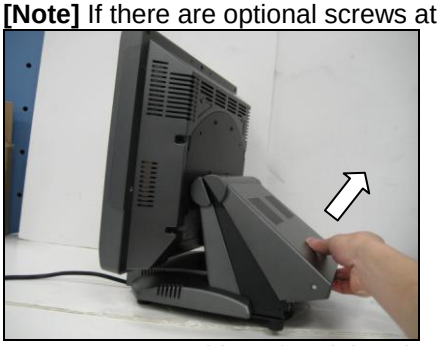


2.2 Connecting cables to I/O panel

1. Tilt the terminal, then remove one *Phillips M3 x 6 Big-Cap Black* (P/N: 10-S3006BB) screw.
2. Pull I/O Port Cover outward.

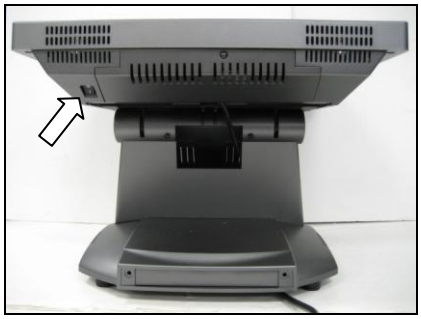

3. Gently pull the base back cover outward.

[Note] If there are optional screws at both sides of the base back cover, remove them.



4. Route cables of peripherals to the front.
5. Connect cables to respective ports.

6. Install I/O Panel Cover and Base Back Cover.
7. Press Power Switch to turn on the system.

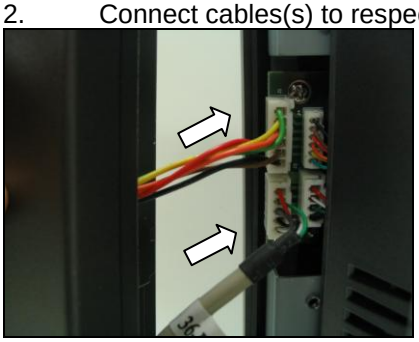
2.3 Connecting network

The LAN network port is located on the I/O Panel. StealthTouch-M5 also comes with optional build-in wireless LAN.

2.4 Installing card reader and/or finger print reader (optional)

1. Remove 2 screws (see circles) to access port for Card/Finger Print reader.

2. Connect cables(s) to respective port(s)



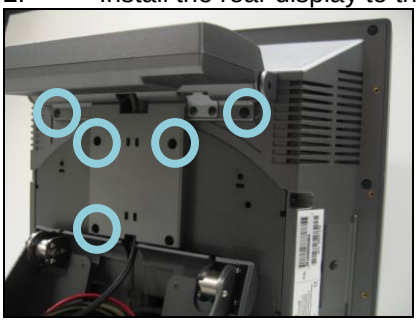
3. Attached the reader to the main unit

4. Secure the readers with two *Phillips M3 x 14 Big-Cap White* (P/N: 10-S3014BW) screws.

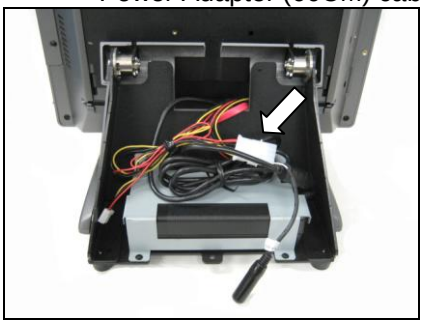
2.5 Installing customer display/rear display (optional)

1. Tilt terminal, and pull the back cover upwards to open.

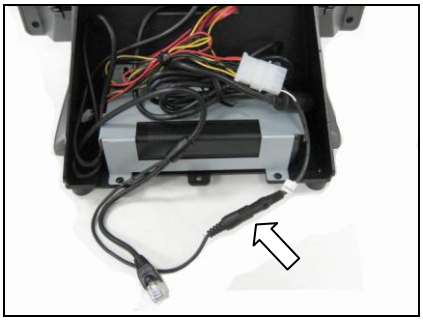
2. Install the rear display to the unit, secure it with five *Phillips M4 x 8 Big-Cap Black* (P/N: 10-S4008BB) screws.



3. Connect the Ext DC Plug Power Cable 12V (P/N: 34-319-122155) to the Molex Connector of SATA & Molex 4-Pin Power Adapter (60CM) cable (P/N: 35-M5-319L60).

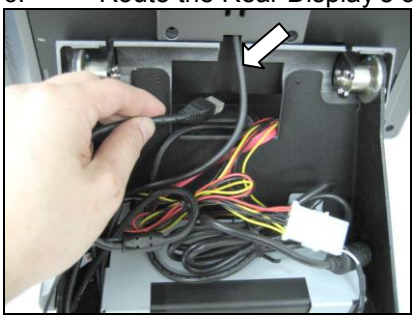


4. Connect the Ext DC Plug Power Cable 12V (P/N: 34-319-122155) to the connector on the Rear Display unit.

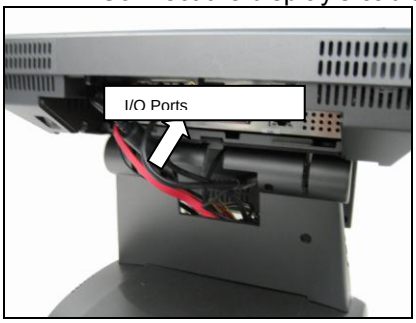


5. Tilt the unit and remove the I/O Panel cover (see arrow).

6. Route the Rear Display's cable to the front

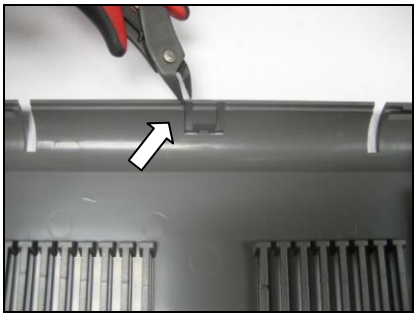


7. Connect the display's cable to COM port.



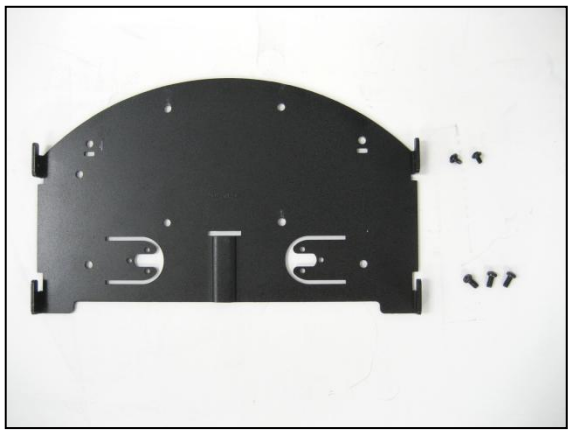
8. Install the I/O Panel Cover back and secure it with one Phillip M3 x 6 Big-Cap Black (P/N: 10-S3006BB) screws.

9. Cut the cable slot on back cover (see arrow).



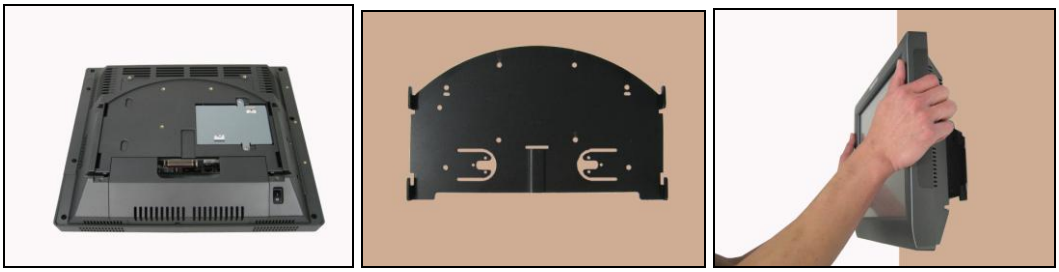
10. Install back cover to the Base.

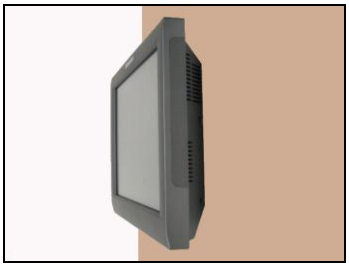
2.6 Installing wall mount/VESA mount (optional, for VESA 75 Pole only)



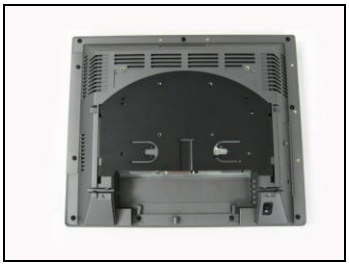
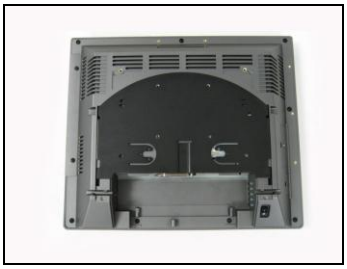
Package Overview:
Wall Mount bracket [#16-M5-101] ----------1 pcs
2. 3x6, Black screw [10-S3006BB] ----------2 pcs
3. 4x8, Black screw [#10-S4008SB] ----------3 pcs

2.6.1 Wall mount





2.6.2 VESA 75 mount

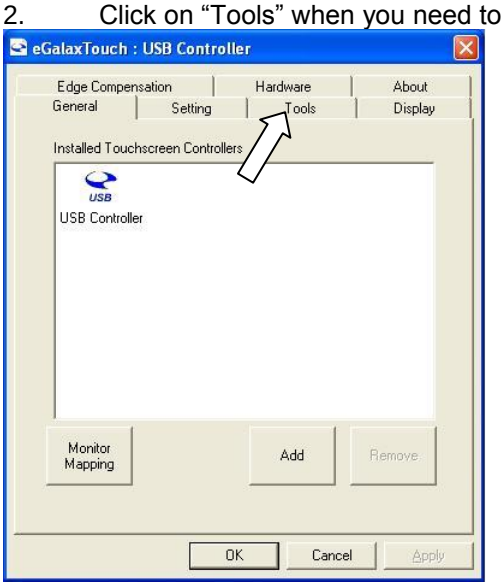

Section B: Using StealthTouch-M5 system

Chapter 3: Touch screen panel

[Note] The instructions below apply for Resistive Type Touch Panel only. For other types of Touch Panels (Infrared, Capacitive, SAW), please contact PioneerPOS Technical Support.

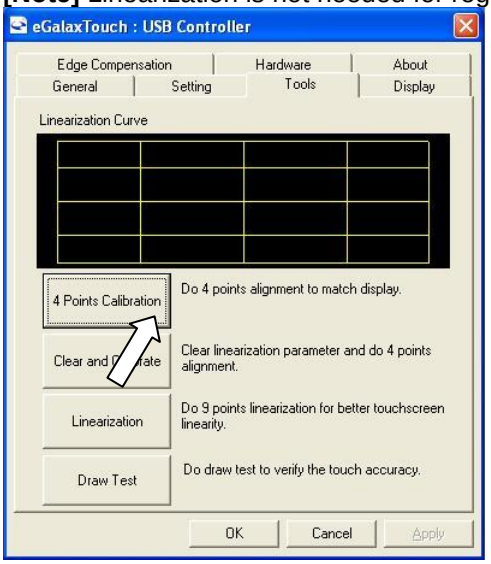
StealthTouth-M5's Touch Screen can be operated with finger or soft stylus. If you have re-installed the driver software, you need to open TouchKit to re-calibrate the touch screen:

1. Go to Start -> All Programs -> eGalaxTouch -> Configure Utility.
2. Click on "Tools" when you need to calibrate.

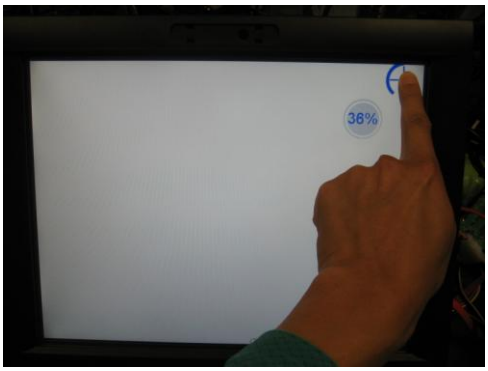


3. Perform 4 point calibration when you see the calibration screen. Use a touch screen stylus pen or your finger to touch each point for about 1-2 seconds until you hear a "beep" sound.

[Note] Linearization is not needed for regular use.



Picture: 4 point calibration screen



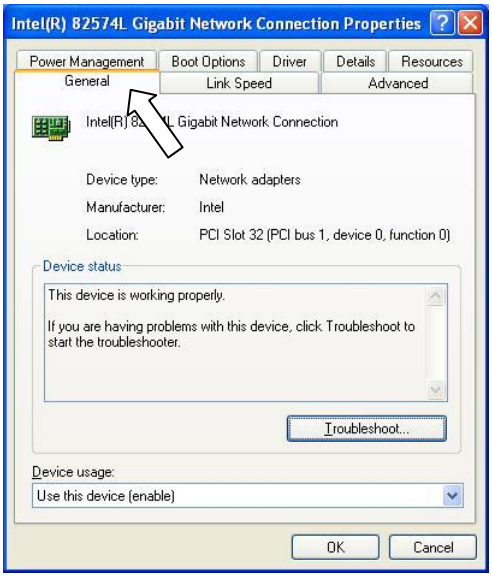
Chapter 4: Network

4.1 Wired network

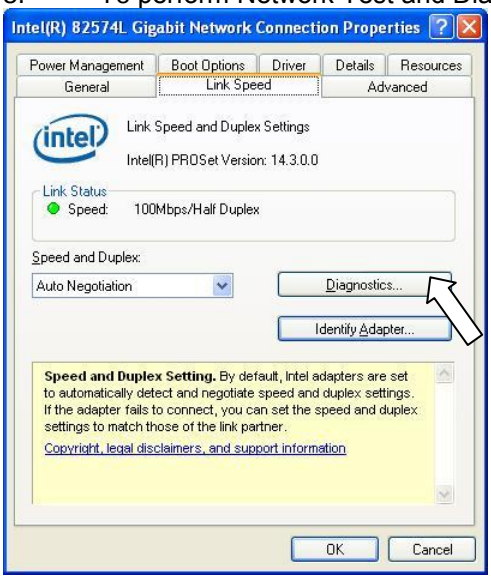
Standard StealthTouch-M5 comes with on-board Intel Network controller. For regular network usage, you just need to plug in the network cable and it should work. In case you need to check your network setting, you can follow the instruction below:

1. Start -> Control Panel -> System
2. Under “Hardware Tab”, select “Device Manager”
3. Expand “Network adapters” selection.

4. In “Intel 82574L Gigabit Network Connection Properties”, you can check items such as: MAC Address, IP Address, Link Status.



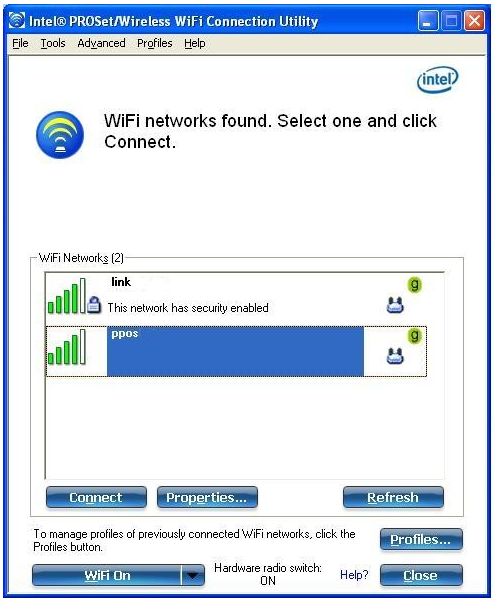
5. To perform Network Test and Diagnostic under the table “Link Speed”. Then, click on “Diagnostics”.



4.2 Wireless network

4.2.1 For system installed with Intel MiniPCI/MiniPCI-E wireless card

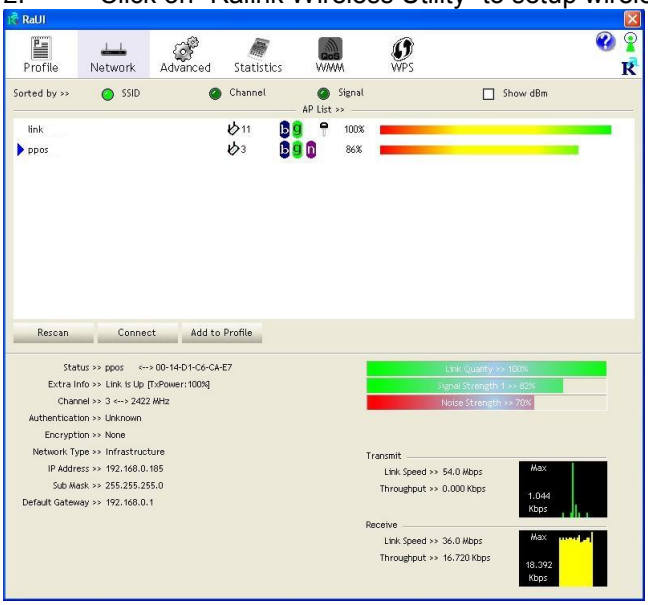
1. Go to Start -> Program -> Intel PROset Wireless.
2. Click on “Intel PROset Wireless” to setup wireless utility.



3. You can also access “Intel PROSet Wireless Utility” by double clicking the “Intel PROSet Wireless Utility” task tray icon on the notification area on taskbar (see picture below). The icon gives us visual indication of the current wireless connection state.

4.2.2 For system installed with Qcom wireless adapter with RAlink chipset

1. Go to Start -> Program -> Ralink Wireless.
2. Click on “Ralink Wireless Utility” to setup wireless utility.



3. You can also access “Ralink Wireless Utility” by double clicking the “RA” task tray icon on the notification area on taskbar (see picture below). The icon gives us visual indication of the current wireless connection state.

Chapter 5: Serial port (RS232, COM ports)

5.1 Serial port location and pin assignment

StealthTouch-M5 comes with four RS232 Serial port on I/O Panel. The serial ports are using 8-Pin RJ45 connector.

Picture: Serial Port (RS232) Location

I/O Ports

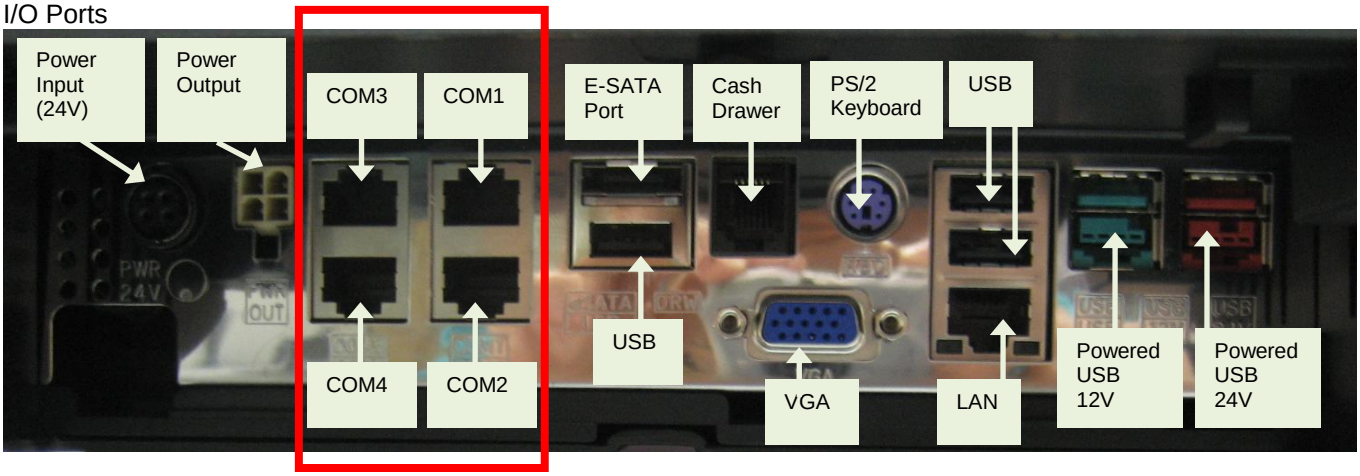
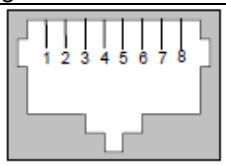


Table: Pin Assignment for RS232 Serial Port



PIN	Serial Port Signal	Description
1	DCD	Data Carrier detect
2	RX	Receive data
3	TX	Transmit data
4	DTR	Data Terminal Ready
5	GND	Signal Ground
6	DSR	Data Set Ready
7	RTS	Request to send
8	CTS	Clear to send

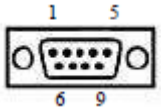
5.2 Using RJ45 to DB9 adapter with serial port/COM port

If you are using devices with DB9 Connector, you can use RJ45 to DB9 adapter. Please see picture below:

Picture: RJ45 Male to DB9 Male adapter (P/N: 30-326F)

Table: Pin assignment for RJ45 Male to DB9 Male adapter (P/N: 30-326F)

RJ45 Male	DB 9 Male

	
Pin 1	Pin 1 (Data carrier detect)
Pin 2	Pin 2 (Receive data)
Pin 3	Pin 3 (Transmit data)
Pin 4	Pin 4 (Data Terminal Ready)
Pin 5	Pin 5 (Signal ground)
Pin 6	Pin 6 (Data set ready)
Pin 7	Pin 7 (Request to send)
Pin 8	Pin 8 (Clear to send)
Pin 9	---

5.3 Power supplied by serial port/COM port

By default, COM Port 2 does not supply power. It can be set to supply +5V or +12V power by modifying jumper setting on JP14 on the System Board. Please see table below for JP14 jumper setting. Power will be available on Pin 1.

[Warning] If you set COM Port 2 with power, remember to put a warning label on the I/O Panel so that users will not plug in other devices to that port.

JP14: COM2 Power Select

JP14	COM 2 DCD PIN	JP14	COM 2 RI PIN
1-3	+5V	2-4	+5V
3-5	+12V	4-6	+12V
7-9	DCD	8-10	RI

[Note] The setting only affects COM2 port on I/O Panel. It does not affect internal I-COM2 Port on the motherboard.

Section C: Using StealthTouch-M5 accessories

Chapter 6: Using Customer Display/Rear Display (optional, part number “46-RORJ” or “46-RARJ” only)

Unless specified, standard Rear Display/Customer Display shipped from PioneerPOS is set to **AEDEX** protocol by default.

6.1 Protocol/emulation supported

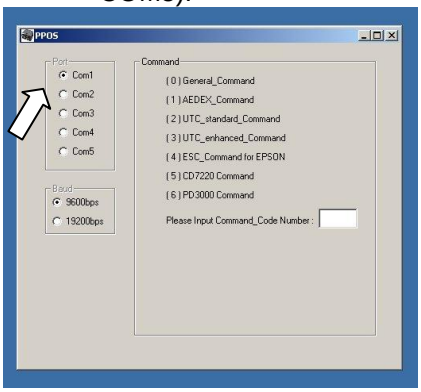
Pioneer POS rear display/customer display supports a few different protocols. The supported protocols are:
General
AEDEX
UTC standard
UTC Enhanced
Epson
CD7220 (CD5220-II)
PD3000

6.2 Reprogram rear display protocol/emulation

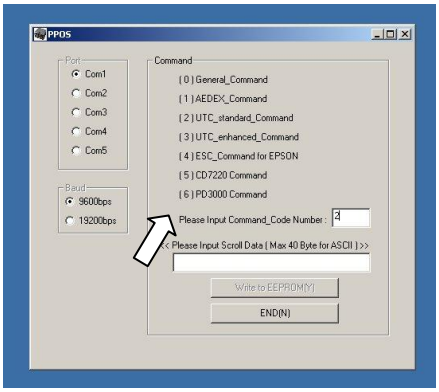
Please obtain the utility to reprogram Rear Display Protocol by contacting PioneerPOS Technical Support.

If you need to re-program the rear display firmware, you may connect the display to COM1/COM2/COM3/COM4 or COM5. After that, run the “PPOS*x*.EXE” (x stands for version number, for example: “PPOS4.exe”) utility. Please follow the steps below when after PPOS program is loaded:

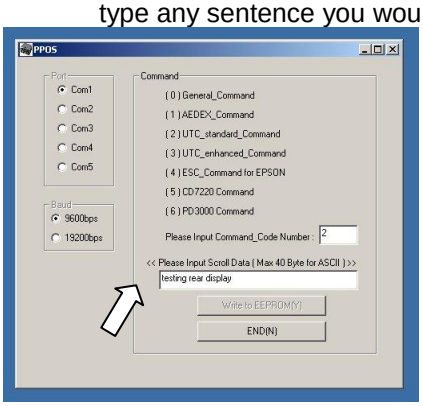
1. Enter the Com port that is connected to your rear display (You can choose COM1, COM2, COM3, COM4, or COM5).



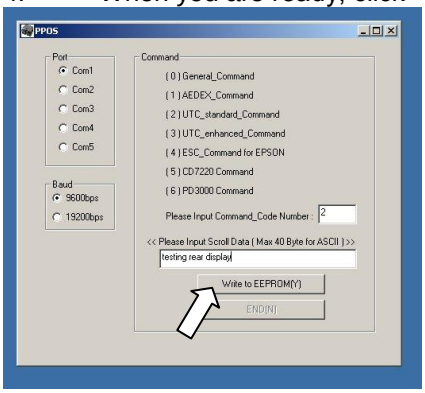
2. Please input Command code number for the protocol that you wish to change to at the text filed after the line “Please Input Command Code Number”.



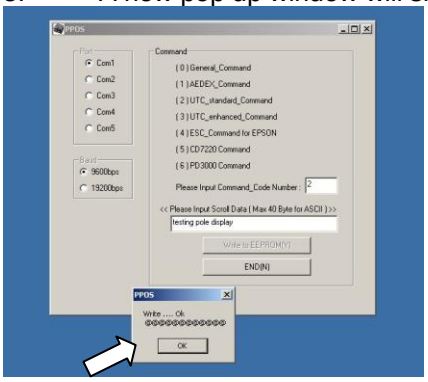
3. On the next field, “Please Input Scroll Data (Max 40 Byte for ASCII)”, you may leave the field blank or you can type any sentence you would like for the scroll data.



4. When you are ready, click “Write to EEPROM(Y)”



5. A new pop up window will show up. The new emulation is being written to the rear display.



6. You may now verify the new emulation by viewing at the Rear Display.

Section D: Solving problems

Chapter 7: Before working on your system

Before performing repairing/replacement procedure, please make sure that you read the safety information with each system or part. Below are some information that is important to your safety and your system's safety:

[Note] Only authorized technician trained by PioneerPOS should repair this system. Damage due to servicing not authorized by PioneerPOS is not covered by your warranty. Do not try to repair at the component level such as Printed Circuit Board (PCB), LCD Panel Unit, Inverter board, or Power Supply unit because it may cause safety hazard. Modification of PCB such as motherboard may void the warranty that came with the component and the system.

7.1 Record keeping

1. Keep a paper to record of serial number/part number of units and any changes you made.
2. If you see an error message, write down the exact message on a piece of paper.
3. If you have a digital camera, take a picture of the error message on the system. Some issues may be intermittent.
4. Use a digital camera to take a picture before disassembling the system or removing parts. You will be able to see how the cables are routed. Record the existing jumper setting and connector settings on your system.

7.2 Protecting your own safety

1. Unplug power from AC power source if you need to disassemble the system.
2. Protect your own safety with insulating glove.
3. **[Warning]** To prevent electric shock, DO NOT open up Power Supply Unit, CRT Monitor Unit.

7.3 Protecting your data

1. Make sure that you have backed up important data. You may also create a backup image of your system.
2. You may back up important data on a USB Memory Drive.
3. If you have important system settings such as password, make sure you keep your password in a safe place.

7.4 Removing power source

1. Remove power source before you try to remove any parts.
2. Turn off the system and unplug the power from the wall.
3. Remove any attached device with power connected to them such as LTP Printer, USB Hubs.

7.5 Electrostatic discharge (ESD)

1. **[Caution]** Electrostatic discharge (ESD) could permanently damage the electronic components in your system.
2. Always ground yourself with a wrist grounding strap.
3. Periodically touch an unpainted metal surface to avoid electrostatic discharge.

7.6 Handling cables and connectors

When you need to disconnect cables at COM Port, LAN port, LTP port, VGA port, Power Connector, or connectors on MSR, do not pull the cable itself. Please remove the connector from the socket carefully. If they have a locking tab (LAN port, COM Port), press and hold the plastic locking tab while removing the connector.

When removing the connector on motherboard, look for the location of "Pin1". Make sure that you put the connector back with the same way before removing it to avoid short circuit. You make take a picture of the original connectors with a digital camera before removing it from the System Board.

7.7 Handing components

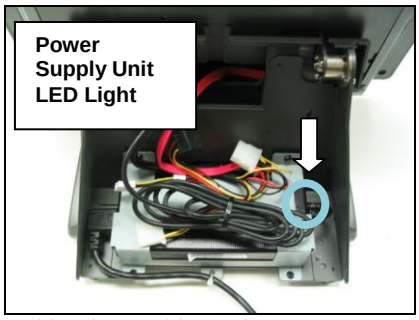
When handling CPU, memory, or hard drive, do not touch the connection surface. Hold the component by its edge and do not hold the contact part.

Chapter 8: StealthTouch-M5 System Problems

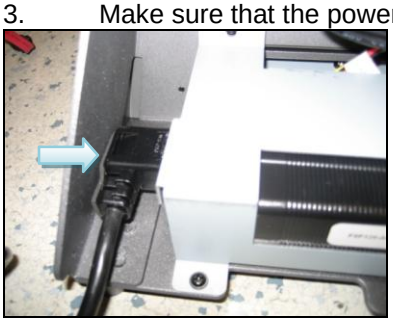
8.1 No power

Problem description: System could not turn on (no POST screen, System Power Indicator LED is off, no sound from Fan or Hard Drive).

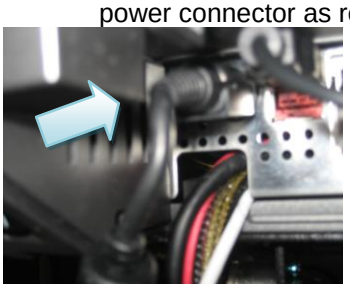
1. Make sure that the power cord coming out from the system is plugged in to the power source (electrical outlet). By pass power strips or power extension or UPS (Uninterrupted Power Supply) to verify that the system turns on. Verify that the electrical outlet is working by connecting it to equipment such as a radio.
2. Check if the LED light on Power Supply Unit is on. If it is not on, double check the connection of power chord to the Power Supply Unit.



3. Make sure that the power cord is plugged in to the power supply block completely.



3. Check if you have the right power adapter. Power adapter part number are *STLH-PSFSP150 or STLH-PSFSP120*.
4. Make sure that the power connector is plugged in to the power port on I/O panel. Unplug and re-connect the power connector as required.



5. A defective hard drive my cause the system to not able to boot. Please refer to “Hard Drive Issue”

8.2 “Invalid System Disk” message

Problem description: While the system is booting, you receive the following error message: *Invaid System disk* *Replace the disk, and then press any key*

1. Double-check the Boot Device Priority under Boot Option in BIOS setup utility.
2. Double-check if connectors on hard-drive are connected properly.
3. The system may be infected with a boot-sector virus. Run a virus check on the hard drive.

4. You may also check if hard drive is detected by pressing F11 when the system is booting up. Make sure that the main hard drive is shown in "Select Boot Device" screen. If hard drive is detected, please try reinstalling or re-imaging O/S to the hard drive.

8.3 System keeps restarting

Problem description: System keeps restarting by itself

1. If the system keeps booting to windows and keep restarting by itself, please check if you have a virus on the system. You may replace another hard drive. Then, you may check for viruses on the original hard drive.

2. If the system keep restarting before it is able to load Operating System, please check if power supply unit is working. If you have another spare power supply unit, please test the system with a spare power supply unit.

8.4 System is on but there is no display on LCD monitor

Problem description: You can hear system boots to OS successfully. You could hear “beeps” when you touch the touch screen panel. The System Power Indicator LED is on. However, the LCD has no display.

1. Please shut down the system and restart the system again.
2. If you could see POST Screen, the problem may be caused by improper setting in Display Driver. Follow the following steps to get into Window’s “safe mode” to uninstall display driver.
   a. You could switch off the system manually by pressing the on/off button.
   b. After that, turn on the system again. Start tapping the F8 key repeatedly.
      [Note: Sometimes computer may display a “keyboard error” message if you begin tapping the F8 key too early. To resolve this issue, please restart the system and try again.]
   c. You will see a screen with “Windows Advanced Option Menu” with dark background after the boot up screen.
   d. Please select “Safe Mode” option by using the up/down key
   e. Then, select “Microsoft Window XP Professional” or your installed Windows operating system if you are given a choice.
   e. Login to Administrator or any user to get on to Desktop.
   f. Click “Yes” when you see a Warning Box with message “Windows is running in safe mode…”
   g. You are now in Safe Mode.
   h. Please uninstall VGA driver in by uninstalling VGA driver from “Add/Remove Programs” or remove VGA driver from Device Manager.
   g. Restart the computer and re-install VGA driver again.
3. If you could not see POST screen, try to connect an external monitor to the VGA connector on I/O Panel. If you could see display from external monitor, the problem could be caused by defective inverter board or LCD. Please contact PioneerPOS Technical Support.

8.5 Software or POS application/program stops responding

Problem description: Certain running program/POS application stops responding. Operating system is still working.

1. Please contact your POS application or program technical support if they freeze up periodically and everything else are working.
2. You may use a keyboard and press <ctrl><alt><delete> to go to “Windows Task Manager”.
3. Click on “Applications” tab.
4. Select the program that is not responding.
5. Click “End Task”. Please understand that when a program stops responding, any work that has not been saved will may be lost when we end a program using task manager.

8.6 Operating system not responding/solid Blue Screen with error message

Problem description: Operating system not responding to touch. You may see a solid blue screen with error message sometimes.

1. If the computer stops responding with finger touch, double-check if the problem is caused by touch panel issue. Try to plug in a USB mouse or keyboard to see if you get the system to work. If you verify that it is Touch Panel issue. Refer to the section “Touch Panel: Touch Panel not responding to finger touch”.
2. Use a digital camera or pen to record any error message. Then, press and hold the power switch for at least 5 seconds. This will shut down the system. Please understand that when a program stops responding, any work that has not been saved will may be lost when we shut down the system.
3. Restart the computer again.
4. A bad sector on hard drive may cause system to freeze or “Blue Screen” if you are using Windows. Try to use Windows Check Disk to check if your system has a bad sector.

   To further diagnose the issue, you may install hard drive’s utilities depending on the brand of the hard drive in the system. For example, if you are using Western Digital hard drive, you may use “Data Lifeguard Tools” available at Western Digital Support Website.

   Western Digital: Western Digital Data Lifeguard Tools for Windows/Dos
   http://support.wdc.com/product/download.asp?level1=6&lang=en
   Select any Hard Drive listed in SATA I, then select “Data Lifeguard Tools” for Windows or DOS.

   Hitachi
   http://www.hitachigst.com/hdd/support/download.htm

   Fujitsu: Windows Diagnostic Tool/DOS Diagnostic Tool
   http://www.fujitsu.com/us/services/computing/storage/hdd/support/utilities.html

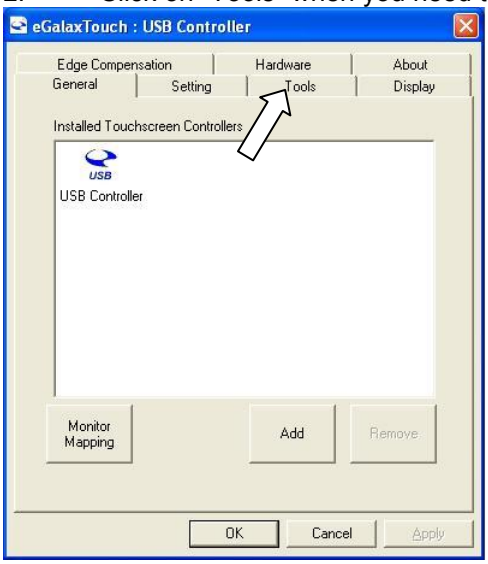
   If you found bad sector on the hard drive, please contact PioneerPOS Technical Support for replacement of hard drive with correct technical spec.

8.7 Touch panel: Touch position is not accurate

Problem description: Touch position is not accurate.

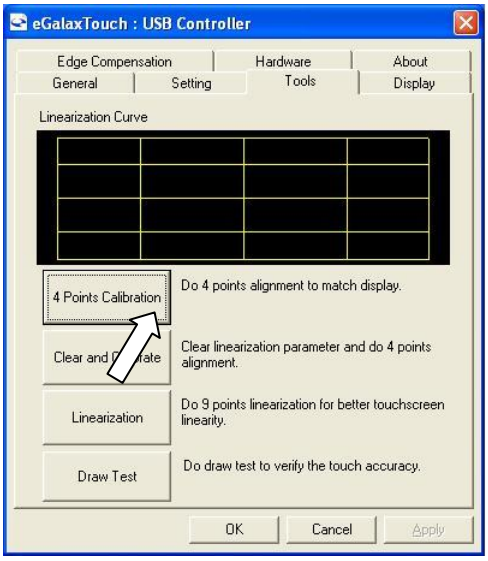
If touch position is not accurate, then try launch Touckit utility to re-calibrate by following the steps below:

1. Go to Start -> All Programs -> eGalaxTouch -> Configure Utility.
2. Click on “Tools” when you need to calibrate.



3. Perform 4 point calibration when you see the calibration screen. Use a touch screen stylus pen or your finger to touch each point for about 1-2 seconds until you hear a “beep” sound.

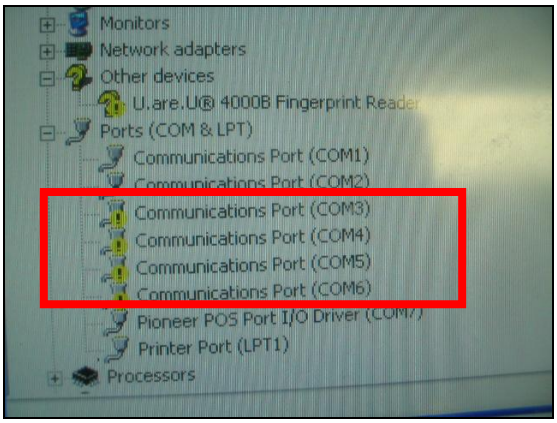
[Note] Linearization is not needed for regular use.



8.8 Touch Panel: Touch panel not responding to finger touch

Problem description: The cursor on Windows is not activated by finger touch.

1. Try to use a keyboard/mouse to test if the system has lockup problem (system stops responding). If you are able to use keyboard/mouse to move the cursor, go to step 2. If you are not able to use mouse/keyboard to activate cursor, the system may have lockup problem. Restart the computer again.
2. Be sure that Touch adapter is detected in touch utility. If touch adapter not detected, press Add on the Touchkit utility screen to add touch adapter.
3. Re-install Touchkit utility driver. TouchKit utility driver can be downloaded from PioneerPOS.com.
4. Since Touch Panel Controller is controlled by Serial Controller on System Board, defective Serial Controller may cause problem on Touch Panel. Please double-check device manager to see if you are having problem on COM Ports. If COM Ports are having problem, you will see yellow exclamation mark in device manager under “communication ports”.



8.9 Touch panel: Cursor always stay on the edge of the screen

Problem description: The touch active area on one side of the screen is pressed.

1. Check for any dirt/dust accumulation on the side of the screen; otherwise re-adjust the touch screen panel.
2. Make sure the active are around the touch panel is not pressed/touched by other objects.

8.10 Touch panel: Touch panel not responding to finger after updating Windows to Service Pack 3 (SP3)

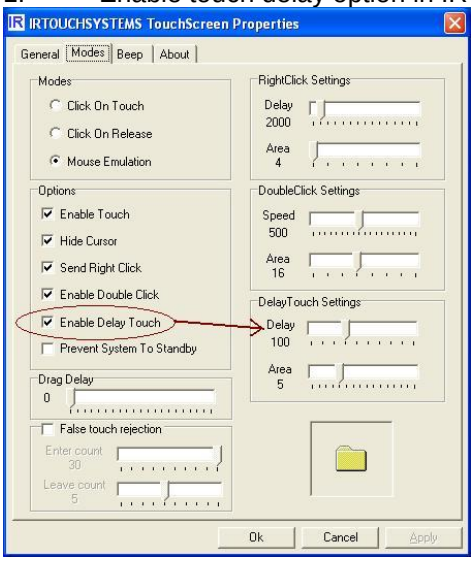
Problem description: After updating your system with Service Pack 3, the touch panel does not respond to finger touch intermittently.

1. Update TouchKit Driver to v5.1.xx

8.11 Touch Panel (IR Touch Panel): IR touch glass cursor responds to sunlight, dither and moving on screen

Problem description: IR touch glass cursor responds to sunlight, dither and moving on screen.

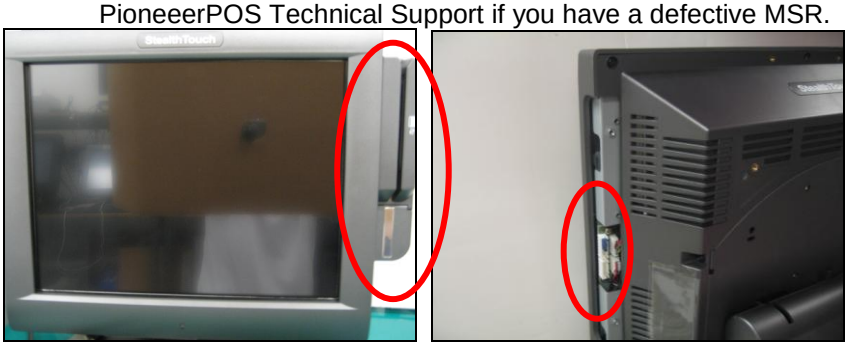
1. Enable touch delay option in IR Touch Screen Control Panel, set touch delay to 100, area to 5.

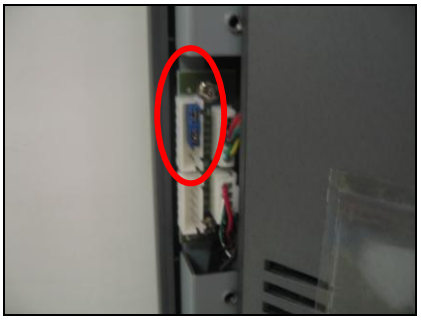


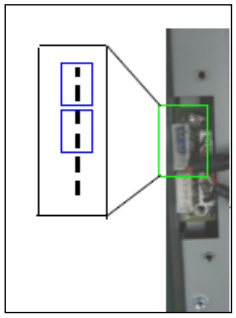
8.12 PS/2 keyboard issue

Problem description: PS/2 keyboard not responding.

1. Try to replace the original keyboard with a different keyboard to make sure that the issue is not caused by a defective keyboard.
2. Since the data from the keyboard passes through MSR, a defective MSR will cause the keyboard to have problem. You may detect this problem by removing MSR and then put 2 jumpers to the top 4 pin. Please contact PioneeerPOS Technical Support if you have a defective MSR.







[Caution] If you put the jumper to the wrong pin, it might restart the system.

8.13 Network: Network disconnects intermittently

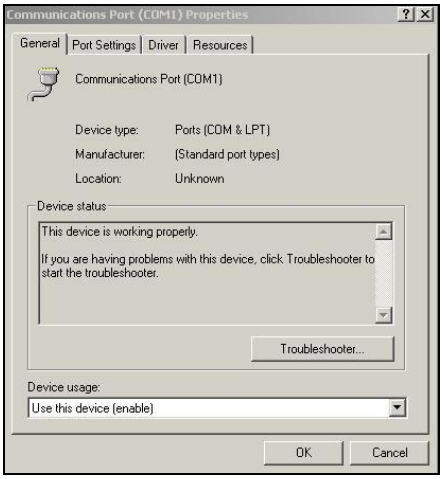
Problem description: Network intermittently disconnected. LAN is not working after system recovers from standby state

1. The network chipset is “Intel 82574L”. You may go to Intel website to search for latest driver or go to the following links to download and reinstall latest driver: http://downloadcenter.intel.com/SearchResult.aspx?lang=eng&ProductFamily=Ethernet+Components&ProductLine=Ethernet+Controllers&ProductProduct=Intel%C2%AE+82574+Gigabit+Ethernet+Controller

8.14 COM port/serial port issue

Problem description: COM port/serial port device not responding

1. Check the connection of the device. Make sure the device is connected to the appropriate port.
2. Check if the particular port is currently being used by other program/printer.
3. Test the COM port with generic printer under Windows.
4. Under Device Manager make sure there is no IRQ address conflict



8.15 LTP port issue

Problem description: LTP port device not responding

1. Check the connection of the device.
2. Make sure that the device is connected to the appropriate port.
3. Check if the particular port is being used by other program (make sure that no two printers are using the same port).

8.16 Built-in speaker issue

Problem description: No sound from built-in speaker

1. Adjust the Windows volume control by clicking the speaker icon in the lower-right corner of your screen. Be sure that the volume is turned up and that the volume control is not set to "mute".
2. Built-in speaker is optional. Check the part number on the FCC label on your system to see if your system is configured with built-in speaker.
3. Try to re-install sound driver.

Chapter 9: StealthTouch-M5 Accessories Problems

9.1 Magnetic Stripe Reader (MSR) issue

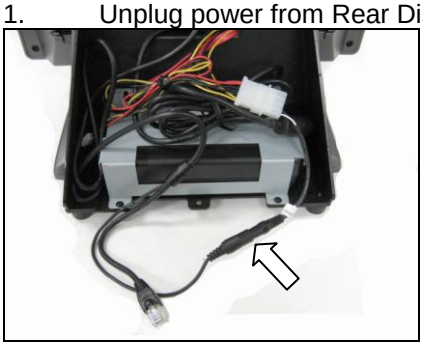
Problem description: Magnetic Stripe Reader (MSR) cannot read cards.

1. Verify the issue by trying to swipe MSR with a different card. Sometimes, the issue may be caused by a defective card.
2. Open notepad program and swipe the card in notepad program to test the card. If you still could not read the card, go to step 3.
3. Apply keyboard patch, visit below link to download keyboard patch. http://www.pioneerpos.com/download/kbdpatchxp.zip
4. Uninstall the MSR from the system and re-plug it.

9.2 Rear Display (Customer Display) issue

Problem description: No display on Rear Display, Rear Display does not display correct message

1. Unplug power from Rear Display and re-connect power again. Check if there is any display on the Rear Display.



2. Make sure that the RJ45 COM port/serial port connector coming out of Rear Display unit is fully inserted to the correct COM Port.
3. Make sure that the POS application/software setting is set to use the correct com port.
4. Refer to **Chapter 8: Using Customer Display/Rear Display (Optional, Part Number "46-R*x*RJ" only)** if you need to change the type of emulation on the Customer Display/Rear Display unit.

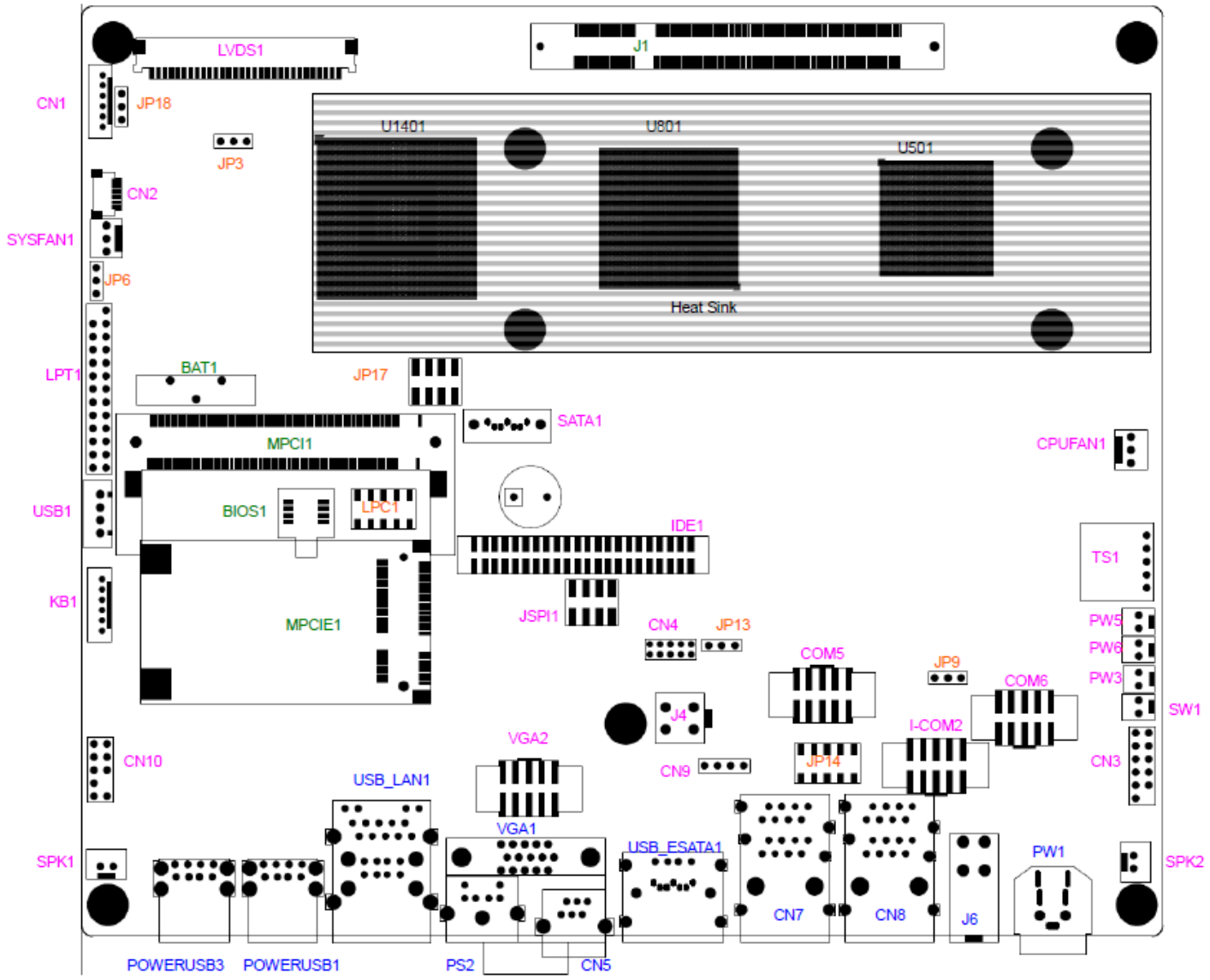
9.3 Bar Code Reader issue

Problem Description: Barcode reader not working

1. Make sure that keyboard terminator is connector to PS/2 connector located on I/O panel

Section E: System Board description

Chapter 10: System board layout



Chapter 11: System Board jumper settings

(Highlighted item indicates factory default setting)

JP3: LVDS1 LCD Power Select

JP3	LCD VDD Power
1-2	3.3V (default)
2-3	5V

JP6: CMOS Clear

JP6	CMOS Clear
1-2	Normal (default)
2-3	Clear CMOS

JP9: COM6 Power Select

JP9	COM6 Power Select
1-2	+3.3V (default)
2-3	DCD

JP14: COM2 Power Select

JP14	COM2 DCD pin	JP14	COM2 RI pin
1-3	+5V	2-4	+5V
3-5	+12V	4-6	+12V
7-9	DCD (default)	8-10	RI (default)

[Note] The setting only affects COM2 port on I/O Panel. It does not affect internal I-COM2 Port on the motherboard.

JP13: COM2 RI Pin Select

JP13	COM2 RI Select
1-2	RI
2-3	GND (default)

JP17: Panel Type Select for LVDS1

JP17 Boot Display Device		
1-2	3-4	Boot Device
Short	Short	N/A
Open	Short	LCD
Short	Open	CRT
Open	Open	LCD+CRT (default)

JP17 Panel Type Setting		
5-6	7-8	Panel Type
Short	Short	1600x1200
Open	Short	1280x1024
Short	Open	1024x768 (default)
Open	Open	800x600

JP18: Brightness Control Logic Select

JP18	Brightness Control Logic
1-2	Invert Mode (default) - For LCD with CCFL backlight
2-3	Normal Mode - For LCD with LED backlight

KB1: PS/2 for MSR

KB1	MSR Connector
None	PS/2 MSR plugged
1-2 3-4	By pass PS/2 keyboard signal if MSR not plugged (default)

Chapter 12: System Board Connectors

The following lists the function each connector on board.

Reference	Description
CN1	CCFL Inverter Connector for LVDS1
CN2	LED Backlight Connector
CN3	Side USB (LED, Power ON, Reset, USB)
CN4	Digital I/O Port
J4	2x2 ATX Power (5V/12V)
J6	2x2 ATX Power (5V/12V)
CN5	Cash Drawer Connector
CN7	COM1, COM2 (RS232)
CN8	COM3, COM4 (RS232)
CN9	RS422/485
CN10	HD Audio Header (w/ Jack Detect)
LVDS1	LVDS Output
KB1	PS/2 KB interface for MSR
PS2	PS/2 Keyboard and Mouse Connector
SW1	Power ON Switch Connector
PW1	Power Jack for +24V Adapter
PW3	+12V
PW5	+5V
PW6	+5V
I-COM2	Internal COM2 (RS232)
COM5	COM5 (RS232)
COM6	COM6 (TTL)
SPK1	Speaker Output (Right)
SPK2	Speaker-Out (Left)
USB1	USB for MSR: USB_P0
SATA1	SATA Connector: SATA0
TS1	5-Wire Touch Panel Connector
VGA1	External VGA Connector
VGA2	Internal VGA Connector
LPT1	Parallel Port
POWERUSB3	24V Powered USB: USB P1
POWERUSB1	12V Powered USB: USB P2
USB_LAN1	LAN: Gigabit Ethernet with LED USB(Upper): USB_P3 USB(Lower): USB_P4
USB_ESATA1	USB: USB_P5 eSATA: SATA1
LPC1	LPC Debug Port (LPC1 will be DNP after mass production)
J1	DDR2 SO-DIMM Slot
BAT1	Battery Holder for CR2032
BIOS1	Socket for SPI Flash BIOS
MPCI1	Mini PCI Slot
MPCIE1	Mini PCI-Express Slot
JSPI1	SPI Flash Programming Header
IDE1	44-pin IDE Connector
CPUFAN1	CPU FAN Connector
SYSFAN1	System FAN Connector

CN1: Inverter Connector for LVDS1

Pin	Name	Signal
1	+12V	+V12S
2	+12V	+V12S
3	GND	GND
4	Adjust	INV_BL_CTRL
5	GND	GND
6	ON/OFF	LCD_ON/OFF

CN2: LED Backlight Connector

Pin	Name	Signal
1	LEDVDD	LED_VDD
2	LEDVDD	LED_VDD
3	LEDVDD	LED_VDD
4	LED_ISEN1	LED_ISEN1
5	LED_ISEN2	LED_ISEN2
6	LED_ISEN3	LED_ISEN3

CN3: USB, Reset, Inverter Adj, and Power/HDD LED

Pin	Name	Signal		Pin	Name	Signal
1	High	+V5S (1K)		2	USB VCC	+V5DUAL
3	Adjust	LVDS_BL_CTRL		4	DATA-	USB_P6-
5	Low	GND (1K)		6	DATA+	USB_P6+
7	PWR LED-	GND		8	GND	GND
9	LED+(VCC)	+V3.3S (330R)		10	Reset	RESET#
11	HDD LED-	HDLED#		12	(KEY)	-

CN4: Digital I/O Port

Pin	Name	Signal		Pin	Name	Signal
1	GND	GND		2	VCC +5V	+V5S
3	DI1	DIO_I0		4	DO1	DIO_O_0
5	DI2	DIO_I1		6	DO2	DIO_O_1
7	DI3	DIO_I2		8	DO3	DIO_O_2
9	DI4	DIO_I3		10	DO4	DIO_O_3

J4/J6: +12V/+5V Power

Pin	Name	Signal
1	GND	GND
2	GND	GND
3	+5V	+V5S
4	+12V	+V12S

CN5: Cash Drawer Port

Pin	Name	Signal
1	GND	GND
2	Cash Drawer 2 (Digital Output)	DOOR_O1
3	+24V	+24V_CS
4	Drawer Open/Close Signal (Digital Input)	DIO_I0
5	Cash Drawer 1 (Digital Output)	DOOR_O0
6	GND	GND

*Note1: An extra **RJ-11 Y-Cable** is needed if want to support 2nd Drawer.*

CN7: Serial Port 1, 2 (RS-232 Level)

Lower (COM1)				Upper(COM2)		
Pin	**Name**	**Signal**		**Pin**	**Name**	**Signal**
1	DCD#	NDCDA		9	DCD#	NDCDB_S Note1
2	SIN	NSINA		10	SIN	NSINB
3	SOUT	NSOUTA		11	SOUT	NSOUTB
4	DTR#	NDTRA		12	DTR#	NDTRB
5	GND	GND		13	RI#	NRIB_P Note2
6	DSR#	NDSRA		14	DSR#	NDSRB
7	RTS#	NRTSA		15	RTS#	NRTSB
8	CTS#	NCTSA		16	CTS#	NCTSB

Note1: JP14 to select +5V, +12V or NDCDB.
Note2: JP13 and JP14 to select +5V, +12V, NRIB or GND

CN8: Serial Port 3, 4 (RS-232 Level)

Lower(COM3)				Upper(COM4)		
Pin	**Name**	**Signal**		**Pin**	**Name**	**Signal**
1	DCD#	NDCDC		9	DCD#	NDCDD
2	SIN	NSINC		10	SIN	NSIND
3	SOUT	NSOUTC		11	SOUT	NSOUTD
4	DTR#	NDTRC		12	DTR#	NDTRD
5	GND	GND		13	GND	GND
6	DSR#	NDSRC		14	DSR#	NDSRD
7	RTS#	NRTSC		15	RTS#	NRTSD
8	CTS#	NCTSC		16	CTS#	NCTSD

CN9: RS-422/485 for COM3

Pin	Name
1	RX-
2	TX-
3	RX+
4	TX+

CN10: HD Audio Header

Pin	Name	Signal		Pin	Name	Signal
1	MIC-L	MIC2_L_L		2	GND	GND
3	MIC-R	MIC2_L_R		4	PRESENCE#	NC
5	LINE-R	LINE2_L_R		6	MIC-JD-RETURN	MIC2_JD (20K)
7	JD_SEND	GND		8	(Key)	-
9	LINE-L	LINE2_L_L		10	LINE-JD-RETURN	LINE2_JD (39.2K)

LVDS1: LVDS Output

Pin	Name	Signal		Pin	Name	Signal
1	GND	GND		16	B_DATA3-	LVDS_CON_A7-
2	GND	GND		17	B_CLK+	LVDS_CON_CLK2+
3	A_DATA3+	LVDS_CON_A3+		18	B_CLK-	LVDS_CON_CLK2-
4	A_DATA3-	LVDS_CON_A3-		19	B_DATA2+	LVDS_CON_A6+
5	A_CLK+	LVDS_CON_CLK1+		20	B_DATA2-	LVDS_CON_A6-
6	A_CLK-	LVDS_CON_CLK1-		21	B_DATA1+	LVDS_CON_A5+
7	A_DATA2+	LVDS_CON_A2+		22	B_DATA1-	LVDS_CON_A5-
8	A_DATA2-	LVDS_CON_A2-		23	B_DATA0+	LVDS_CON_A4+
9	A_DATA1+	LVDS_CON_A1+		24	B_DATA0-	LVDS_CON_A4-
10	A_DATA1-	LVDS_CON_A1-		25	GND	GND
11	A_DATA0+	LVDS_CON_A0+		26	GND	GND
12	A_DATA0-	LVDS_CON_A0-		27	VDD	LVDS_CON_PVDD
13	GND	GND		28	VDD	LVDS_CON_PVDD
14	GND	GND		29	VDD	LVDS_CON_PVDD
15	B_DATA3+	LVDS_CON_A7+		30	GND	GND Note

Note: Must check this pin is GND or VDD before plug an older version LVDS cable.

PS2: External PS/2 Interface

Pin	Name	Signal
1	DATA	KBDATA
2	NC	MSDATA
3	GND	GND
4	VCC	+V5DUAL
5	CLK	KBCLK
6	NC	MSCLK

KB1: Internal PS/2 Interface

Pin	Name	Signal
1	CLOCK IN	KCLK_IN Note
2	CLOCK OUT	KCLK_OUT Note
3	DATA IN	KDAT_IN Note
4	DATA OUT	KDAT_OUT Note
5	GND	GND
6	VCC	+V5DUAL

(Note: Need short-plug on pin-1&2 and pin-3&4 if MSR module is not connected.)

SW1: Power ON Switch Connector

Pin	Name	Signal
1	Button Pin 1	PM_PWRBTN#
2	Button Pin 2	GND

PW3: +12V Power

Pin	Name	Signal
1	+12V	+V12S
2	GND	GND

PW5, PW6: +5V Power

Pin	Name	Signal
1	+5V	+V5S
2	GND	GND

I-COM2: Internal COM2 (RS-232 Level)

Pin	Name	Signal		Pin	Name	Signal
1	DCD	NDCDB		2	DSR	NDSRB
3	RX	NSINB		4	RTS	NRTSB
5	TX	NSOUTB		6	CTS	NCTSB
7	DTR	NDTRB		8	RI	NRIB
9	GND	GND		10	(Key)	NC

COM5: Internal COM5 (RS-232 Level)

Pin	Name	Signal		Pin	Name	Signal
1	DCD	NDCDE		2	DSR	NDSRE
3	RX	NSINE		4	RTS	NRTSE
5	TX	NSOUTE		6	CTS	NCTSE
7	DTR	NDTRE		8	RI	NRIE
9	GND	GND		10	(Key)	NC

COM6: Internal COM6 (TTL Level)

Pin	Name	Signal		Pin	Name	Signal
1	DCD	COM6_DCD-		2	DSR	COM6_DSR-
3	RX	COM6_SIN		4	RTS	COM6_RTS-
5	TX	COM6_SOUT		6	CTS	COM6_CTS-
7	DTR	COM6_DTR-		8	RI	COM6_RI-
9	GND	GND		10	(Key)	NC

SPK1: Speaker Output (Right)

Pin	Name	Signal
1	Right	EAROUT_R
2	GND	GND

SPK2: Speaker Output (Left)

Pin	Name	Signal
1	Left	EAROUT_L
2	GND	GND

USB1: USB Pin Header

Pin	Name	Signal
1	VCC	USB0_V5DUAL_L
2	DATA-	USB_P0_DN
3	DATA+	USB_P0_DP
4	GND	GND

LPC1: LPC Debug Header

Pin	Name	Signal		Pin	Name	Signal
1	CLK	CLK_PCI_HEADER		2	AD1	LPC_AD1
3	RESET#	PLTRST#		4	AD0	LPC_AD0
5	FRAME#	LPC_FRAME#		6	VCC	+V3.3S
7	AD3	LPC_AD3		8	GND	GND
9	AD2	LPC_AD2		10	GND	GND

POWEREDUSB1: +12V Powered USB

Pin	Name	Signal
1	VCC	+V5DUAL
2	-Data	USB_P2-
3	+Data	USB_P2+
4	Ground	GND
5	12V Ground	GND
6	12V	+V12S
7	12V	+V12S
8	12V Ground	GND

POWEREDUSB3: +24V Powered USB

Pin	Name	Signal
1	VCC	+V5DUAL
2	-Data	USB_P1-
3	+Data	USB_P1+
4	Ground	GND
5	24V Ground	GND
6	24V	+V24S
7	24V	+V24S
8	24V Ground	GND

USB_LAN1: RJ45 for Ethernet + 2xUSB Stack Connector

LAN				USB		
Pin	**Name**	**Signal**		**Pin**	**Name**	**Signal**
L1	YELLOW+	LAN_LED2				
L2	GREEN+	LAN_LED1				
L3	GREEN-	LAN_LED0				
L4	GREEN+	+V3.3A_LAN				
R1	VCC	+V1.9_LAN		U1	VCC	+V5DUAL
R2	TD1+	MDI0P		U2	DATA-	USB_P3-
R3	TD1-	MDI0N		U3	DATA+	USB_P3+
R4	TD2+	MDI1P		U4	GND	GND
R5	TD2-	MDI1N		U5	VCC	+V5DUAL
R6	TD3+	MDI2P		U6	DATA-	USB_P4-
R7	TD3-	MDI2N		U7	DATA+	USB_P4+
R8	TD4+	MDI3P		U8	GND	GND
R9	TD4-	MDI3N				
R10	GND	GND				

USB_ESATA1: USB+eSATA Stack Connector

eSATA				USB		
Pin	**Name**	**Signal**		**Pin**	**Name**	**Signal**
P1	GND	+V1.9_LAN		U1	VCC	+V5DUAL
P2	TX+	MDI0P		U2	DATA-	USB_P3-
P3	TX-	MDI0N		U3	DATA+	USB_P3+
P4	GND	MDI1P		U4	GND	GND
P5	RX+	MDI1N				
P6	TD3+	MDI2P				
P7	TD3-	MDI2N				

VGA1: External VGA Port

Pin	Name	Signal		Pin	Name	Signal
1	Red	VGA_RED		9	KEY	+V5S
2	Green	VGA_GREEN		10	SGND	GND
3	Blue	VGA_BLUE		11	ID0	NC
4	ID0	NC		12	ID2/SDA	VGA_DDCDATA
5	GND	GND		13	HSYNC	VGA_HSYNC
6	RGND	T_VGA1		14	VSYNC	VGA_VSYNC
7	GGND	GND		15	ID3/SCL	VGA_DDCCLK
8	BGND	GND				

VGA2: Internal VGA Port

Pin	Name	Signal		Pin	Name	Signal
1	Red	VGA_RED		2	GND	GND
3	Green	VGA_GREEN		4	GND	GND
5	Blue	VGA_BLUE		6	DETECT	T_VGA2
7	HSYNC	VGA_HSYNC		8	GND	GND
9	VSYNC	VGA_VSYNC		10	GND	GND

LPT1: Printer Port

Pin	Name	Signal		Pin	Name	Signal
1	STB#	LPT_STB#		2	PD0	LPT_PD0
3	PD1	LPT_PD1		4	PD2	LPT_PD2
5	PD3	LPT_PD3		6	PD4	LPT_PD4
7	PD5	LPT_PD5		8	PD6	LPT_PD6
9	PD7	LPT_PD7		10	ACK#	LPT_ACK#
11	BUSY	LPT_BUSY		12	PE	LPT_PE
13	SLCT	LPT_SLCT		14	AFD#	LPT_AFD#
15	ERR#	LPT_ERR#		16	INIT#	LPT_INIT#
17	SLIN#	LPT_SLIN#		18	GND	GND
19	GND	GND		20	GND	GND
21	GND	GND		22	GND	GND
23	GND	GND		24	GND	GND
25	GND	GND		26	(Key)	

PW1: +24V Power Jack

Pin	Name	Signal
1	+24V	+V24IN
2	+24V	+V24IN
3	GND	GND
4	GND	GND

JSPI1: SPI Flash On-Board Programming Header

Pin	Name	Signal		Pin	Name	Signal
1	VCC	+V3.3A_SPI		2	GND	GND
3	CS#	SW_SPI_CS#		4	CLK	SW_SPI_CLK
5	SO	SW_SPI_SO		6	SI	SW_SPI_SI
7	NC	NC		8	NC	NC