



Fanless Mini PC

- TV-850B 1,2 GHz Mini PC, with TV out, LPT, 2xCOM, 1x LAN
- TC-850B 1,2 GHz Mini PC, 2xCOM, HDD sup., 1x LAN
- RB-851B 1,2 GHz Mini PC, with CF, miniPCI, 1x LAN
- RB-851BG 1,2 GHz Mini PC, with CF, miniPCI, HDD sup., 1x LAN
- RB-852B 1,2 GHz Mini PC, with CF, 2xLAN, miniPCI
- RB-853BS 1,2 GHz Mini PC, with CF, 2xLAN, HDD sup.



User's manual

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SAFETY INFORMATION

WARNING

- ▶ Do not expose your computer to rain or moisture, in order to prevent shock and fire hazard.
- ▶ Never install your computer in wet locations.
- ▶ Do not open the cabinet to avoid electrical shock. Refer to your nearest dealer for qualified personnel servicing.
- ▶ Never touch un-insulated terminals or wire unless your power adaptor and display monitor are disconnected.
- ▶ Locate your computer as close as possible to the socket outline for easy access and to avoid force caused by entangling of your arms with surrounding cables from the computer.
- ▶ When using Mini PC, avoid using or installing the modem to the serial port during a storm or a lightning.
- ▶ Do not use the modem or a telephone to report a gas leak in the vicinity of the leak.
- ▶ USB connectors are not supplied with Limited Power Sources.

DO NOT ATTEMPT TO OPEN OR TO DISASSEMBLE THE CHASSIS (ENCASING) OF THIS PRODUCT. PLEASE CONTACT YOUR NEAREST DEALER FOR SERVICING FROM QUALIFIED TECHNICIAN.

REGULATORY

FCC CLASS A NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference in which case the user will be required to correct the interference at his own expense. Testing was done with shielded cables. Therefore, in order to comply with the FCC regulations, you must use shielded cables with your installation.

WARNING

This product Complies with EN55022 Class A. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference - causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe (A) prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le ministre des Communications.

MANUFACTURER'S DECLARATION OF CONFORMITY

This equipment has been tested and found to comply with the requirements of European Community Council Directives 89/336/EEC and 73/23/EEC relating to electromagnetic compatibility and product safety respectively.

ATTENTION

This product has been designed and certified to comply with certain regulatory requirements pertaining to Information Technology Equipment. This product has not been designed for use as a medical device. Without limitation of the foregoing, this product is not intended and has not been certified for use in a hospital or clinical environment to diagnose, treat, or monitor patients under medical supervision, and is not intended and has not been certified to make physical or electrical contact with patients, nor to transfer energy to or from patients and/or to detect such energy transfer to or from patients.

UNPACKING YOUR MINI PC

Congratulation!

You have just acquire Mini PC RB/TC/TV series, the world's smallest and compact PC, please check the following items:

PACKING LIST FOR Mini PC SERIES

Item	Description	Q'ty
c	Mini PC	x1
d	Max. 20-watts External Power Adaptor, Vin: 100~240VAC • 60/50Hz, 1.0A / Vout.: +5.0~5.25VDC @ 4A max. LPS	x1
e	Drivers CD for Mini PC	x1
f	User's Manual	x1

* Note: The accessories are subject to change without immediate notice.

CHECK BEFORE USE

c Mini PC EmbedBox



d AC Power Adaptor



e Drivers CD



PREFACE

Mini PC TV-850B/TC-850B/RB-851B/RB-851BG/RB-852B/RB-853BS



XtendLan introduces an industrial classic in the computing industry, by featuring Mini PC RB/TC/TV series, a chef d'oeuvre compact PC that connects people through networking via global internet across the continents over the channels of sea bay. The conquest for browsing e- information through wired LAN/WAN. This portable device is handy for travelers and service technicians who worked in and out of the office. For office desk workers, this showpiece occupies very little space on a corner of the table, and it is so convenient that you may lock it in your drawer after office hours.

A jewel in the crown Mini PC RB/TC/TV series for thin client users, which is handy-rugged-robust. Mini PC RB/TC/TV series serves as the Internet Appliance that offers state-of-art design for applications surrounding networking, computing, transaction and information transport.

XtendLan connotes the Mini PC RB/TC/TV series for small business enterprises to serve these boxes to users for the connection to a server as thin client. The Mini PC RB/TC/TV series achieves multi-servers requirement to serve as firewall, mail-server, print server, and many other single task application in the office. Furthermore, with Mini PC RB/TC/TV series, business executive can work his way from the office to home, a student can do his assignment from the dormitory and continue back at home. Mini PC RB/TC/TV series allows you to use your computer with just one finger press at the power button. It is built in an awesome mechanical dimension of 170×124× 56mm, this is just a right device for space conscious environment.

Mini PC Overview



Front Panel

Power LED

The power LED lights up, when system is turn on.

HDD LED

The HDD LED flashes when the system is working. Please do not turn off the system when HDD start running

Power Switch

Depress switch to turn on & turn off the systems.

USB port

For connection to devices with USB interface (keyboard, mouse, HDD, CD-ROM, Memory Stick, etc.)

ABOUT EMBEDDED CPU BOARD

SYSTEM SPECIFICATION

CPU

VIA Esther 1.2GHz

North/South Bridge

VIA CX700M

Main Memory

512MB DDR2 (1GB RB-851BG)

BIOS

“Plug and Play” function, auto-search new apparatuses inset.

Provide DMI for system management.

Advanced ACPI configuration and power control interface. (intelligence control system.)

VGA

AGP Rev.2.0 Compliant

Resolution up to 1920x1440

Audio

AC97 CODEC, Fully Compliant with AC97v2.1

LAN

Realtek 8100B

10/100Base-Tx Ethernet Interface

Keyboard and Mouse

PS/2 Keyboard and Mouse

On-Board IDE

Support PIO, Bus Master, and Ultra DMA/66 operation.

Can connect to 2 IDE devices.

Peripheral

1. Printer port x1
(support SPP/EPP/ECP module)
2. USB2.0 ports x2
3. Serial port
4. Rear Audio (Mic-in, Line-out)

Dimension & Weight

170 x 123 x 56 mm / 970g

Operating System

Suitable for –

Windows XP

Windows XP Embedded

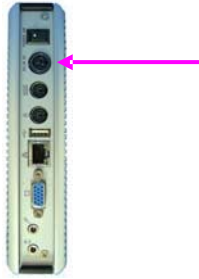
Windows Embedded CE

WEPOS

LINUX

PERIPHERALS

CONNECTING THE POWER ADAPTOR



Power Adaptor

To use your computer immediately, take and use the supplied AC adapter as a power source. See the left diagram for visual connection.

Connect the DC power jack of the power adaptor to the DC Input jack of Mini PC.



Turning ON Your Computer

Press the power button as indicated on the figure on your left-side, the system will start automatically.

CONNECTING THE MONITOR



VGA Connection

Depending on your choice of viewing, select a conventional CRT or the LCD VGA monitor.

CONNECTING THE USB

Mini PC provides USB port (one each in front & at the back of the cabinet).

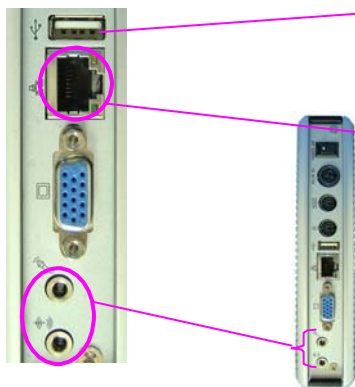
Front cabinet



Turning ON Your Computer

Press the power button as indicated on the figure on your left-side, the system will start automatically.

CONNECTING USB, SPEAKER/EARPHONE AND WEB



USB Port

The second USB port is available for connection to USB devices.

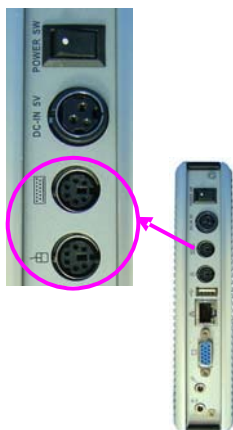
Connecting to WEB

There is an available RJ-45 LAN jack for connection to the hub of your intranet; and via your server for internet service (see diagram for RJ-45 LAN jack).

Speaker/Earphone

Mini PC supports Input/Output device for speaker, earphone and MIC (Microphone), etc...

CONNECTING THE KEYBOARD AND MOUSE



Describing Mouse actions

Action	Description
Point	- Slide and point your mouse to your desired position.
Click	- Press the left button once.
Double-click	- Press the left button twice.
Right-click	- Press the right button once. When selecting (most) programs, this action displays a shortcut menu of the context-sensitive choices.
Scroll wheel	- Move your finger along the wheel of your mouse (just upright your middle finger) and scroll vertically to move page upward and downward.

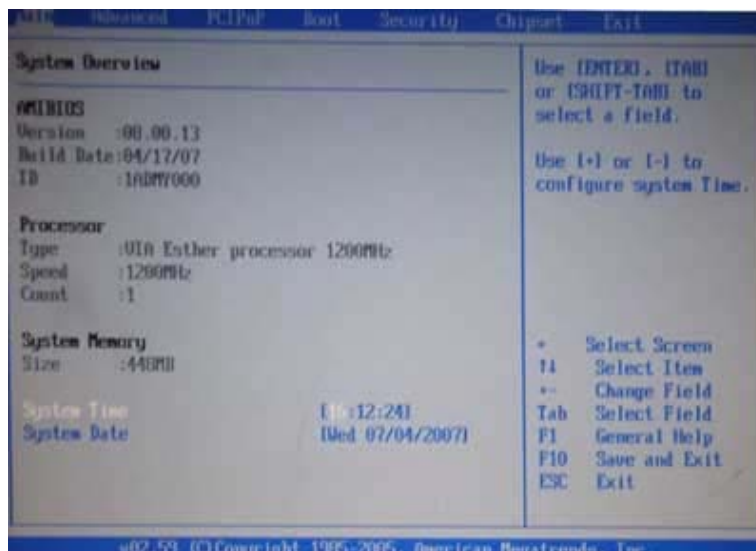
Describing Keyboard

The keypad usually comes in standard QWERTY; except that different language(s) keyboard comes with additional special characters..

BIOS

RECONFIGURING Mini PC

1. Take note that AMI BIOS is used in the Mini PC. To reconfigure the computer, depress or hit the key to enter your **BIOS setup main menu**.
2. Select from the menu, the desired setup for change.
3. Press <Esc> to go back to main menu.
4. Move your cursor to "Save Settings and Exit", press "Y" to save the changes that you just made. Mini PC will restart accordingly to your new setup.



TECHNICAL SPECIFICATION

Features	Description
CPU	VIA Esther 1.2GHz
BIOS	AMI BIOS
System Chipset	VIA CX700M
I/O Chip	VT1211
System Memory	Onboard 512MB DDR2 (1GB RB-851BG)
Expansion	1x X-PCI connector
I/O	
MIO	EIDE (Ultra DMA 133), 1x PS/2 K/B and Mouse Print and RS-232 Port
USB	USB 2.0 Ports (one in front)
Compact Flash Slot	Type I/II compact flash slot
Mini PCI Socket	124pin Mini PCI socket
Display	
Chipset	Integrated VIA UniChrome 2D/3D Graphics with MPEG4/WMV9 Accelerator
Display Memory	Up to 64 MB share system memory
Resolution CRT	Up to 1920 x 1440
Audio	
AC97 2.2 (Codec)	VIA Vinyl VT1708
Audio Interface	Line out, , Mic in
Ethernet	
Chipset	Realtek 8100BT
Remote Boot ROM	Built-in boot ROM function
Mechanical & Environment	
Power Requirement+	5V~5.25V @ 4A
Operating Temperature0	0 ~ 60°C
Operating Humidity0%	- 90% relative humidity, non-condensing
Size (W x H x D)	170 x 123x 56mm
Weight780	780g / 940 g

TAKING CARE YOUR COMPUTER

This section gives you guidelines on using Mini PC computer – Safe using, Storing and Handling.

STORING

- ▶ Do not place your computer in a location that is subject to:
 - Heating sources, such as stove, oven, heater, radiator or air duct
 - Direct contact from sunlight
 - Rain or moisture area
 - Excessive dust accumulation area
 - High humidity place
 - Constant or occasional mechanical movement, vibration or shock
 - Strong magnets or magnetic fields or magnetically unshielded speakers
 - Ambient temperature of more than 95°F (35°C) or less than 32°F (0°C)
- ▶ Do not place other electronic device or electrical equipment near your computer. The electromagnetic field of the computer may cause interference subjecting to malfunction.
- ▶ Provide adequate air ventilation (circulation) to prevent internal buildup of heat. Do not place your computer near the wall, behind the curtains or draperies, in between two books that block its ventilation slots. Leave a space of at least 8 inches (20cm) behind the sides and back panel of the computer.
- ▶ Change of environmental temperature: Problems may occur when there is a sudden change of environmental temperature, or if the computer is brought directly from a cold location to a warm one, moisture may condense inside your computer. Turn off your computer, and contact your nearest dealer.
- ▶ Checking the surrounding appliance(s) before using your computer. Since the computer uses high-frequency radio signal and may interface with radio or TV reception causing interference or poor signal display. When this happens, relocate the computer by a suitable distance away from the set.
- ▶ Do not drop the computer from the working table nor place heavy objects on top of the computer.

USING CABLES FOR CONNECTION

- ▶ To avoid problem, use only the specified interface cables in your accessory bag. The supplier will not be responsible for the connection arising from the other unspecified peripheral equipment.
- ▶ Do not use cut or damaged cables for connection.

CLEANING YOUR COMPUTER

- ▶ Clean the computer with a soft, dry cloth or a soft cloth lightly moistened with a mild detergent solution.
- ▶ Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine, as these may damage the finish of your computer.
- ▶ When a solid object falls or a liquid spills onto the computer, turn off the computer immediately and unplug the LAN and power cables. Contact a qualified person or your dealer to check the computer before you use it again.
- ▶ Always disconnect the power cord from the power source before cleaning the computer.

TROUBLESHOOTING

This section describes the techniques of resolving some basic problems that you encounter when using your computer. For more troubleshooting guidelines, please contact your nearest dealer for technical support.

TROUBLESHOOTING YOUR EMBEDBOX

A. Computer does not start

- ▶ Make sure the computer is properly secured and plugged into a power source before it is turned on. Make sure the power indicator shows the power is on.
- ▶ When the computer is plugged into a power strip or the UPS (Uninterruptible Power Supply), make sure the power strip or UPS is turned on and working normally.
- ▶ Check if your VGA or LCD monitor is properly plugged into a power source and turned on. Make sure the brightness and contrast controls are adjusted correctly. See the manual that came with your display (monitor) for details.
- ▶ Check if your power control button does not function, by removing the AC adaptor. Wait for one minute, and then reattach all power connection before pressing the power button.
- ▶ Condensation may cause the computer to malfunction for a while. If this happens, do not use the computer for at least one hour.
- ▶ When you have checked all the above guidelines and the computer does not work. Remove the power adaptor from the computer, unplug the power cord, and plug it in again. Then turn on the power.

B. BIOS Error Message – BIOS error message appear when my computer starts

If the BIOS error message appears, press any key to resume or, hit to enter **BIOS setup main menu**, follow these steps:

1. Press , and the **BIOS Setup main menu** appears, check if HDD is detected at "Pri Master". If it is not detected, use "Sel" keys < ↑ ↓ > to choose "AUTO", then go back to the main menu by pressing <ESC>. Move your cursor down with "Sel" keys < ↓ >, and choose "Save Settings and Exit", a message dialog appears as seen below, hit <Enter>.

"Save current settings and exit (Y/N)? Y"

2. Go to "Auto Configuration with Optimal Settings" using the "Sel" keys < ↑ ↓ >, then press <Enter>. A message dialog appears as seen below, hit " Y " key and press <Enter> to save and recover the factory setting.

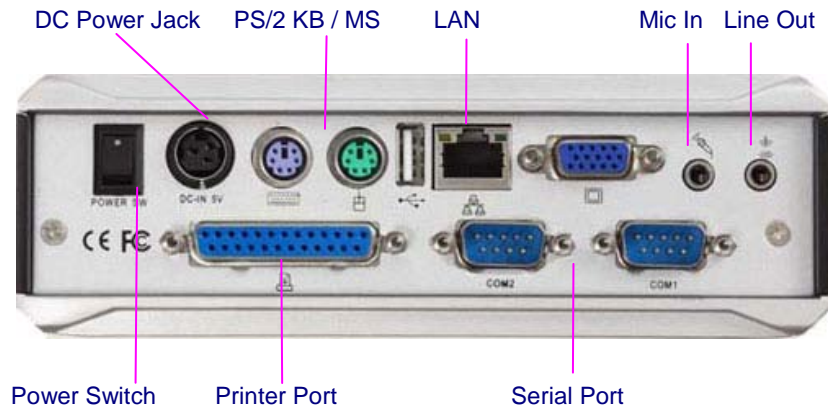
"Load high default settings (Y/N)? N"

C. "Operating System Not Found" – A message indicating that "Operating system not found" appear when my computer starts (Windows won't start)

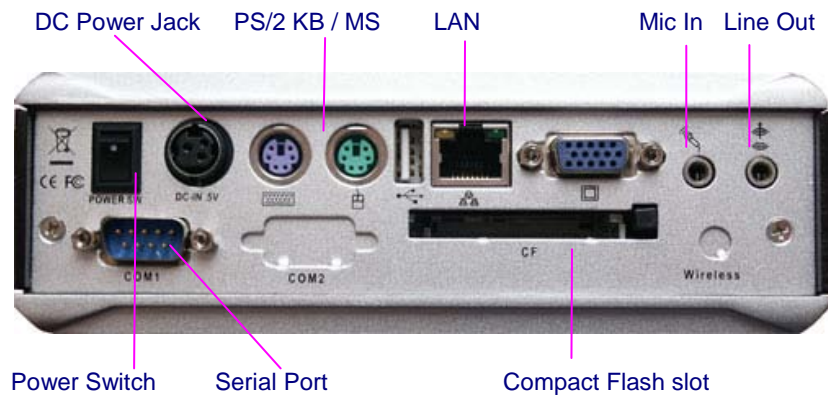
- ▶ Enter your BIOS setup main menu by pressing key, be sure that your C: drive is enable.
- ▶ If Windows still does not start, follow these steps to initialize the BIOS:
 1. Turn off the computer.
 2. Remove any peripheral devices connected to the computer.
 3. Restart the computer..
 4. Press to enter **BIOS Setup main menu** window.
 5. Follow the steps as written in item **B. BIOS error message**.
- ▶ If you have just connect your computer to a USB Devices, remove these peripherals.. And restart your computer to confirm that the Windows operating system starts properly. If your computer continues to display the message "Operating system not found," and Windows does not start, please contact your nearest dealer for servicing.

REAR PANEL

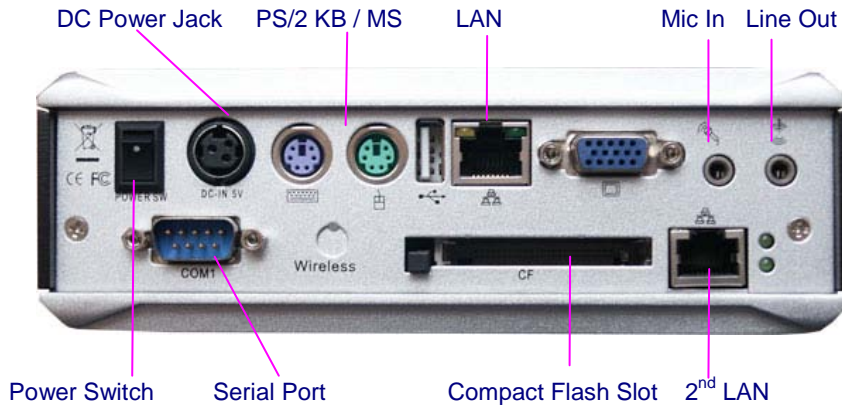
REAR CONNECTORS OUTLINE FOR Mini PC TC-850B



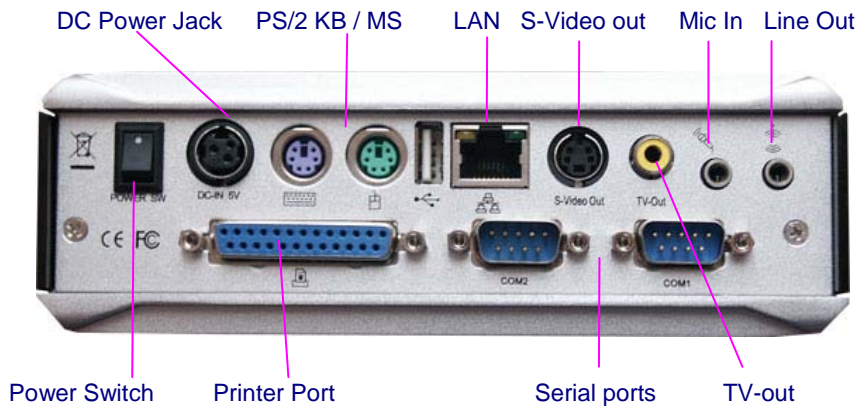
REAR CONNECTORS OUTLINE FOR Mini PC RB-851B / RB-851BG



REAR CONNECTORS OUTLINE FOR Mini PC RB-852B / RB-853BS

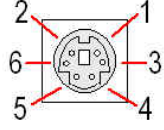


REAR CONNECTORS OUTLINE FOR Mini PC TV-850B




PIN ASSIGNMENTS

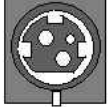
KBD(PS/2Keyboard & Mouse) – 6-pin Mini-Din Connector

	Pin #	Signal Name
	1	KBCLK
	2	PMCLK
	3	GND
	4	KBDAT
	5	PMDAT
	6	SB5V
	7	GND
	8	GND
9	GND	

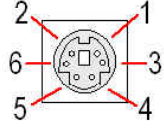
Power Sw – Push Button Switch

	Pin #	Status
		ON
	0	OFF
	--	--
	--	--

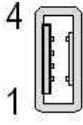
DC-IN (DC-IN 5V) – 3-pin MINI-DIN Lock Pin Socket

	Pin #	Signal Name
	1	J23-pin 1 & 2
	2	SB5V
	3	NC
4	GND	

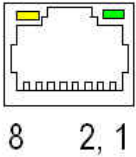
Mouse (PS/2 Mouse) – 6-pin Mini-Din Connector

	Pin #	Signal Name
	1	PMCLK
	2	NC
	3	GND
	4	PMDAT
	5	NC
	6	SB5V
	7	GND
	8	GND
9	GND	

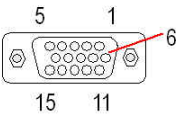
USB1 (USB1x90°)– 4-pin USB Type 1 Connector (Vertical Type)

	Pin #	Signal Name
	1	VCC
	2	USB0-
	3	USB0+
	4	GND
	5	GGND
	6	GGND
	7	GGND
8	GGND	


RJ-45 FOXCONN (LAN) – RJ45 Connector

	Pin #	Signal Name	Pin #	Signal Name
	1	FTXD+	2	FTXD-
	3	FRXIN+	4	NC
	5	NC	6	FRXIN-
	7	NC	8	NC


VGA – 15-pin Dsub Connector

	Pin #	Signal Name	Pin #	Signal Name	Pin #	Signal Name
	1	MR	6	GND	11	NC
	2	MG	7	GND	12	VCC
	3	MB	8	GND	13	HYSYNC
	4	NC	9	NC	14	VSYNC
	5	GND	10	GND	15	VCC


MIC_IN – 5-pin RCA Phone Jack

	Pin #	Signal Name
	1	GND
	2	MIC1
	3	Open Touch
	4	Open Touch
5	VREFOUT	

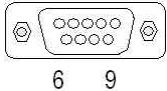
USB (USB2): For connection to external USB device –4-pin USB Type 1 Connector (H)

	Pin #	Signal Name
	1	VCC
	2	USB2-
	3	USB2+
	4	GND
	5	NC
6	NC	

LEDS: POWER ON/OFF & HDD R/W

	LED Color	State
	Blue	Power On
	Red	HDD On
	Red Flashes	HDD R/W

COM - 9-pin Dsub Connector

	Pin #	Signal Name	Pin #	Signal Name
	1	DCD1	2	RXD1
	3	TXD1	4	DTR1
	5	GND	6	DSR1
	7	RTS1	8	CTS1
	9	RI1	--	--