TD750 - TD850 - TD900
PANEL PC TOUCH SCREEN

User manual

1   Introduction

Thanks for choosing a Pixsys device.
TD750, TD850, TD900 are touch-screen Panel-PC based on Atom architecture and featuring Microsoft Windows XP and XP Embedded OS.

2   Model identification/ Ordering codes

TD750-AEB-XPE

→ **SOFTWARE CONFIGURATION**
→ **HARDWARE CONFIGURATION**
→ **PART NUMBER/MODEL**

2.1   Part numbers / Models

TD750	Panel PC 7.0", CPU Intel® Atom™ Z510 1.1Ghz, 512Mb RAM DDR2
TD850	Panel PC 10.4", CPU Intel® Atom™ Z530 1,6Ghz, 1Gb RAM DDR2
TD900	Panel PC 15.0", CPU Intel® Atom™ Z530 1,6Ghz, 1Gb RAM DDR2

2.2   Hardware configuration

-APC-XPE	Power: 24V DC ±15% HDD SATA 160Gb Windows XP Professional SP3 Movicon SCADA pre-installed with DEMO license
-AEB-XPE	Power: 24V DC ±15% DOM SATA8Gb Windows XP Embedded SP3 Movicon SCADA pre-installed with DEMO license

2.3   Optional devices

ETD884-AD	Expansion module for load cells, 8 digital I/O , 2 analogue outputs V/mA.
ETDWIF-AD	Expansion module Wi-Fi 802.11b,g,n
ETD2RS232-AD	Expansion module 2 x UART RS232
ETDLAN1G-AD	Expansion module 1 X LAN 10/100/1000T RJ45
ETDHCLEXP	Cover plate for hole of expansion module
2700.10.012	ALM-MDR-60-24 (24V 2,5A 60W)

3 Dimensions and installation
3.1 TD750-APC and TD750-AEB

179 mm

17

34 mm

4

Dissipatore (optional)
heatsink (optional)
Cod. **SL-DISS-TD**

SD

Dima di foratura
180 x 144 mm
Frontal panel cut-out

Spessore suggerito
0÷14 mm
Suggested thickness

Memory Card (optional)
Cod. CARD SD

SD

32 mm
inserimento
Memory Card

*32mm
insert
Memory Card*

PIXSYS

7"

TD750

160 mm

143 mm

204 mm

Espansione
expansion
IN / OUT
(optional)
Cod. ETD884-AD

Espansione
expansion
Wireless
(optional)
Cod.ETDWIF-AD

COM1
2 - RX
3 - TX
8 - RTS
7 - CTS
5 - C

COM4
9 - A+
8 - B-
5 - C

6

3.2 TD850-APC and TD850-AEB

260 mm

17

35 mm

9

Dissipatore (optional)
heatsink (optional)
Cod. SL-DISS-TD

SD

Memory Card (optional)
Cod. CARD SD

32mm
Inserimento
MemoryCard

32mm
insert
Memory Card

Dima di foratura
302 x 242 mm
Frontal panel cut-out

Spessore suggerito
0÷7 mm
Suggested thickness

260 mm

10"

TD850

240 mm

325 mm

Espansione
expansion
IN/OUT
(optional)
Cod. ETD884-AD

Espansione
expansion
Wireless
(optional)
Cod.ETDWIF-AD

7

3.3　TD900-APC and TD900-AEB

413 mm

Dima di foratura
416 x 313 mm
Frontal panel cut-out

Spessore suggerito
0÷10 mm
Suggested thickness

330 mm

435 mm

310 mm

Espansione
expansion
IN/OUT
(optional)
Cod. ETD884-AD

Espansione
expansion
Wireless
(optional)
Cod. ETDWIF-AD
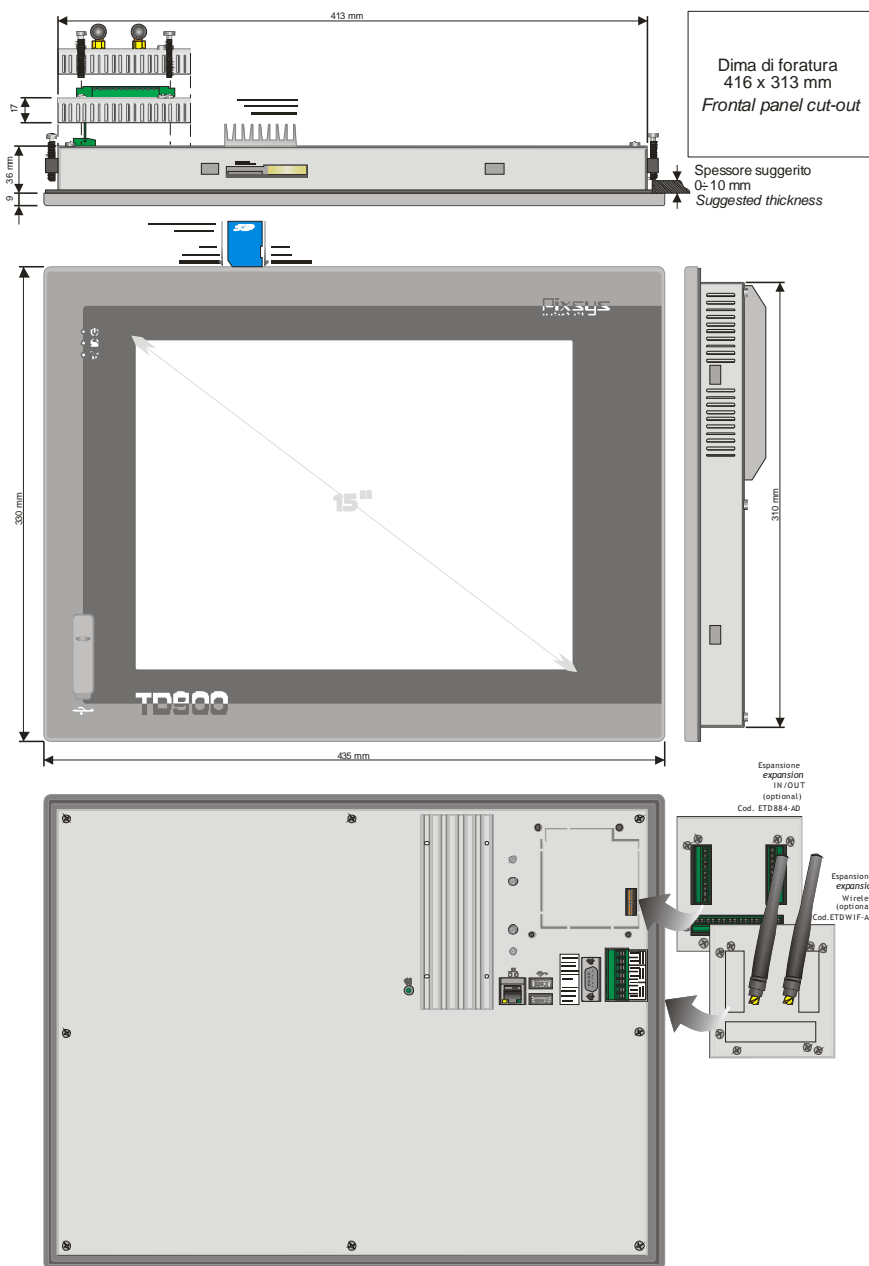
3.4 Device installation

To fix the Terminal on the panel it is necessary to make a rectangular hole according to the dimensions indicated below and to use plastic hooks (see chapter 3.5).

3.4.1 TD750

Dima di foratura
180 x 144 mm
Frontal panel cut-out

It is suggested to use a panel with a max. 14mm thickness.

3.4.2 TD850

Dima di foratura
302 x 242 mm
Frontal panel cut-out

It is suggested to use a panel with a max. 10mm thickness.

3.4.3 TD900

Dima di foratura
416 x 313 mm
Frontal panel cut-out

It is suggested to use a panel with a max. 10mm thickness.

3.5   Fixing hooks

To fix the device on panel it is necessary to use the provided plastic hooks, as indicated in the figures below:
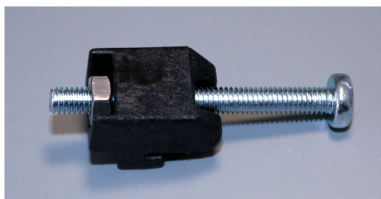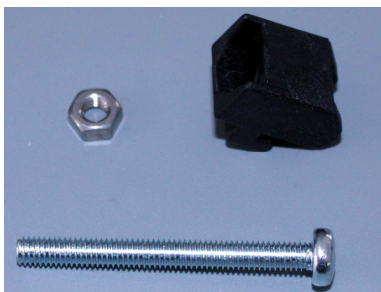
4 Hardware data

4.1 Mechanical features

Front panel	Dull Anodized alluminium 8mm. On TD750 the edge is depressed in order to stick out 4mm from the panel where it is fixed.
Polyester Cover	Resisting at most domestic cleanser detergents.
Silicon cap	Atoxic, hypoallergenic and resisting at most domestic cleanser detergents.
Box	Chromed steel, resisting at hydrocarbons and neutral detergents.
Fixing hooks	Plastics, resisting up to 90℃

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4.2   STANDARD HARDWARE CONFIGURATION

CPU	Intel® Atom™ Z530 @ 1,6GHz Intel® Atom™ Z510 @ 1,1GHz
Power supply	24V DC ±15%
Absorbed power	See chapter 4.3
Audio	Chipset PCM2606BDBR Jack stereo output 3,5mm
USB	1 USB on frontal panel, and 2 USB compatible with standard USB 2.0 480Mbit. Max current available on USB connectors is 500mA.
Touch Controller	PenMount PM6000
Ethernet	1 port 10/100 Mbit Ethernet connector is electrically isolated from other communication ports and from power-supply except for the metal enclosure of the connector which is shield is connected to chassis.
Communication ports	1 Port RS232 opto-isolated 1 Port RS485 opto-isolated 1 Port CAN opto-isolated Communication ports are isolated from power supply but not from each other.
Expansion modules	PIXSYS proprietary expansion port ETD-EXP Mini PCI-Express 1X full-size connector SD-MMC Memory Card connector

For the whole series it is suggested to use a 24Vdc 2,5A 60W power supply unit (see code 2700.10.012).

4.3 POWER CONSUMPTION

4.3.1 UPS and Power consumption at start

At start-up the device charges the UPS internal accumulators, therefore power consumption is higher than in standard operating conditions.

TD750 (1,1Ghz)	TD850 (1,6Ghz)	TD900 (1,6Ghz)
24V 0,8A 19W (-AEB)	24V 1,1A 26W (-AEB)	24V 1,5A 36W (-AEB)
24V 1A 24W (-APC)	24V 1,3A 31W (-APC)	24V 1,7A 40W (-APC)

4.3.2 Min. consumption
- CPU charge < 10% and LCD back-lighting OFF
- No USB device connected
- Ethernet cable disconnected

TD750 (1,1Ghz)	TD850 (1,6Ghz)	TD900 (1,6Ghz)
24V 0,3A 7,2W (-AEB)	24V 0,3A 7,2W (-AEB)	24V 0,3A 7,2W (-AEB)
24V 0,4A 9,6W (-APC)	24V 0,4A 9,6W (-APC)	24V 0,4A 9,6W (-APC)

4.3.3 Typical consumption
- CPU charge approx. 50% and LCD back-lighting ON
- USB device (Mouse)
- Ethernet cable connected

TD750 (1,1Ghz)	TD850 (1,6Ghz)	TD900 (1,6Ghz)
24V 0,4A 9,6W (-AEB)	24V 0,5A 12W (-AEB)	24V 0,7A 16W (-AEB)
24V 0,5A 12W (-APC)	24V 0,6A 14W (-APC)	24V 0,8A 18W (-APC)

4.3.4 Max. consumption
- CPU charge approx. 90% and LCD back-lighting ON
- USB device (Mouse)
- HDD USB device (reading/writing)
- Ethernet cable connected

TD750 (1,1Ghz)	TD850 (1,6Ghz)	TD900 (1,6Ghz)
24V 0,5A 12W (-AEB)	24V 0,7A 16W (-AEB)	24V 0,9A 21,6W (-AEB)
24V 0,6A 14W (-APC)	24V 0,8A 18W (-APC)	24V 0,9A 21,6W (-AEB)

4.4 LCD FEATURES

4.4.1 DISPLAY AND LAMP TD750

Type	LCD TFT touch-screen
Dimensions	Active area 141x106mm 7.0" 4:3
Resolution	800 x 600
Pixel dimension	0.059 x 0.177 mm
Colors	262K colors (R,G,B 6 bit)
Back-lighting	LED 400cd/m^2
Sight angle (vertical)	120°
Sight angle (horizontal)	140°
Lamp life	20000 h typical
Lamp power	2.1 W

4.4.2 DISPLAY AND LAMP TD850

Type	LCD TFT touch screen
Dimensions	Active area 211x158mm 10.4" 4:3
Resolution	800 x 600
Pixel dimension	0.088 x 0.264 mm
Colors	262K colors (R,G,B 6 bit)
Back-lighting	LED 320 cd/m^2
Sight angle (vertical)	110°
Sight angle (horizontal)	130°
Lamp life	20000 h typical
Lamp power	2.3 W

4.4.3 DISPLAY AND LAMP TD900

Type	LCD TFT touch screen
Dimensions	Active area 304 x 228 mm 15.0" 4:3
Resolution	1024 x 768
Pixel dimension	0.297 x 0.297 mm
Colors	16.7M colors (6-bit with A-FRC)
Back-lighting	CCFL 500 cd/m2
Sight angle (vertical)	110°
Sight angle (horizontal)	130°
Lamp life	20000 h typical
Lamp power	16.24 Watt@500cd

5　Electrical wirings

⚠️ Although this device has been conceived to resist noises in an industrial environment, please notice the following safety guidelines
- Separate control lines from power wires
- Avoid proximity of remote control switches, electromagnetic meters powerful engines
- Avoid proximity of power groups, especially those with phase control

6　Warranty terms

Pixsys S.r.l. warrants its electronic devices for 12 months from Invoice date. Pixsys liability shall be limited to repairing (or replacing at its option) any defective product which is returned with RMA (Return Material Authorization) priorly obtained from Pixsys and to be clearly marked on documents.
Pixsys shall not be responsible for accident, neglect, misuse, damage to objects or people caused using the devices outside their specifications or outside any published performance data, including unauthorized and unqualified repairing or failure to provide proper environmental conditions. In no event shall Pixsys liability exceed the purchase price of the product(s).

6.1　Software warranty terms

Warranty is not valid for problems caused installing software applications after sale, and in particular for damages caused by malware.
Any Pixsys technical intervention to restore operative system or programs will be subjected to the assistance tariff in force.

6.2   Power supply hidden key

To force start/stop of the system, press the hidden key placed on the USB frontal connector (as indicated in the figure).
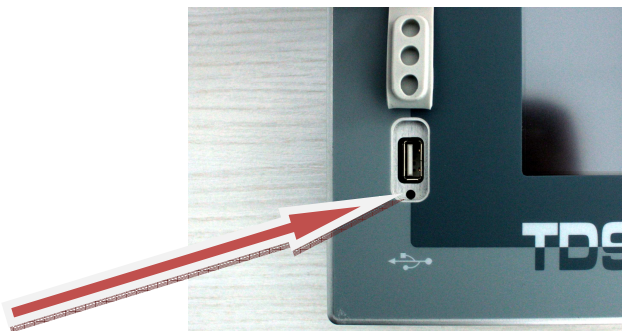
Depending on device status, a short pressure (250-500mSec) can produce:
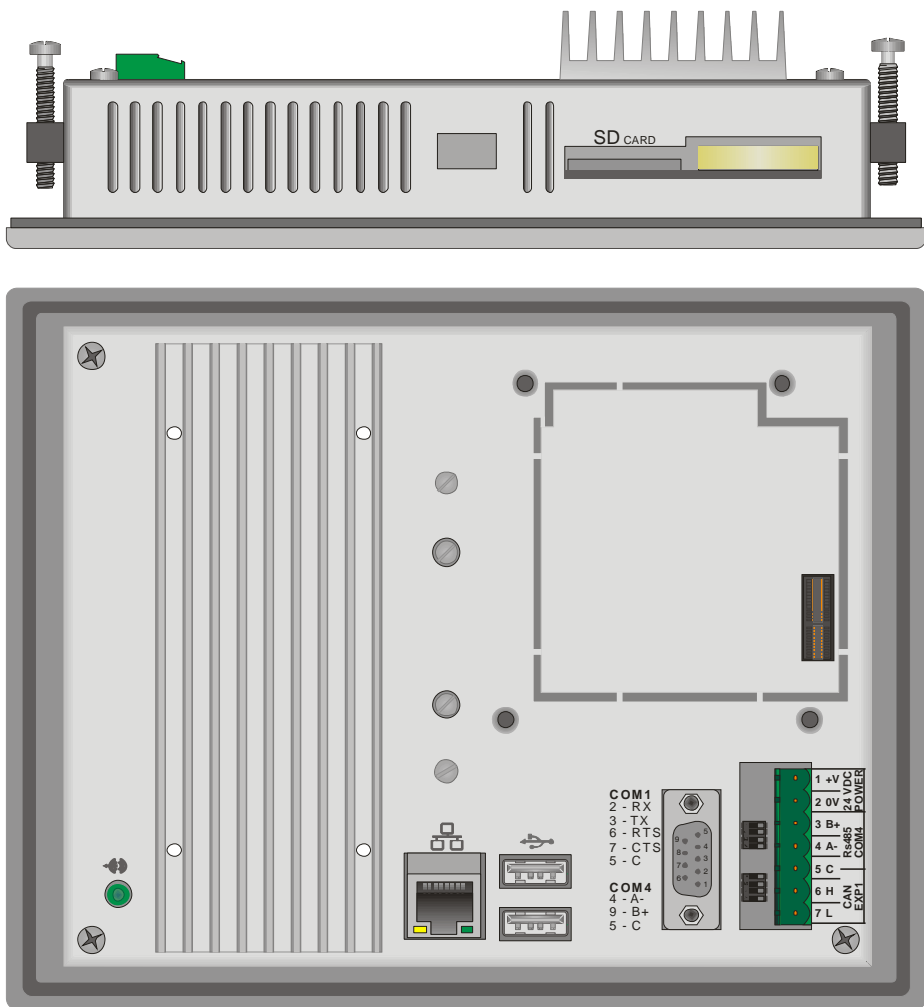- Switch-on (if device is off)
- Assisted shutdown (if the operating system is already started) and consequent automatic restart if the function is enabled by the appropriate DIP.

With operating system already started, a long pressure (approx. 4Sec) forces the device switch-off.
If this function is enabled by the appropriate DIP the device will restart automatically.

> **ATTENTION: Forced switch-off is an emergency procedure which doesn't allow operating system to close correctly the open files and so it can cause data loss. Use only if strictly necessary.**

6.3   View of connectors on TD750

COM1
2 - RX
3 - TX
6 - RTS
7 - CTS
5 - C

COM4
4 - A-
9 - B+
5 - C

1 +V
2 0V
3 B+
4 A-
5 C
6 H
7 L

24 VDC POWER
RS-485 COM4
CAN EXP1

6.4 View of connectors on TD850
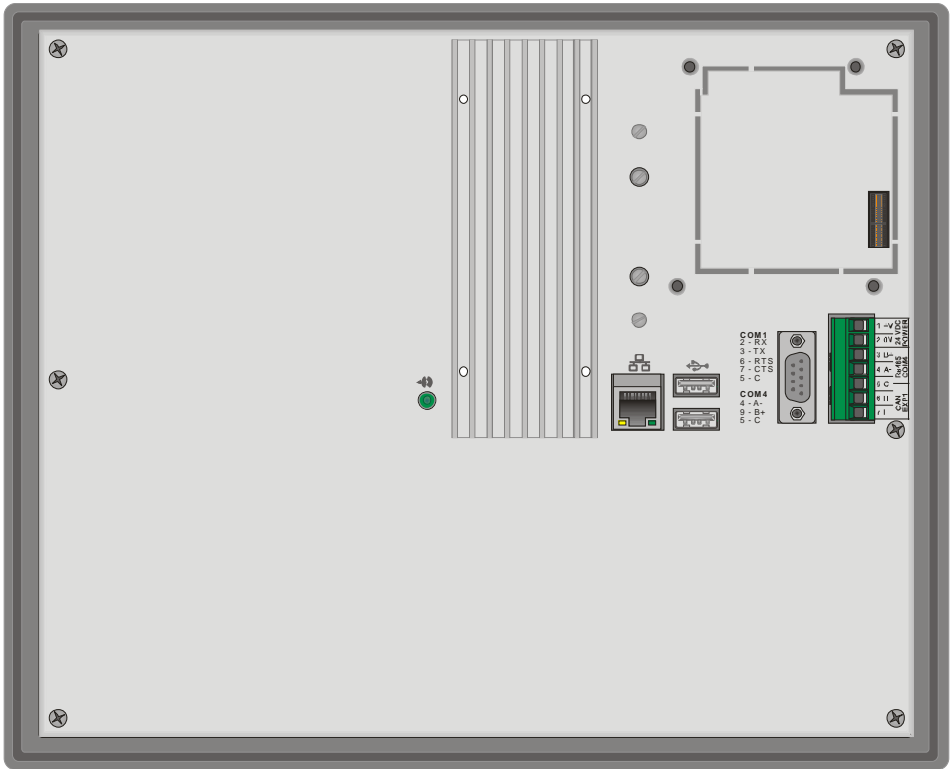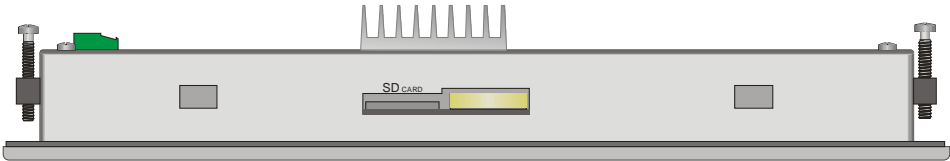
6.5 View of connectors on TD900

**ATTENTION: Do not release these screws
(device can be damaged).**

COM1
2 - RX
3 - TX
6 - RTS
7 - CTS
5 - C

COM4
4 - A-
9 - B+
5 - C

9
8
7
6

5
4
3
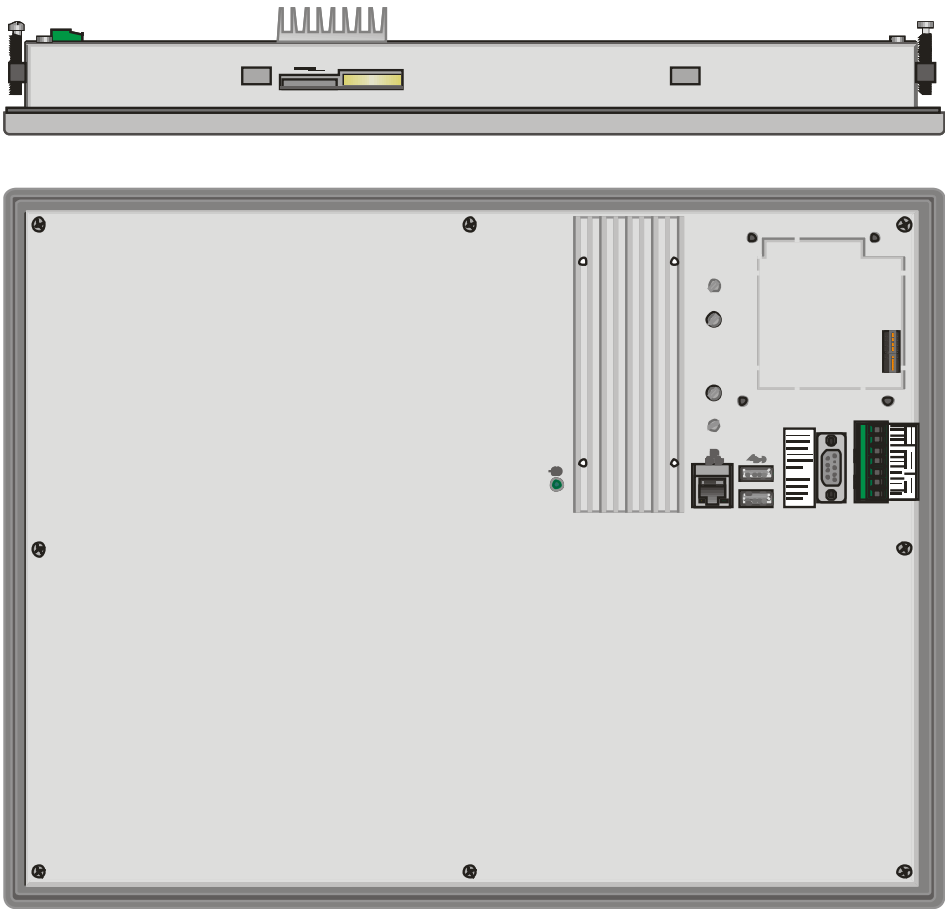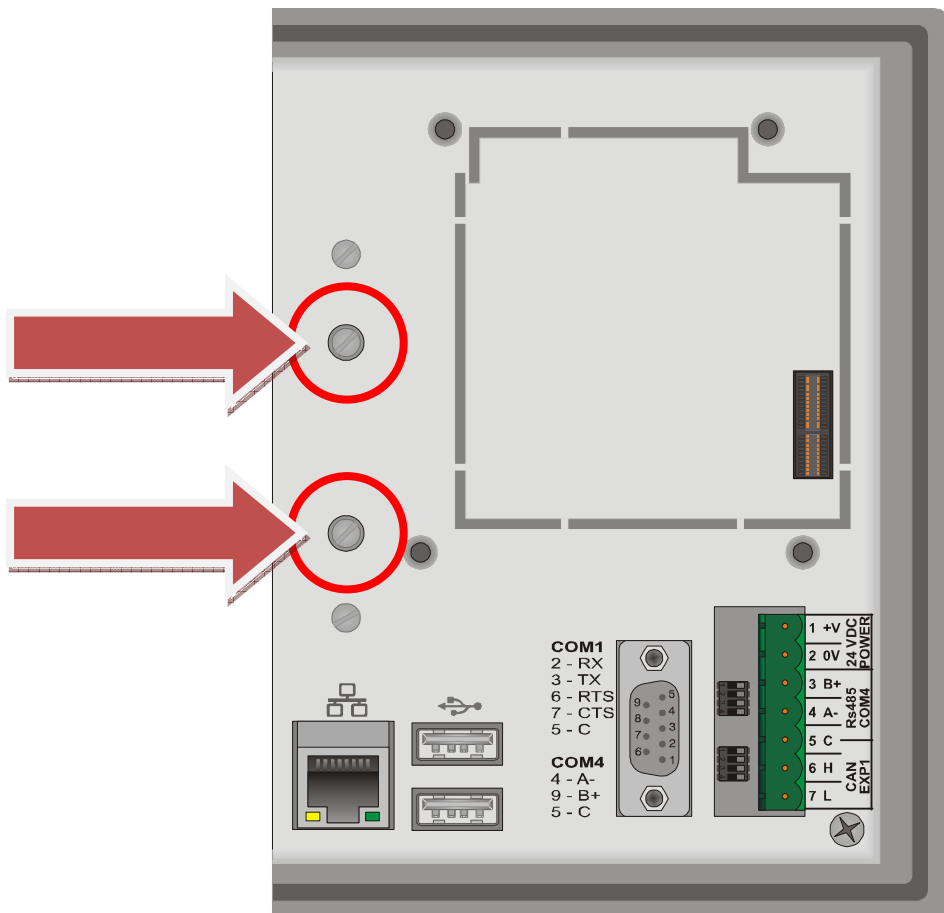2
1

1 +V
2 0V
3 B+
4 A-
5 C
6 H
7 L

24 VDC
POWER
Rs485
COM4
CAN
EXP1

6.6 Terminal block M1

	M1
1	Positive power supply of device
2	Ground power supply of device
3	Rs485+ opto-isolated
4	Rs485+ opto-isolated
5	Isolated ground for serial
6	CAN H opto-isolated serial
7	CAN L opto-isolated serial

6.7 Ethernet connection

RJ45 connector.
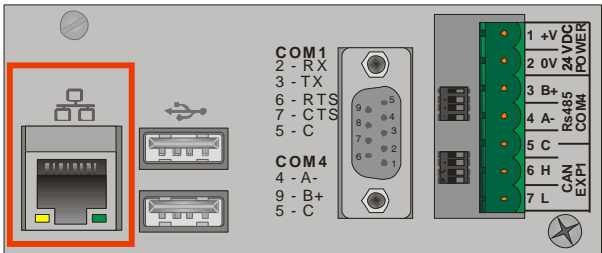
The Ethernet Connector 10/100 Base-T is available on the rear side of Terminal. It allows to connect the device to local network.
Green led indicates that "link" is available and the device is connected to the network.
Yellow led indicates that data transmission/receipt is in progress.

6.8   USB connections

The device is provided with 3 USB 2.0 connectors (one on the front and two on the rear side)
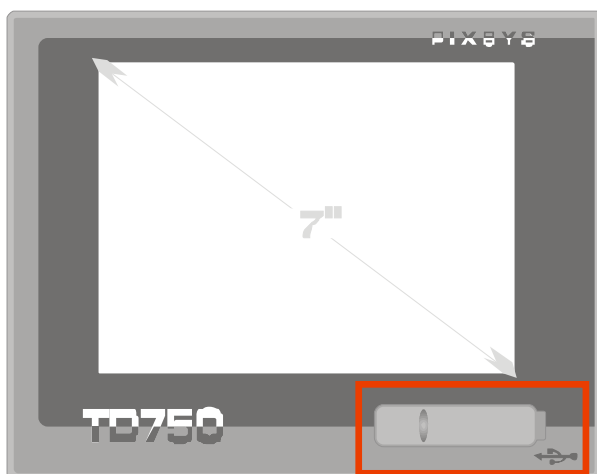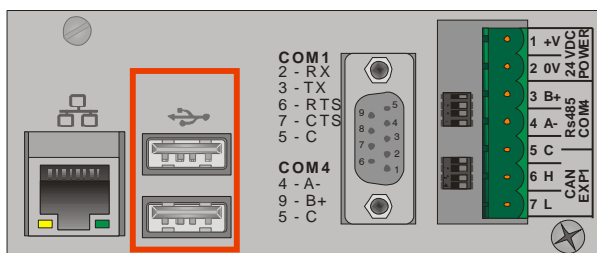
The connector located on the front panel is protected by a silicon cover, it allows to connect plug&play peripheral devices also when the Terminal is panel-mounted.
USB Peripheral devices include keyboards, mouse, serial converters, barcode readers etc.
The total max. current available on the 3 USB connectors is 500mA.

6.9   COM1 RS232 connector

		COM1 RS232	
COM1 2 - R X 3 - T X 6 - R T S 7 - C T S 5 - C **COM4** 4 - A - 9 - B + 5 - C	1		
	2	RX	Serial In or Receive Data
	3	TX	Serial Out or Transmit Data
	4	RS-	RS485 – (A)
	5	GNDi	Serial isolated ground
	6	RTS	Request To Send
	7	CTS	Clear to Send
	8		
	9	RS+	RS485 + (B)

6.10 Audio connector

Jack audio 3.5mm
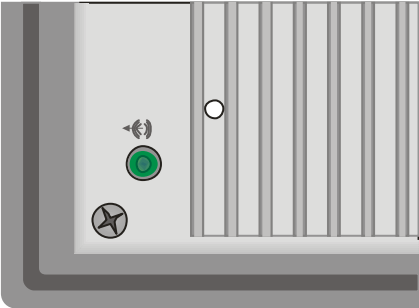
A non-amplified audio stereo output is located on the right side of the device (standard connector 3.5mm).

6.11 SD/MMC connector

SD/MMC reader, push-pull type
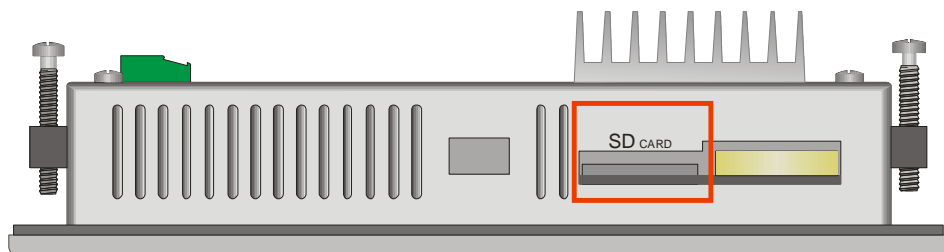
This connector is located on the upper side of the device, beside the battery holder.
It is a push-pull type connector, therefore enter the memory card till a click is produced and release it (see diagram below).
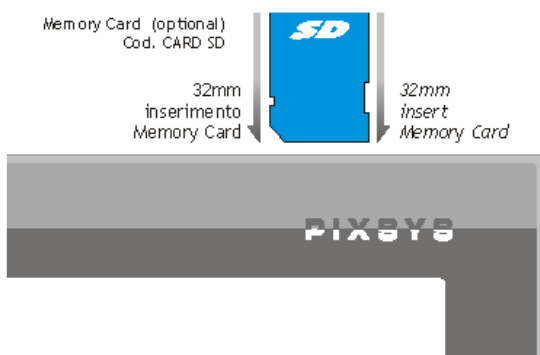
To extract the Memory, press it until a click is produced and pull it.
The device can support SD and MMC memories (both standard and HC mode).

6.12 BIOS battery
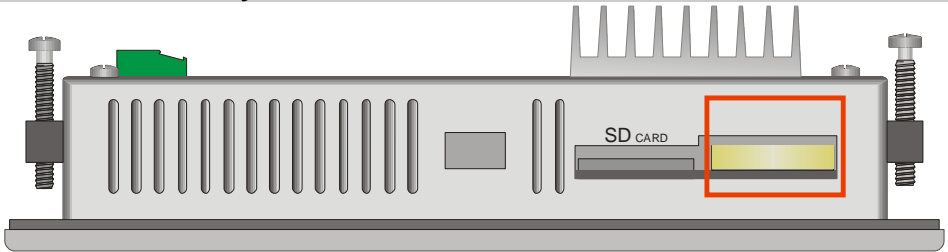
To store data the CPU uses a CR2032 lithium battery.
Battery life is approx. of 4 years; once discharged some anomalies can be noticed (ex. incorrect time setting and/or wrong visualization on LCD).

To avoid these anomalies it is suggested to replace the battery (also with device connected to the power supply).

Device allows an easy battery replacement thanks to an extraction box which can be removed using a blade screwdriver:
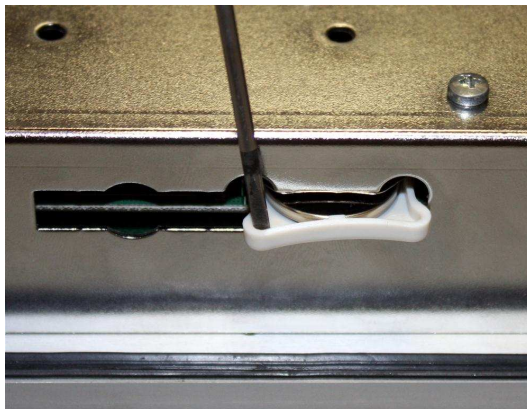
Enter battery into the box as showed:

Check the entering side:

If a configuration loss is noticed consult "BIOS configuration" chapter to re-configure the instrument autonomously.

6.13   Installing data acquisition modules

It is possible to connect two different data acquisition modules:

- **ETD-EXP** expansion module on proprietary BUS
- **Mini PCI Express** expansion on proprietary BUS

A specific driver is required for **ETD-EXP** expansion on proprietary BUS
and for the use of a **CAN** bus.
For further informations contact Pixsys technical service.

6.13.1 Expansion connection through ETD-EXP bus

The **ETD-EXP** connector allows to connect rapidly a proprietary data
acquisition module.

ETD-EXP connector is showed in the figure:
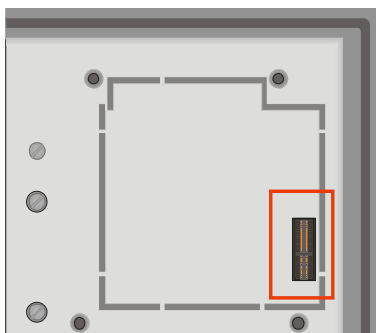
To connect a data acquisition module which uses an **ETD-EXP**
connector follow the steps below:
- switch the device off, disconnecting power supply
- enter the expansion module into the proper connector
- fix the four screws provided with the expansion
- connect the device to power supply
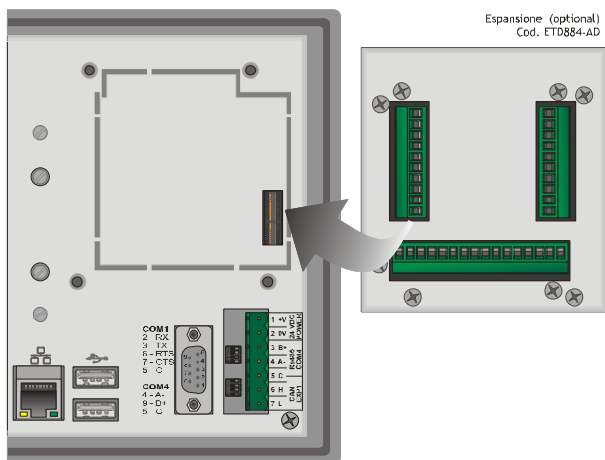
6.13.2 Mini PCI Express connection

Into the same place of **ETD-EXP** it is possible to install also **Mini PCI Express** modules like WiFi expansion **ETDWIF-AD** and expansion **ETD2RS232-AD** which allows to add two RS232 ports on DB9 connector.
To install **Mini PCI Express** it is necessary to found the proper connector cutting the metal box as indicated in the figure.
A cover plate **ETDHCLEXP** is available if expansion has to be removed.
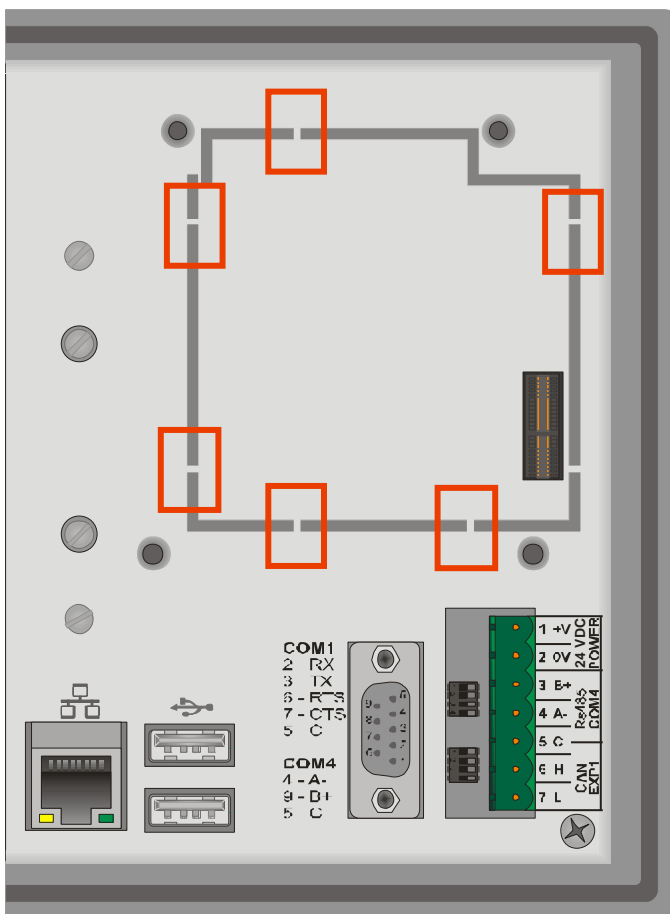
To install the expansion modules follow the steps below:

1. Remove the **ETDHCLEXP** cover

2. Connect cables to the Mini PCI Express
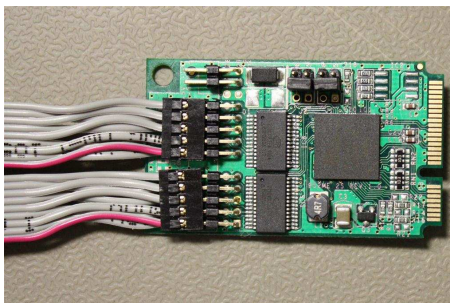
3. Place the module on the connector and press to hook it on the support
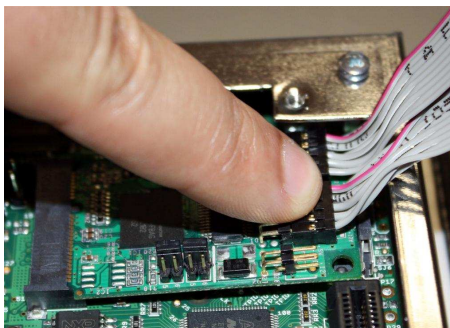
4. Place expansion cover near fixing holes (ATTENTION: Do not pinch the cables)

5. Fix the cover with the provided screws

If expansion has to be removed, place the cover **ETDHCLEXP** as indicated in the figure:

7   Setting of dip-switches

Device is provided with some internal dip-switches (which may be accessed through special holes on the box), allowing the user to configure some device functions.

N.B.: Switch the device off and disconnect the power supply before proceeding with any hardware setting.

7.1   DIP4 – Disconnecting RS485 line from DB9
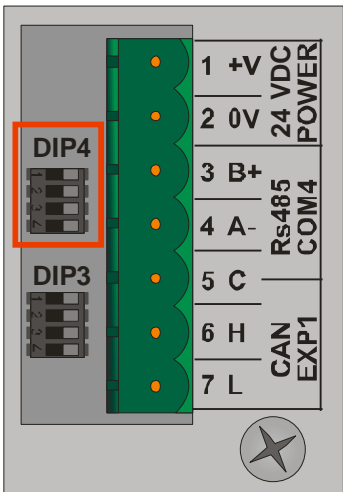
DIP4 allows to disconnect RS485 line from DB9 connector and keep it connected only to the power supply connector.

ON ■ 4 ■ 3 ■ 2 ■ 1 OFF	RS485 line connected. Default settings.
ON ■ 4 ■ 3 ■ 2 ■ 1 OFF	RS485 line disconnected.
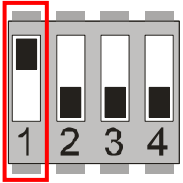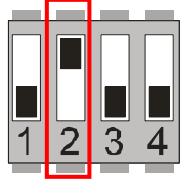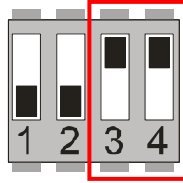
7.2 DIP3 – Serial lines terminations

DIP3, placed next to the terminal block, allows to select the configuration of serial lines terminations.
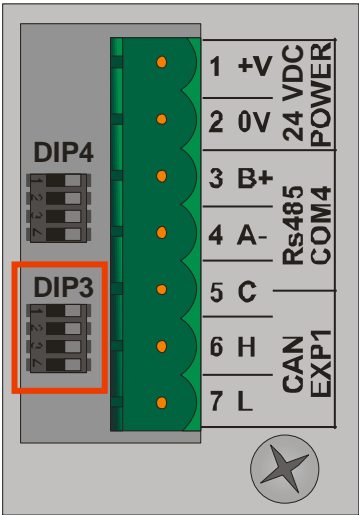
The following table shows dip-switch optional settings:

Input type	Dip-switch	Notes
Disabled	ON / 1 2 3 4 / OFF	Default settings. Termination and polarizators of lines CAN and RS485 disabled.

CAN Termination		Closes between lines CANH and CANL a termination resistor of 120 Ohm.
RS485 Termination		Closes a 330 Ohm termination resistor between RS485+ and RS485-. To be placed **if the device is used as Slave** and if it is the last device on RS485 line.
RS485 Polarization		Closes polarization resistors on RS485 line. **If device is used as Master** on RS485 line.
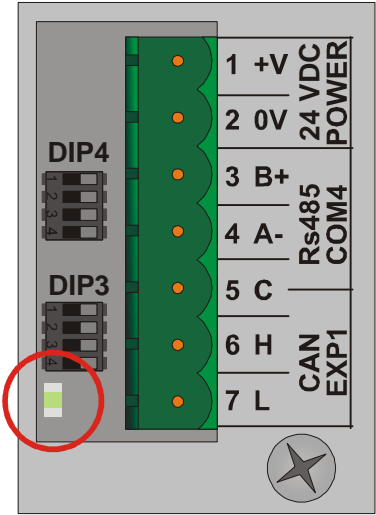
Beside DIP3 there is a green led which indicates that data are being received on RS485. In this case the LED is ON only if dip 3 and 4 of DIP3 are set to ON, with consequent polarization of RS485 line.

7.3 POWER SUPPLY

7.3.1 Assisted shut-down

The assisted shut-down of the system ensures a correct terminal shutdown in case of power failure.
Device stops automatically when there is a power failure longer than 250mSec.
An internal accumulator allows device to manage correctly (**within a 6Sec limit**) all writing operations on disk before switching-off.
Installed operating system is configured to force closing of all applications and open files after 2Sec from power failure

It is important to verify if the installed application is conceived to be closed correctly and to complete all writings on disk when systems stop signal is given.

7.3.2 Automatic restart
An internal circuitry restarts device automatically after a system stop.
The only way to stop device is removing the power supply.
It is possible to deactivate this function operating on the proper Dip-Switch.

7.3.3 DIP1 configuration
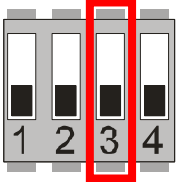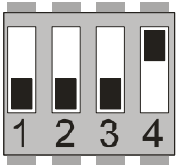
DIP1 is located on the lower back side of device beside the Jack audio hole.
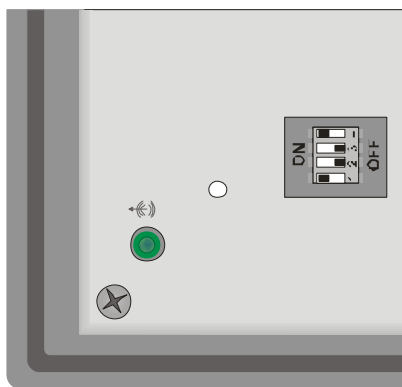
This dip-switch allows to configure the hidden key placed on the frontal side of USB port and the automatic switching-on function.

The following table shows the optional DIP settings:

Dip-switch	Mode
ON 1 2 3 4 OFF	**DIP1.1** : If **ON** enables the automatic switch-on, if **OFF** the device has to be switched-on through the hidden frontal key.
ON 1 2 3 4 OFF	**DIP1.2** : Hidden frontal key used to force the device switch-on and the switch-off (**ONLY TD750**) **Don't enable if DIP1.4=ON** On **TD850/TD900** this setting is enabled and cannot be modified.
ON 1 2 3 4 OFF	**DIP1.3 : DO NOT USE, keep it on OFF**
ON 1 2 3 4 OFF	**DIP1.4** : Hidden frontal key used to force the device RESET **(ONLY TD750).** **Don't enable if DIP1.2=ON** On **TD850/TD900** this setting is enabled and cannot be modified. For the key functioning make reference to the proper chapter.

8 SERIAL PORTS CONFIGURATION

To configure the two serial ports refer to the "Device Manager" configuration utility which can be entered through "System Properties".

The peripherals list at "Ports (COM & LPT)" shows the two communication ports as devices "USB Serial Port (COM1) and "USB Serial Port (COM4)".

As per default setting COM1 refers to the RS232 port, while COM4 refers to the RS485 port.
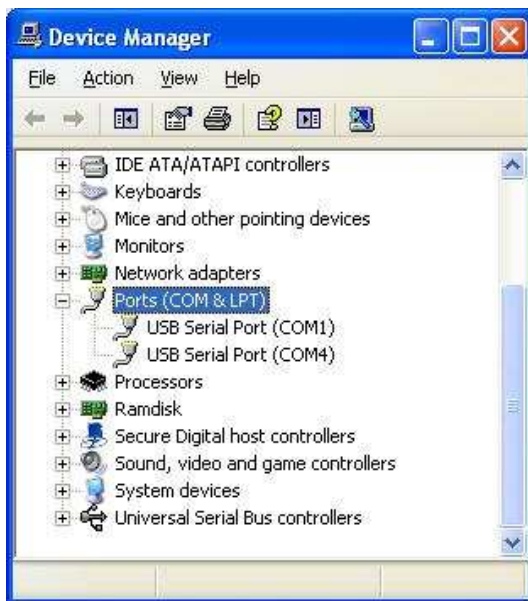
"Port Settings" on menu allows to configure the serial port default settings. This settings can be modified by the same program.

Pressing the key "Advanced" it is possible to modify the serial port advanced settings:

- COM Port Number : it is the name related to the port RS232 (COM1) and RS485 (COM4) and can be modified.
- Latency Timer (mSec) : it is the time elapsed between the data writing on the port and its transfer on the serial line.

Below the default settings:

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9 TOUCHSCREEN

9.1 Touch-screen configuration

The device is provided with a touch-screen display.

To configure the touch-screen and its calibration it is necessary to enter the pre-installed control panel.

"Right click" on of windows task bar allows to open Control Panel.
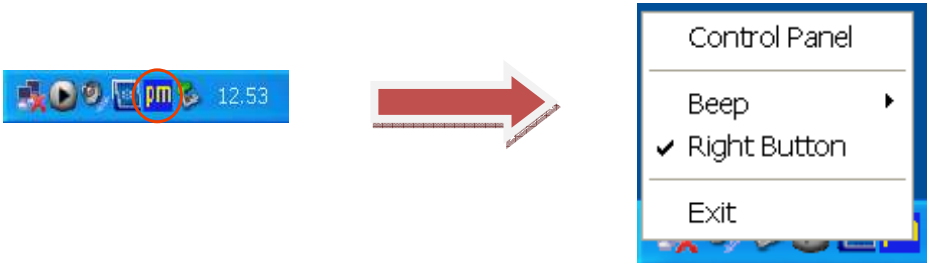
Select "PenMount 6000 USB" device
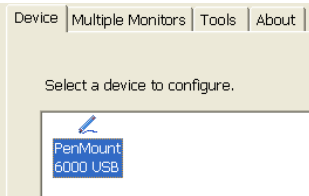
Go to "Setting" window to configure different touch properties.

9.2 Touch-screen operation

Touch-screen works as a "Mouse", a short pressure on the desktop corresponds to the "Left click".

Otherwise, "Right click" can be created through a long pressure (2-3 Sec.) or thanks to a Mouse icon placed on the SystemTray.
These two modes can be enabled or disabled independently.

NB. Pressure duration and dimensions of selected area can be modified.

If the mouse icon is used, the driver allows to decide if keep it placed on the SystemTray or overlay on display.

Enabling "Right Button" from the menu which can be entered with a click on , a semi-transparent icon will appear on display or on the SystemTray.
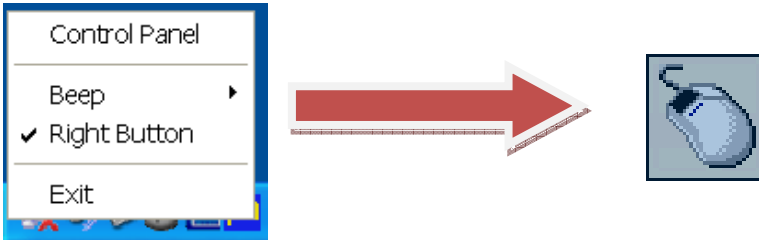
A click on enables the next click as **"Right click"**.

A right click will be generated after a long pressure on a desktop point (function configurable by Control Panel).

On the lower side of "Setting" window it is possible to:

- Enable/Disable double-click whit a long pressure on a point.
- Establish time to be elapsed for an event creation.
- Define area where, after a pressure, it is possible to move without exit from "Right-click" mode (NB. A wide area is more confortable to click but laying is less accurate).

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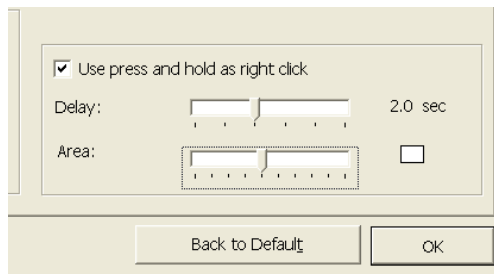
9.2.1   "Mouse Emulation" or "Click on Touch".

The upper side of "Setting" window allows to select some other different settings.
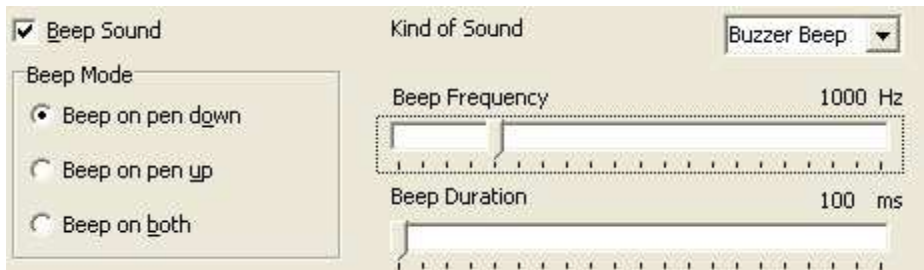
Touch Mode includes "Mouse Emulation" and "Click on Touch".

MOUSE EMULATION: Touch works as a mouse allowing both area selection by dragging the layer and a single click on a point.

CLICK ON TOUCH: Layer cannot be dragged but it is moved rapidly on the pressed point.

9.3   Beep sound

Control Panel allows to enable a Beep Sound if touch is pressed.

Available options are:
- **Beep Sound**: Enable or disable beep sound.
- **Beep Mode**: Allows to choose if create a beep sound on pen down, on pen up or on both cases.
- **Kind of Sound**: Allows to produce a normal "Buzzer Beep" or a WAVE sound that can be addressed to the buzzer or to the system audio output.
- **Beep Frequency** & **Beep Duration**: Determinates frequency and duration of each produced beep.

9.4   Touch calibration

If the touch is not perfectly calibrated this operation can be done manually, by entering this configuration form.
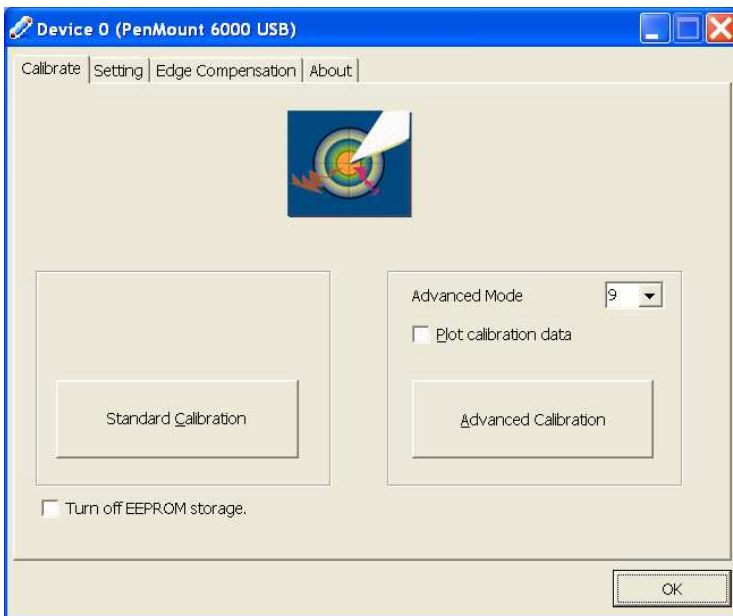
Two calibration types are available:
- **Standard Calibration**: Allows to calibrate the touch using 4 measure points.
- **Advanced Calibration**: Pressing "Advanced Mode" it is possible to execute calibration using up to 25 measure points.

"Advanced Mode" calibration has to be enabled by "Tools" tab which can be entered form main page of configuration program (see "Tools" chapter).

"Turn off EEPROM storage" allows not to save calibration data into controller memory (useful during a test).
"Plot Calibration Data" at calibration end visualizes a graphic to determinate touch linearity.
Black lines indicate ideal linearity while blue lines indicate real linearity.

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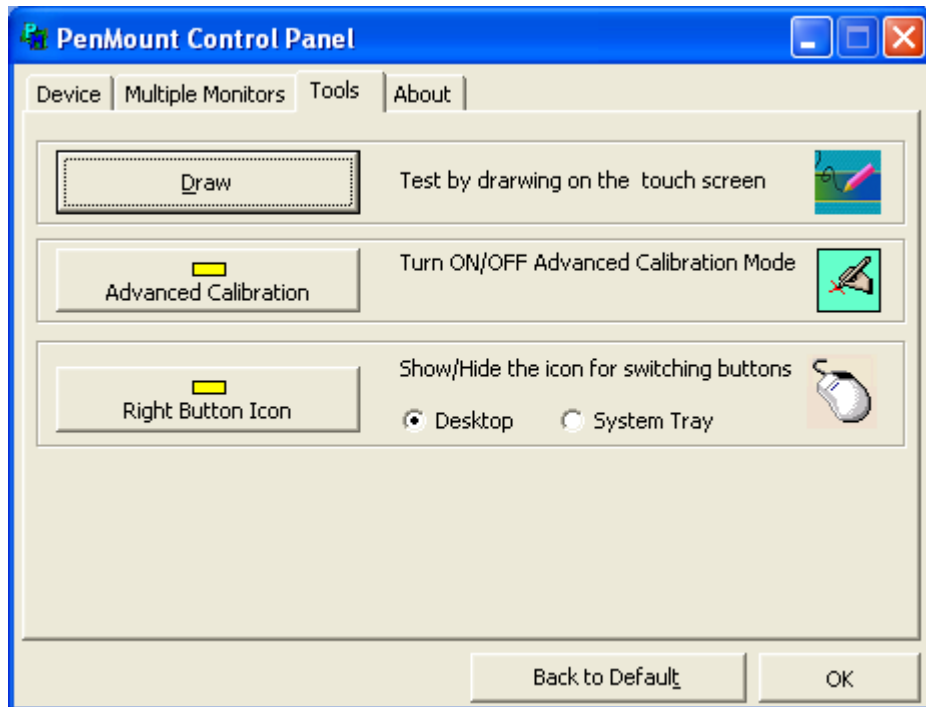
This form allows to:
- **Draw**: open a test window to verify touch functioning.
- **Advanced Calibration**: enable advanced calibration mode on "Calibrate" panel.
- **Right Button Icon**: enable right click pressing a mouse icon which can be moved on "system tray" (bar located on the lower right side of desktop beside the clock) or kept "free" on a desktop point.

10 Remote assistance

All Pixsys devices are provided with a software application which allows our technicians to access the PC for remote assistance.
This type of access can be done only if there is an Internet connection.
It is possible to uninstall this service following Windows standard procedure.

The program results active as system service and (if it is active) its icon appears on the SystemTray.

With a double click on the icon this window will be opened:

Under "Your ID" the program visualizes a number which will be used by the operator to identify your terminal.
If this window will appear, verify Internet connection.

With a "Right click" on the icon it is possible to enter program settings through "Options".
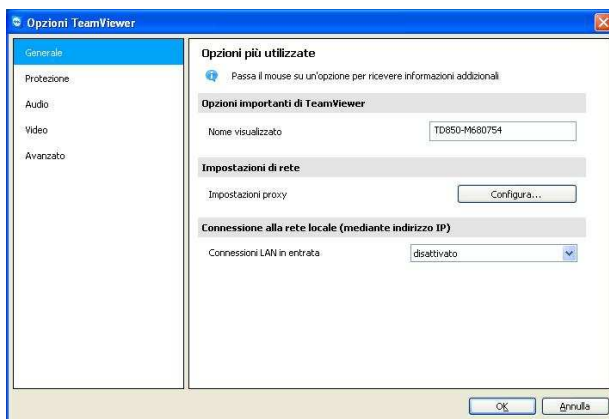
Into "General" window, "Visualized name" is the name which will be used to identify your terminal by our operator associated to the ID.

As per previous figures our operator will visualize a device with ID "973 935 063" and name "TD850-M680754".
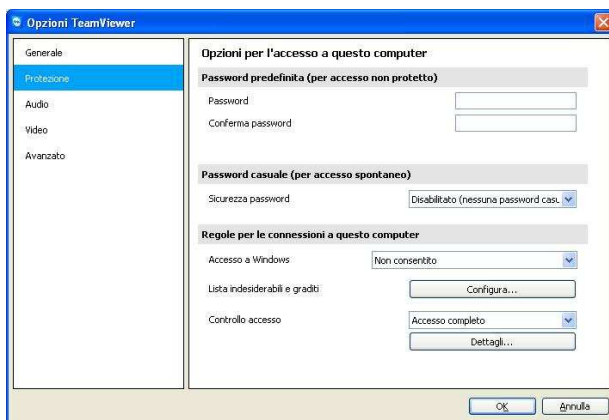
Into "Protection" window it is possible to enter a password which allows to a third user to enter the terminal from remote knowing its ID and Password.

11 AutorunDelay application

AutorunDelay application is preinstalled on the terminal.
This program manages the start of the applications through the reading of the apposite configuration files.

After a predetermined time, the program executes the commands of all autorun.dsk files of the system.

The advancement bar indicates the time interval on which it is possible to realize the operations allowed by the visualized key.
When time expires the application continues in background with the icon ♦ on the traybar.

The key "DISABLE Autorun.dsk" allows to lock temporarily, up to the next restart, the execution of the commands selected on all autorun.dsk files and also to lock the start of all the applications from the fixed units.

Once inserted the password (1234), press "SETUP" key to enter the configuration menu.

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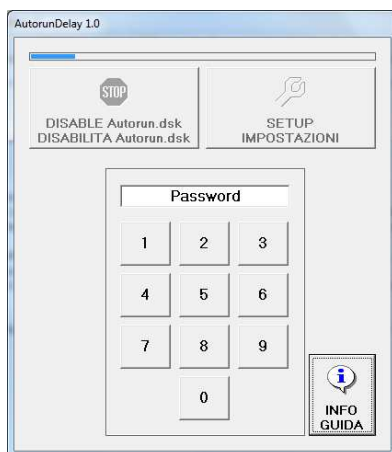
From this window it is possible to:

- choose how to start the AutorunDelay program, with or without windows desktop
- select/remove the protection on "C" disk writing (when allowed)
- restart the PC
- esc from configuration
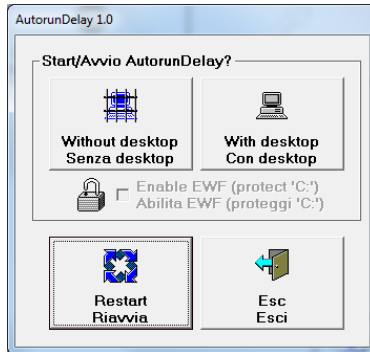
Configuration files can reside in any fix or removable unit of the terminal, but imperatively on the unit root (ex. in c:\ , in d:\ - not into a folder).
These files can be different, according to the chosen execution mode.

11.1 autorun.dsk

The **autorun.dsk** file is read and executed only once at AutorunDelay start.

This type of file resides in a not removable peripherals and allows to start automatically the main application.

11.2 autorun.usb

The **autorun.usb** file is executed only once by AutorunDelay when it is noticed.

This type of file resides in USB keys or in removable peripherals and allows to start upgrade or backup procedures.

11.3 autorun.menu

Processing **autorun.menu**, AutorunDelay will show a window where to choose the starting application.

This file has to be placed on the root of the removable unit.

For any further information, refer to the AutorunDelay user manual, which can be accessed by the same program.

12 Software upgrade and restore

12.1.1 Restore default settings

This function, which can be done by USB key, allows to cancel all data saved on the terminal and to re-install the operative system.
Useful when the hard-disk or the operating system have been damaged (ex. virus; user errors).

To start the procedure:
1. Switch the device OFF and hold the complete system stop.
2. Switch the device ON (with no USB key entered).
3. Enter the USB Key when the first digits are visualized on display (after 1-2 Sec.).
4. The USB key LED prolonged flashing indicates that data are being loaded.

5. At the end of loading, this window is showed:
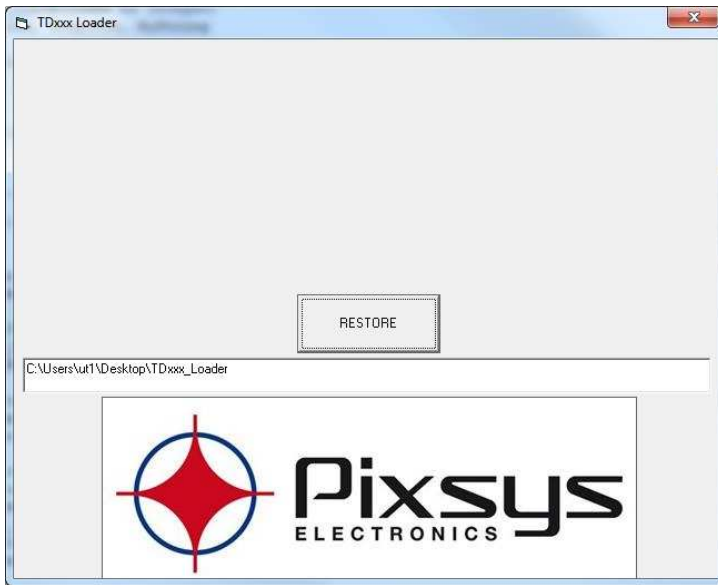
6. Press "RESTORE" and the follow program indications.
7. When procedure ends switch the device OFF, remove the USB key and restart it.

If this procedure has not been started correctly and device loads the operating system, it is necessary to disconnect the power supply and to repeat the procedure starting from point 2.

12.1.2 USB-KEY for software upgrade

An USB Key is available (and can be provided on demand) which allows to update the installed application through the AutorunDelay program preinstalled on the PC.

To start the updating procedure it is necessary to enter the USB Key on the apposite port of the terminal and follow the instructions on display.

For any further information, refer to the USB Key user manual.

12.2 Precautions

The operative system restore procedure **will eliminate all user data**, a preventive backup is suggested.

During the updating procedure it is necessary to follow the indications provided with the dedicated key.
This procedure allows the data backup and the consequent system restore.

For any further information, contact our technical assistance.

13 BIOS Configuration

BIOS (Basic Input-Output System) is a group of CUP Q7 softwares providing a series of basic functions which allow operating system and program to enter hardware and peripherals integrated on mother board. This program allows CPU to switch-on, recognize all system components and direct their interaction with the operating system.

Some of these functions are configurable through a proper setup program which can be entered at starting pressing **F2** on the keyboard.

Below are showed BIOS default settings windows.
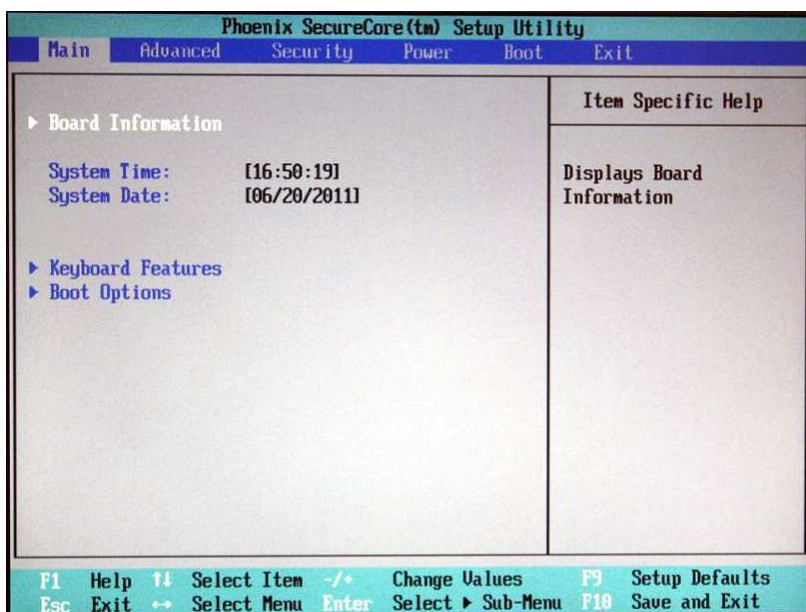
```
          Phoenix SecureCore(tm) Setup Utility
 Main

┌─────────────────────────────────────┬────────────────────────┐
│       Keyboard Features              │   Item Specific Help   │
│                                      │                        │
│  NumLock:                  [On]      │  Selects Power-on state│
│  Key Click:                [Disabled]│  for NumLock           │
│  Keyboard auto-repeat rate: [30/sec] │                        │
│  Keyboard auto-repeat delay: [1/2 sec]│                       │
│                                      │                        │
└─────────────────────────────────────┴────────────────────────┘
 F1  Help  ↑↓  Select Item  -/+   Change Values    F9  Setup Defaults
 Esc Exit  ↔   Select Menu  Enter Select ▶ Sub-Menu F10 Save and Exit
```

```
          Phoenix SecureCore(tm) Setup Utility
 Main

┌─────────────────────────────────────┬────────────────────────┐
│         Boot Options                 │   Item Specific Help   │
│                                      │                        │
│  Summary screen:           [Disabled]│  Display system        │
│  Boot-time Diagnostic Screen: [Enabled]│ configuration on boot │
│  QuickBoot Mode:           [Disabled]│                        │
│  Hard Disk Pre-Delay:      [Disabled]│                        │
│  Extended Memory Testing   [None]    │                        │
│  POST Errors:              [Enabled] │                        │
│                                      │                        │
└─────────────────────────────────────┴────────────────────────┘
 F1  Help  ↑↓  Select Item  -/+   Change Values    F9  Setup Defaults
 Esc Exit  ↔   Select Menu  Enter Select ▶ Sub-Menu F10 Save and Exit
```

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```
            Phoenix SecureCore(tm) Setup Utility
  Main    Advanced    Security    Power    Boot    Exit

                                          Item Specific Help

   Installed O/S:                [WinXP]
   Reset Configuration Data:     [No]
   Large Disk Access Mode:       [DOS]      Select the operating
   Small LBA-Disk CHS Translation: [No]     system installed
   On-board LAN:                 [Enabled]  on your system which
     PXE OPROM:                  [Disabled] you will use most
   Serial ATA OPROM:             [Enabled]  commonly.
   Serial ATA Mode:              [Compatible]
   SDIO Controller Boot OPROM:   [Enabled]  Note: An incorrect
                                            setting can cause
  ▶ Cache Memory                            some operating
  ▶ CPU Control Sub-Menu                    systems to display
  ▶ Chipset Control Sub-Menu               unexpected behavior.
  ▶ Video (Intel IGD) Control Sub-Menu
  ▶ I/O Device Configuration
  ▶ ACPI Control Sub-Menu
  ▶ Watchdog Options                    ▼

  F1   Help  ↑↓  Select Item  -/+  Change Values   F9   Setup Defaults
  Esc  Exit  ↔   Select Menu  Enter Select ▶ Sub-Menu F10  Save and Exit
```

```
            Phoenix SecureCore(tm) Setup Utility
         Advanced

            Cache Memory                  Item Specific Help

   Memory Cache:            [Enabled]     Sets the state of the
   Cache System BIOS area:  [Write Protect] memory cache.
   Cache Video BIOS area:   [Write Protect]

   Cache D000 - D3FF:       [Disabled]
   Cache D400 - D7FF:       [Disabled]
   Cache D800 - DBFF:       [Disabled]
   Cache DC00 - DFFF:       [Disabled]
   Cache E000 - E3FF:       [Disabled]

  F1   Help  ↑↓  Select Item  -/+  Change Values   F9   Setup Defaults
  Esc  Exit  ↔   Select Menu  Enter Select ▶ Sub-Menu F10  Save and Exit
```

```
                    Phoenix SecureCore(tm) Setup Utility
       Advanced

           CPU Control Sub-Menu                        Item Specific Help

    Hyperthreading:                  [Enabled]      Enabling Hyperthreading
    Processor Power Management:      [Enabled]      activates additional
      Enhanced C-States Enable:      [Enabled]      CPU threads.  These
      Timestamp Counter Updates:     [Enabled]      threads may appear as
                                                    additional processors
    Thermal Control Circuit:         [TM1 and TM2]  but will share some
    DTS Enable:                      [Enabled]      resources with the
                                                    other threads within
    No Execute Mode Mem Protection   [Enabled]      the physical package.
    Intel(R) Virtualization Technology [Disabled]
    Set Max Ext CPUID = 3            [Disabled]

    PROCHOT# Enable:                 [Enabled]


    F1   Help   ↑↓  Select Item  -/+   Change Values   F9   Setup Defaults
    Esc  Exit   ↔   Select Menu  Enter Select ▶ Sub-Menu F10 Save and Exit
```

```
                    Phoenix SecureCore(tm) Setup Utility
       Advanced

           Chipset Control Sub-Menu                   Item Specific Help

  ▶ PCI Express Control Sub-Menu                  These items control
  ▶ PCI Control Sub-Menu                          various PCI Express
  ▶ USB Control Sub-Menu                          Devices.

    HD Audio Controller:           [Disabled]
    SDIO Controller:               [Enabled]

    Pop Up Mode Enable:            [Disabled]

    Memory Throttling              [50%]


    F1   Help   ↑↓  Select Item  -/+   Change Values   F9   Setup Defaults
    Esc  Exit   ↔   Select Menu  Enter Select ▶ Sub-Menu F10 Save and Exit
```

Advanced

PCI Express Control Sub-Menu	Item Specific Help

CI Express - Root Port 1:   [Enabled]
 PCI Express - Root Port 2:   [Enabled]

oot Port ASPM Support: [Disabled]

Control the PCI Express
Port via this setup
option.

Disabled - Port always
           disabled.
Auto   - Only enable
           if card
           found.

Note that if Root
Port 1 is disabled,
Root Port 2 will be
disabled as well.

Help   ↑↓ Select Item   -/+   Change Values   F9   Setup Defaults
Exit   ↔   Select Menu   Enter Select ▶ Sub-Menu F10 Save and Exit

---

Phoenix SecureCore(tm) Setup Utility

Advanced

PCI Control Sub-Menu	Item Specific Help

PCI IRQ line 0: [Auto Select]
PCI IRQ line 1: [Auto Select]
PCI IRQ line 2: [Auto Select]
PCI IRQ line 3: [Auto Select]
PCI IRQ line 4: [Auto Select]
PCI IRQ line 5: [Auto Select]
PCI IRQ line 6: [Auto Select]
PCI IRQ line 7: [Auto Select]

Select which Interrupt
should be assigned to
this PCI Irq.

Devices:
PCIe Ports

F1   Help   ↑↓ Select Item   -/+   Change Values   F9   Setup Defaults
Esc Exit   ↔   Select Menu   Enter Select ▶ Sub-Menu F10 Save and Exit

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Advanced

USB Control Sub-Menu	Item Specific Help

USB 1.1 Ports Enabled: [Port 0-5]
USB 2.0 Ports: [Enabled]

USB Client (depends on USB_HC_SE):   [Disabled]

Item Specific Help

Select the number of
UHCI ports that
should be enabled.

Port 0-1 = Dev 29, Fun 0
Port 2-3 = Dev 29, Fun 1
Port 4-5 = Dev 29, Fun 2

NOTE: Port 1 in the
Chipset is equivalent
to Port 2 on the Qseven
connector.
NOTE: Port 2 in the
Chipset is equivalent
to Port 1 on the Qseven
connector.

F1   Help   ↑↓ Select Item   -/+   Change Values   F9   Setup Defaults
Esc Exit   ↔   Select Menu   Enter Select ▶ Sub-Menu F10   Save and Exit

Advanced

Video (Intel IGD) Control Sub-Menu	Item Specific Help

IGD – Device 2:   [Auto]
IGD – Boot Type: [VBIOS Default]
IGD – S3 Popup: [Disabled]

Pre-Allocated Memory Size: [8MB]

IGD – LCD Panel Type: [800x600, 1PPC, 1]
IGD – Panel Scaling: [Auto]

Backlight Brightness: [80%]

Item Specific Help

Enable or Disable
the Internal Graphics
Device by setting item
to the desired value.

F1   Help   ↑↓ Select Item   -/+   Change Values   F9   Setup Defaults
Esc Exit   ↔   Select Menu   Enter Select ▶ Sub-Menu F10   Save and Exit

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```
                  Phoenix SecureCore(tm) Setup Utility
          Advanced

             ACPI Control Sub-Menu                    Item Specific Help

   Passive Cooling Trip Point:    [63  C]          This value controls
     Passive TC1 Value:           [0]              the temperature of
     Passive TC2 Value:           [10]             the ACPI Passive Trip
     Passive TSP Value:           [2]              Point - the point
   Critical Trip Point:           [63  C]          in which the OS will
                                                   begin thottling the
   FACP - RTC S4 Flag Value:      [Enabled]        CPU.
   FACP - PM Timer Flag Value:    [Enabled]
                                                   NOTE: When the DTS is
   HPET Support:                  [Enabled]        enabled, only values
     HPET Base Address:           [0xFED00000]     below 90C are valid.


   F1   Help   ↑↓  Select Item   -/+   Change Values   F9   Setup Defaults
   Esc  Exit   ↔   Select Menu   Enter  Select ▶ Sub-Menu  F10  Save and Exit
```

```
                  Phoenix SecureCore(tm) Setup Utility
          Advanced

                Watchdog Options                      Item Specific Help

   Watchdog delay:           [30 seconds]          After watchdog is
   Watchdog timeout:         [30 seconds]          activated, it waits
   Watchdog start on boot:   [No]                  the selected delay
                                                   time before starting
                                                   to decrement the
                                                   timeout period.


   F1   Help   ↑↓  Select Item   -/+   Change Values   F9   Setup Defaults
   Esc  Exit   ↔   Select Menu   Enter  Select ▶ Sub-Menu  F10  Save and Exit
```

```
                Phoenix SecureCore(tm) Setup Utility
   Main    Advanced    Security    Power    Boot    Exit

                                                    Item Specific Help

   Supervisor Password Is:   Clear
   User Password Is:         Clear
                                              Supervisor Password
   Set Supervisor Password   [Enter]          controls access to the
   Set User Password         [Enter]          setup utility.
   Password on boot:         [Disabled]



   F1   Help   ↑↓  Select Item  -/+   Change Values   F9   Setup Defaults
   Esc  Exit   ↔   Select Menu  Enter  Select ▶ Sub-Menu  F10  Save and Exit
```

```
                Phoenix SecureCore(tm) Setup Utility
   Main    Advanced    Security    Power    Boot    Exit

                                                    Item Specific Help

   After Power Failure:     [Power On]

   Power Button Wake:       [Always]           Sets the mode of oper-
   Sleep Button Wake:       [S3 Only]          ation if an AC/Power
   Wake Signal:             [Off]              Loss occurs.
   LID Switch Wake:         [S3 Only]
   LID Switch Polarity:     [Standard]

   ▶ Hardware Monitor



   F1   Help   ↑↓  Select Item  -/+   Change Values   F9   Setup Defaults
   Esc  Exit   ↔   Select Menu  Enter  Select ▶ Sub-Menu  F10  Save and Exit
```

```
┌────────────────────────────────────────────────────────────┐
│            Phoenix SecureCore(tm) Setup Utility            │
│                          Power                             │
├──────────────────────────────────┬─────────────────────────┤
│        Hardware Monitor          │   Item Specific Help    │
│                                  │                         │
│  CPU Temperature Sensor   55 °C  │  All items on this menu │
│  Board Temperature Sensor 54 °C  │  cannot be modified in  │
│                                  │  user mode. If any      │
│  Fan Speed              STALLED  │  items require changes, │
│                                  │  please consult your    │
│                                  │  system Supervisor.     │
│                                  │                         │
├──────────────────────────────────┴─────────────────────────┤
│ F1  Help  ↑↓  Select Item  -/+  Change Values  F9  Setup Defaults │
│ Esc Exit  ↔   Select Menu  Enter Select ▶ Sub-Menu F10 Save and Exit │
└────────────────────────────────────────────────────────────┘
```
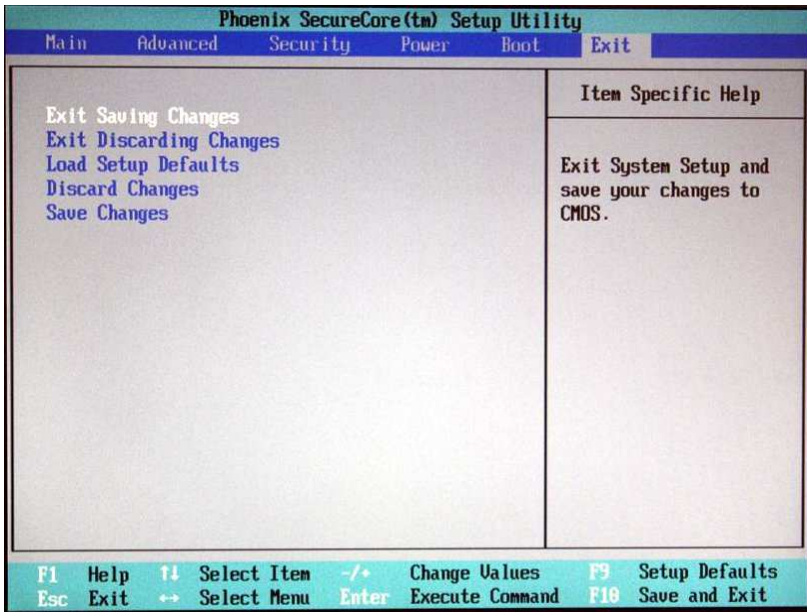
```
┌────────────────────────────────────────────────────────────┐
│            Phoenix SecureCore(tm) Setup Utility            │
│  Main    Advanced   Security   Power    Boot    Exit      │
├──────────────────────────────────┬─────────────────────────┤
│                                  │   Item Specific Help    │
│  Boot priority order:            │                         │
│   1:  USB FDC:                   │  Keys used to view or   │
│   2:  USB KEY:                   │  configure devices:     │
│   3:  USB CDROM:                 │  Up and Down arrows     │
│   4:  USB HDD:                   │  select a device.       │
│   5:  PCI SCSI: SanDisk SSD P4 8 │  <+> and <-> moves      │
│   6:                             │  the device up or down. │
│   7:                             │  <f> and <r> specifies  │
│   8:                             │  the device fixed or    │
│  Excluded from boot order:       │  removable.             │
│    :  IDE HDD:                   │  <x> exclude or include │
│    :  PCI BEV:                   │  the device to boot.    │
│    :  Bootable Add-in Cards      │  <Shift + 1> enables or │
│    :  IDE CD:                    │  disables a device.     │
│                                  │  <1 - 4> Loads default  │
│                                  │  boot sequence.         │
├──────────────────────────────────┴─────────────────────────┤
│ F1  Help  ↑↓  Select Item  -/+  Change Values  F9  Setup Defaults │
│ Esc Exit  ↔   Select Menu  Enter Select ▶ Sub-Menu F10 Save and Exit │
└────────────────────────────────────────────────────────────┘
```

```
                 Phoenix SecureCore(tm) Setup Utility
  Main      Advanced     Security     Power      Boot      Exit

                                              Item Specific Help

     Exit Saving Changes
     Exit Discarding Changes
     Load Setup Defaults                   Exit System Setup and
     Discard Changes                       save your changes to
     Save Changes                          CMOS.




  F1   Help   ↑↓  Select Item   -/+   Change Values    F9   Setup Defaults
  Esc  Exit   ↔   Select Menu   Enter  Execute Command  F10  Save and Exit
```

14 Notes / Updates

Read carefully the safety guidelines and programming instructions
contained in this manual before using/connecting the device

$C\epsilon$ $_c\text{(U}_\text{©}\text{L)}_\text{US}$

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