

JARLTECH

ISO 9001 Certified Lead with technology Win customers with service

Touch POS System SERIES 8802

Vewsion: 1.0



MANUAL

Table of Contents:

Chapter 1 Specification introduction	2
Chapter 2 Appearance	3
Chapter 3 Installation	5
Chapter 4 Commands for Peripheral Controlling	70
Chapter 5 Hardware Configuration	73
Chapter 6 Hardware Specification	
Appendix – Power supply	

CHAPTER 1 Specification Introduction

Preview

Jarltech is defining the New Age of POS with its integrated TouchPOS. The 8802 is designed on NB base with Intel Celeron M processor 1.5 GHz, One slot of DDR DIMM memory max up to 1GB; 12.1" TFT-LCD with resistive touch screen; built-in VGA, LAN chip, Internal IDE Hard disk (20GB or above); includes Magnetic card reader and 20X2 customer VFD display, XGA 1024 x 768 Resolution, wireless 802.11 b/g.

Thus designation helps user easy and comfortable to handling. Its multi-functional capability makes it suitable for software developments under Windows XP, XP Embedded, XP professional for Embedded, WIN 2000 professional Embedded, WIN NT 4.0, Linux, Redhat 7.2, WIN98, ME.

The brand new Touch POS 8802 has been designed with all advantages from JARLTECH POS series, but less cost to customer with its interactive transaction, RFID and smart card reader design provides multiple clerk access and customer database management, suitable and superior for super-market; hotel; convenience store; restaurants and any organization or store that needs point of service. Following description helps user understand what integrated part in 8802 TouchPOS.

Notes:

Must to adjust display setting in BIOS first.

Advanced Chipset Features On-Chip VGA Setting _____ Boot Display [CRT+LCD] _____ Panel Type [1024x768 18Bit 1CH]





COM1/COM2: Standard DB9 PIN Serial port

Mouse: PS2 mouse socket

K/B: PS2 Keyboard socket

USB: USB port X 2

VGA: 15 Pins VGA Connector

LAN: Ethernet connector

Multi-Media: Line Out / MIC / Line-In

CD1/CD2: Cash Draw 1(beside S/W) and Cash Draw 2

S/W: Switch button – S/W1 S/W2; \downarrow = ON, \uparrow = OFF (Default S/W1=OFF, S/W2=OFF)

Power: Connect to ATX power supply

CAUTION:While installing any additional hardware device, please make sure to shut down the computer power. (USB device is not subject to the limits.)

CHAPTER 3 Driver Installation

Touch Drivers



Insert CD Rom and select driver & manual folder.

C:\Documents and Settings\88	05\Desktop\Driver&Manua	ils	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools	Help		A
🕝 Back - 🕥 - 🏂 🔎 Se	arch 😥 Folders 🛄 🕇		
Address 🛅 C:\Documents and Settings\8	805\Desktop\Driver&Manuals		💌 🄁 Go
File and Folder Tasks 🛛 😵	Mother board	Touch Driver	
Other Places			
 Desktop My Documents Shared Documents My Computer My Network Places 			
Details 🛞			
Touch Driver File Folder			
Date Modified: Today, January 15, 2006, 9:11 PM			

Select Touch driver folder.

8802 Touch POS



Access setup of 519d2166xp2k.exe



Skip out the previous setup screen and select next step.



After installation

System will require reboot

select "YES"



When first time complete Touch installation, require processing the cursor accuracy calibration, Search for the Touchset utility shortcut on the desktop and select Touchset utility to set up.

TouchSet Set-up	Utility	?
Function Touch	Beep Soun	d About
Configuration	Calibration	Touch Sensitivity
Communication Inter	rface Set-up	
Communication	n Interface:	
COM4 Po	rt	Scan
Stream Mode Localization	O Point	: Mode
Languager		
English	×	
l		
	Close Ca	ncel Apply

When configuration window appear, select the language which you desire

(As above selected picture explanation)

TouchSet Set-up Ut	ility	?
Function Touch	Beep Soun	d About
Configuration	Calibration	Touch Sensitivity
Controller Features	store Calibration	Parameters
Calibration Set-up	ccuracy Required	ts 025-Points
Touch Panel Draw To Paint Drawi	est ng Test	Calibrate
Cic	ose Ca	ncel Apply

Than to select calibration function and select numbers of calibration point first (above picture shows select by 4 numbers) next to click on calibrate button.



The screen will shows as above picture, use the Touch pen to point on dot to align the cursor, if the actual alignment has too much difference than the system will skip back to previous screen and require calibration once again.



The numbers of the calibration point shows on the screen will depend on the number you have set previously, after complete system will skip back to desktop (if the cursor still not accurate please repeat the calibration again).

IDE Drivers



Insert CD Rom and select driver & manual file folder.



Select the mother board folder.

🗁 Mother board 📃 📃	a 🗙
File Edit View Favorites Tools Help	-
Search i Search i Folders	
Address C:\Documents and Settings\8805\Desktop\Driver & Manual\Mother board File and Folder Tasks Rename this folder Move this folder Move this folder Copy this folder Copy this folder Publish this folder to the Web Share this folder Share this folder Distribution User Manuals VGA	Go
Delete this folder Other Places Driver & Manual My Documents Shared Documents My Computer My Network Places	
Details IDE File Folder Date Modified: Today, September 19, 2006, 10:42 AM	

And select IDE folder.



Access the infinst_autol.exe



When the setup screen appears than to select next step.

License Agreement	
Piedse read the following license agreement calefully.	
Press the PAGE DOWN key to see the rest of the agreement.	
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User) IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING. Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loadii using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software. Please Also Note: Do you accept all the terms of the preceding License Agreement? If you choose No, setup will close. To install Intel(R) Chipset Software Installation Utility, you must accept agreement.	g or V the t this
A Rack Yes	No

Select yes to accept authorization agreement.

Setup 🛛	
Readme Information	
Readme.txt	
XVANUAUXANANANANANANANANANANANANANANANANAN	
NOTE: For the list of supported chipsets, please refer to the Release Notes	
InstallShield	
<pre></pre>	

Select next step to accept the software understanding agreement.



After installation

System will require reboot

select "YES"

🗁 Mother board	
File Edit View Favorites Tools Help	
Search i Search i Folders	
Address C:\Documents and Settings\8805\Desktop\Driver & Manual\Mother board File and Folder Tasks Rename this folder Move this folder Move this folder Opy this folder to Publish this folder to Publish this folder's files Delete this folder Other Places Shared Documents My Documents Shared Documents My Computer My Network Places	Go
Details (*) IDE File Folder Date Modified: Today, September 19, 2006, 10:42 AM	

And select IDE folder.



Select the mother board folder.

😂 Mother board			
File Edit View Favorites Tool	s Help		
🚱 Back 🔹 🕥 - 🏂 🔎	Search 😥 Folders 🛄 🕶		
Address 🛅 C:\Documents and Setting	gs\8805\Desktop\Driver & Manual\Moth	ner board	💌 🋃 Go
File and Folder Tasks 🙁	DE IDE	Lan	
Rename this folder			
Copy this folder	Sound	USB	
Publish this folder to the Web	User Manuals	VGA	
🖂 E-mail this folder's files			
X Delete this folder			
Other Places 🙁			
Driver & Manual			
My Documents			
My Computer			
My Network Places			
Details			
Sound File Folder Date Modified: Today, September 19, 2006, 10:35 AM	~		

Select SOUND folder.

😂 Sound			
File Edit View Favorites Tools	Help		
🚱 Back 🔹 🕥 - 🏂 🔎 Se	earch 😥 Folders 🛄 🕶		
Address 🛅 C:\Documents and Settings\8	8805\Desktop\Driver & Manual\Mother	board\Sound	💌 🋃 Go
File and Folder Tasks	2,258 KB	HDR File 27 KB	<u>^</u>
Rename this file Move this file Conv. this file	data2 1 KB	engine32 531 KB	
Publish this file to the Web	GETDXVER	EX_File 337 KB	
Conter Places	layout BIN File 1 KB	Text Document 22 KB	
Mother board	SetCDfmt	setup Setup.exe Macrovision Corporation	
Computer My Computer My Network Places	Configuration Settings 3 KB	INX File 318 KB	
Details 🛞	setup.ibt IBT File 446 KB	ISN File 245 KB	
setup Application Date Modified: Wednesday,	setup.iss ISS File 1 KB	SetupEx Configuration Settings 1 KB	
April 06, 2005, 6:39 PM Size: 118 KB	SOLINDMAN 16 × 16 Icon		~

Access the SETUP.



When the setup screen appears click the next step.



Above screen shows the setup process.



After installation

System will require reboot

select "YES"

LAN Drivers



Select mother board folder.



Select LAN folder.



Access the SETUP.



When the setup window appear than to select the next step.

REALTEK GbE & FE Ethernet	PCI NIC Driver - InstallShield Wizard	
Ready to Install the Program The wizard is ready to begin ins	tallation.	
	Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to wizard.	exit the
Install Shield	K Back Install Cance	

When the next setup window appears again select the setup to continue the setup

process.

	Lan			Ξ×
File	Bac Setup Status	net PCI NIC Driver - InstallShield Wizard	×	A *
Add	dress			→ Go
	File a File a	The InstallShield® Wizard is installing REALTEK GBE & FE Ethemet PCI NIC Driver		
	Applic Date	Cancel		
	07, 21 Size: 118 KB			

Above screen shows the installation process window.


After installation complete select "finish".

VGA Drivers



Insert CD Rom and select driver & manuals file folder.



Select mother board folder.

😂 Mother board			
File Edit View Favorites Too	ols Help		
🕝 Back 🔹 🕥 🕤 🏂 🔎	Search 🌔 Folders 🛄 🕶		
Address 🛅 C:\Documents and Settin	gs\8805\Desktop\Driver & Manual\Moti	ner board	💌 🋃 Go
File and Folder Tasks 🙁	DE IDE	Lan	
Rename this folder Move this folder Copy this folder	Sound	USB	
 Publish this folder to the Web Share this folder E-mail this folder's files 	User Manuals	VGA	
X Delete this folder			
Other Places 🛞	=		
 Driver & Manual My Documents Shared Documents My Computer My Network Places 			
Details 🔹			
VGA File Folder Date Modified: Today, September 19, 2006, 10:35 AM	 ✓ 		

Select VGA folder.



Access win2k_xp141950.exe



When setup window appear select the next step.



When next setup window appear select the next step to continue setup.

Intel(R) Graphics Me	edia Accelerator Driver	
	Intel(R) Graphics Med	lia Accelerator Driver
	intel.	License Agreement Please read the following license agreement carefully. Press the Page Down key to view the rest of the agreement. INTEL SOFTWARE LICENSE AGREEMENT (DEM / IHV / ISV Distribution & Single User) IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING. Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software. Please Also Note: * If you are an Original Equipment Manufacturer (DEM), Independent Hardware Vendor (IHV), or Independent Software Vendor (ISV), this complete LICENSE AGREEMENT applies; You must accept all of the terms of the license agreement in order to continue the setup program. Do you accept the terms?

When setup window appear select the next step.



After installation

System will require reboot

select "YES"

SmartCard Reader Driver



Right click ''My Computer'' and select the Properties.

System Re	n Restore Automatic Updates		Remote
General	Computer Name Hardware		Advanced
Device Man	ager		
S Th on pro	e Device Managerlis your computer. Use operties of any device	ts all the hardware devic the Device Manager to c	es installed hange the
		Device M	anager
Dri CO	ver Signing lets you r	nake sure that installed d	TRUCTO DEC
Hardware Pr	mpatible with Windov w Windows connects Driver Signing	vs. Windows Update lets s to Windows Update for Windows	you set up drivers. Update
Hardware Pr	mpatible with Window w Windows connects Driver Signing ofiles ardware profiles provid ierent hardware confi	vs. Windows Update lets s to Windows Update for Windows de a way for you to set up gurations.	you set up drivers. Update
Hardware Pr	mpatible with Window w Windows connects Driver Signing ofiles ardware profiles provid ferent hardware confi	vs. Windows Update lets s to Windows Update for Windows de a way for you to set up gurations. Hardware	you set up drivers. Update

Select "Device Manager".

🚇 Device Manager		
File Action View Help		
← → 🔟 🗳 🖨 😫 📚	88	
POS-8805 Computer Disk drives Disk drives Disk drives DVD/CD-ROM drives Floppy disk controllers Human Interface Devices Human Interface Devices Keyboards Mice and other pointing devices Mice and other pointing devices Network adapters Network adapters Cher devices Human Li® 4000B Eingerprint Bit	ader	
USB PC/SC SmartCard Reads USB2.0 WLAN USB-Serial Controller Ports (COM & LPT) Processors Sound, video and game controlle	Update Driver Disable Uninstall Scan for hardware changes Properties	

Select "USB PC/SC SmartCard Reader" and right click to choose "Update Driver.."

Hardware Update Wizard	
	This wizard helps you install software for: USB PC/SC SmartCard Reader If your hardware came with an installation CD or floppy disk, insert it now. What do you want the wizard to do?
	Install the software automatically (Recommended)
State of the local division of the local div	Install from a list or specific location (Advanced)
	Click Next to continue.
	< <u>B</u> ack <u>N</u> ext > Cancel

When the setup screen appears than to select "Advanced" & "Next" step.

Browse For	Folder		? 🛛
Select the fo	older that contains o	drivers for your ha	ardware.
	 ■ ■ ● ●	er&Manuals Driver ifare Driver other board <mark>nartcard USB Driv</mark> uch driver i-Fi Driver	er
To view any	subfolders, click a p	olus sign above.	
		ок	Cancel

Select "Smartcard USB Driver" folder.

Hardware Update Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM)
Include this location in the search:
E:\8805 Driver&Manuals\8805 Driver&Manuals\880 🐱 Browse
O Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back Next > Cancel

When next setup window appear select the next step to continue setup.

Har dwar	e Installation
	The software you are installing for this hardware: IMT5123 PC/SC SmartCard Reader has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
	<u>Continue Anyway</u> <u>STOP Installation</u>

When next setup window appear select the "Continue Anyway" step to continue setup.



Above screen shows the installation process window.



After installation complete select "Finish".

Wi-Fi Driver



Right click "My Computer" and select the Properties.

em Proper	rties			?
System Re	store	Automa	tic Updates	Remote
General	Computer Name Hardware		Advanced	
Device Man	ader			
Th Sector Th on pro	e Device Mana your computer	ager lists all . Use the D device.	the hardware device evice Manager to ch	es installed hange the
			Device Ma	inager
Hardware Pr	Driver Sign	ning) Windows U	Ipdate
🧼 Ha difi	ardware profiles ferent hardware	provide a v e configurati	vay for you to set up ons.	and store
			Hardware F	Profiles
		ОК	Cancel	Apply

Select "Device Manager".

B Device Manager	
File Action View Help	
⊡	~
H Sector Disk drives	
Usplay adapters	
H Ima Interface Devices	
🗉 🚍 IDE ATA/ATAPI controllers	
🗄 🦢 Keyboards	
🗄 🝈 Mice and other pointing devices	
🗄 🧕 Monitors	
🔁 🕎 Network adapters	
U.are.U® 4000B Fingerprint Reader	
USB2 Update Driver	
Disable Disable	
🖅 🤕 Smart ca 🛛 Scan for hardware changes	
🗄 🥘 Sound, v	
庄 🦁 System dProperties	~
Launches the Hardware Update Wizard for the selected device.	

Select "USB2.0 WLAN" and right click to choose "Update Driver.."

Hardware Update Wizard	
	This wizard helps you install software for: USB2.0 WLAN If your hardware came with an installation CD or floppy disk, insert it now. What do you want the wizard to do? Install the software automatically (Recommended) Install from a list or specific location (Advanced) Click Next to continue.
	< <u>B</u> ack <u>N</u> ext > Cancel

When the setup screen appears than to select "Advanced" & "Next" step.

=

Browse For Folder	? 🗙
Select the folder that contains drivers for your hardv	vare,
Mother board Smartcard USB Driver Touch driver	^
Windows_98	
To view any subfolders, click a plus sign above.	cel .::

Select Wi-Fi Driver folder.

Hardware Update Wizard			
Please choose your search and installation options.			
Search for the best driver in these locations.			
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.			
Search removable media (floppy, CD-ROM)			
Include this location in the search:			
C:\Documents and Settings\8805\Desktop\Driver & 🔽 🛛 Browse			
O Don't search. I will choose the driver to install.			
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.			
< Back Next > Cancel			

When next setup window appear select the next step to continue setup.

Har dwa	re Installation
	The software you are installing for this hardware: 802.11b+g USB Wireless LAN Adapter has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.

When next setup window appear select the "Continue Anyway" step to continue setup.



Above screen shows the installation process window.



After installation complete select "Finish".

Mifare Driver

B Device Manager			
File Action View Help			
POS-8805 Computer Disblay adapters DVD/CD-ROM drives Floppy disk controllers Human Interface Devices IDE ATA/ATAPI controllers Keyboards Mice and other pointing devices Monitors Network adapters Other devices U.are.U® 4000B Fingerprint Reader USE-Serial Controllers Processors Smart card read Sound, video an System devices System devices Processors System devices			
Launches the Hardware Update Wizard for the selected device.	Ì		

Select "USB-Serial Control" and right click to choose "Update Driver.."



When the setup screen appears than to select "Advanced" & "Next" step.

Browse For Folder	? 🛛
Select the folder that contains drivers for your h	hardware.
🖽 👰 My Computer	~
🗉 🧐 My Network Places	
🖃 🛅 Driver & Maual	
Mifare Driver	
🗉 🛅 Mother board	
🚞 Smartcard USB Driver	
🗉 🚞 touch driver	
🗷 🛅 Wi-Fi Driver	
To view any subfolders, click a plus sign above.	Cancel

Select Mifare Driver folder.

Please cho	ose your search and installation options.
 Search 	h for the best driver in these locations.
Use th paths	ne check boxes below to limit or expand the default search, which includes local and removable media. The best driver found will be installed.
	Search removable media (floppy, CD-ROM)
	Include this location in the search:
	C:\Documents and Settings\8805\Desktop\Driver & 🗸 🛛 Browse
O Don't Choos the dr	search. I will choose the driver to install. The this option to select the device driver from a list. Windows does not guarantee the wer you choose will be the best match for your hardware.
	<pre>< Back Next > Cancel</pre>

When next setup window appear select the next step to continue setup.

Har dwar	e Installation
	The software you are installing for this hardware: Prolific USB-to-Serial Bridge has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.

When next setup window appear select the "Continue Anyway" step to continue setup.



Above screen shows the installation process window.



After installation complete select "Finish".

CHAPTER 4 Commands for Peripheral Controlling

RS232 Protocol: 9600, N, 8, 1

Follow the Jarltech standard command: Send : <ESC> <Command code> <Length> <Data> Response: <ESC> <Status code> <length> <data>

Note: 8802 controller return a beep after power on, delay about 3 sec then urn on the Main TFT Backlight, return another beep and then start to receive the RS232 commands.

Read products Model Name

Command : <ESC><00h> Length & Data don't need.

- Response : <ESC><00h><07h><JP-8802>

Read Products Version info

Command : <ESC><01h> Length & Data don't need.

Response: <ESC><01h> <Length depends on data ><8802 POS V1.0>

Beeps command:

Command : <ESC><22h><01h><data> <Data> = 00h ~ FFh , means how many beeps. Response: <ESC><22h><01h><data>

Sound command:

Command : <ESC><24h> <02h><m><n> m: tempo (ASCII DEC 1~255) n: Frequency (ASCII DEC 1~255) Response: <ESC><24h><02h><m><n>

Example: <ESC><24h><02h><dec 2><dec 191> for play sound "Do"

Example Sound frequency Table:

Do	Re	Mi	Fa	So	La	Si
				G-:255	A-:227	B-:202
C : 191	D:170	E:151	F:143	G : 127	A : 113	B:101
C+: 95	D+: 85	E+: 75	F+: 71	G+: 63	A+: 57	B+: 50

Open Cash Drawer Command :

Before send command, please confirm the SW1 for provides voltage: - SW1=OFF: 24V (default) SW1=ON: 12V

The SW2 is for setting auto response cash drawer sensor status after trigger cash drawer, or if someone manually to open the cash drawer or close the cash drawer Then controller will auto response status to software application.

SW2=OFF: disable (default) SW2=ON: Enable

Open Cash Drawer 1

Command : <ESC> + 34h (dec 52)

When SW2=ON response: $\langle ESC \rangle + 34h (dec 52) + N$ N = "A" (41h, dec 65), means Cash Drawer 1 is close. N = "B" (42h, dec 66), means Cash Drawer 1 is open.

Open Cash Drawer 2

Command : <ESC> + 35h (dec 53)

When SW2=ON response: $\langle ESC \rangle + 35h$ (dec 53) + N N = "A" (41h, dec 65), means Cash Drawer 2 is close. N = "B" (42h, dec 66), means Cash Drawer 2 is open.

Detect Cash Drawer 1 Sensor Command : <ESC> + 3Ah (dec 58)
Response: **<ESC>** + **34h** (**dec 52**) + **N**

N = "A" (41h, dec 65) , means Cash Drawer 1 is close. N = "B" (42h, dec 66) , means Cash Drawer 1 is open.

Detect Cash Drawer 2 Sensor Command : <ESC> + 3Bh (dec 59)

Response: <ESC> + 35h (dec 53) + N

N = "A" (41h, dec 65), means Cash Drawer 2 is close. N = "B" (42h, dec 66), means Cash Drawer 2 is open.

Turn on the main TFT LCD backlight Command : <ESC> + 38h (dec 56)

Turn off the main TFT LCD backlight Command : <ESC> + 39h (dec 57)

Support Epson command to open the cash drawer:

- 1. [ESC] p m t1 t2
- 2. DLE DC4 n m t

CHAPTER 5

Hardware Configuration

5-1. COMPONENT LOCATIONS

Placement Top View



Bottom View



Jumper Settings

To ensure correct system configuration, the following section describes how to set the jumpers to enable/disable or change functions. For jumper descriptions, please refer to the table below.

Location	Function
JP1	COM1 Signal / Power Selection
JP2	COM2 Signal / Power Selection
JP3	COM3 Signal / Power Selection
JP4	COM4 Signal / Power Selection
JP5	COM5 Signal / Power Selection
JP6	COM6 Signal / Power Selection
JP7	LPT1 Signal / Power Selection
JP8	CFD1 Master / Slave Selection
JP9	Clear CMOS Selection
JP10	LVDS Panel Power Selection

Table 2-1. Jumper Descriptions

JP1 - COM1 Signal/Power Selection (Pitch: 2.54mm):

			Jumper	Setting	Function
				1-3 Short	Pin 1 of COM1 = +12V
1		2	1	3-5 Short	Pin 1 of COM1 = +5V
	00			5-7 Short	Pin 1 of COM1 = +5V
				7-9 Short	Pin 1 of COM1 = DCD
_				2-4 Short	Pin 9 of COM1 = +12V
9		10	2	4-6 Short	Pin 9 of COM1 = +5V
			-	6-8 Short	Pin 9 of COM1 = +5V
				8-10 Short	Pin 9 of COM1 = RI

Table 2-2. JP1 - COM1 Signal/Power Selection Settings

JP2 - COM2 Signal/Power Selection (Pitch: 2.54mm):

1		2
	00	
	00	
9	000	10

Jumper	Setting	Function
	1-3 Short	Pin 1 of COM2 = +12V
	3-5 Short	Pin 1 of COM2 = +5V
1	5-7 Short	Pin 1 of COM2 = +5V
	7-9 Short	Pin 1 of COM2 = DCD@RS232, TX+@RS422, RTX+@RS485
2	2-4 Short	Pin 8 of COM1 = +12V
	4-6 Short	Pin 8 of COM1 = +5V
	6-8 Short	Pin 8 of COM1 = +5V
	8-10 Short	Pin 8 of COM1 = RI

Table 2-3. JP1 - COM2 Signal/Power Selection Settings

			Jumper	Setting	Function
				1-3 Short	Pin 1 of COMx = +12V
1		2	1	3-5 Short	Pin 1 of COMx = +5V
	00		-	5-7 Short	Pin 1 of COMx = +5V
	00			7-9 Short	Pin 1 of COMx = DCD
	pр			2-4 Short	Pin 8 of COMx = +12V
9	ØØ	10	2	4-6 Short	Pin 8 of COMx = +5V
			-	6-8 Short	Pin 8 of COMx = +5V
				8-10 Short	Pin 8 of COMx = RI

JPx - *COMx Signal/Power Selection* (*x* = 3, 4, 5, 6 - *Pitch*: 2.54*mm*):



JP7 - LPT1 Signal/Power Selection (Pitch: 2.54mm):

			Jumper	Setting	Function	
1		2	1	1-2 Short	Pin 4 of LPT1 = ERR#	
	00		-	1-3 Short	Pin 4 of LPT1 = +5V	
			2	4-6 Short	Pin 6 of LPT1 = +5V	
					5-6 Short	Pin 6 of LPT1 = INIT#
9	00	10	3	7-8 Short	Pin 8 of LPT1 = SLIN#	
				7-9 Short	Pin 8 of LPT1 = +5V	

Table 2-5. JP1 - LPT1 Signal/Power Selection

CF Master/Slave Selector (JP8: 3-pin 2.54mm pitch header):

Function	JP1	1	
Master	1-2 Short	2	p
Slave (Default)	2-3 Short	3	0

Table 2-6. CF Master/Slave Setting

Clear CMOS setting (JP9: 2-pin 2.54mm pitch header):

Function	JP2	1	П
Normal (Default)	Open	-	
Clear CMOS	Short	2	\square

Table 2-7. Clear CMOS Setting

Panel Power Selector (JP10: 3-pin 2.54mm pitch header):

Function	JP3	1	
+ 3.3 V (Default)	1-2 Short	2	0
+ 5 V	2-3 Short	3	0

Table 2-8. Panel Power Setting

Connector Pin Definitions

For Main Board connector and header descriptions, please refer to the table below.

Connector	Function
ATX1	ATX Power Connector
CFD1	Compact Flash type I/II Connector
CN1	IrDA Pin Header
CN2	Digital Input / Digital Output Pin Header
CN3	SM Bus Wafer
CN6	Left Audio AMP Output Wafer
CN7	LVDS Backlight Inverter Wafer
CN8	Right Audio AMP Output Wafer
COM2	RS-232 / 422 / 485 Port-2 Box Header
СОМЗ	RS-232 Port-3 Box Header
COM4	RS-232 Port-4 Box Header
СОМ5	RS-232 Port-5 Box Header
СОМб	RS-232 Port-6 Box Header
DIMM1	Primary DDR SO-DIMM Socket
DIMM2	Secondary DDR SO-DIMM Socket
FAN1	FAN 1 Connector
FAN2	FAN 2 Connector
FAN3	FAN 3 Connector
FDD1	Slim Type Floppy Connector
FP1	Power LED Pin Header
FP2	Front Panel Pin Header
IDE1	Primary 44-pin IDE Box Header
IDE2	Secondary 40-pin IDE Box Header
KB1	Internal PS/2 Keyboard Wafer
LVDS1	Channel 1 LVDS Connector
LVDS2	Channel 2 LVDS Connector
MPCI1	Mini-PCI Socket
MS1	Internal PS/2 Mouse Wafer
SW1	External PS/2 KB/MS Switch
USB1	USB Port-2&3 Box Header
USB2	USB Port-4&5 Box Header

Table 2-9. Main Board Connector and Header Descriptions

PIN	SIGNAL	PIN	SIGNAL
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	Ground	13	Ground
4	+5V	14	PS-ON
5	Ground	15	Ground
6	+5V	16	Ground
7	Ground	17	Ground
8	PW-OK	18	-5V
9	5VSB	19	+5V
10	+12V	20	+5V

ATX Power Connector (ATX1: 10x2 pin female):



26

50

Table 2-10. ATX Power Connector pin definition

CompactFlash slot (CFD1):

PIN	SIGNAL	PIN	SIGNAL		
1	GND	2	D3		
3	D4	4	D5		
5	D6	6	D7		
7	CSO#	8	A10		
9	ATASEL#	10	A9		Р
11	A8	12	A7		
13	VCC	14	A6		⊢
15	A5	16	A4	-	::
17	A3	18	A2		
19	A1	20	AO		
21	DO	22	D1		::
23	D2	24	IOCS16#		
25	CD2	26	CD1		::
27	D11	28	D12		
29	D13	30	D14		::
31	D15	32	CS1#		
33	VS1	34	IORD#		::
35	IOWR#	36	WE#	5	••
37	INTRQ	38	VCC		
39	CSEL#	40	VS2#		
41	RESSET#	42	IORDY		п
43	INPACK#	44	REG#		
45	DASP#	46	PDIAG#		
47	D8	48	D9		
49	D10	50	GND		

Table 2-11. CompactFlash Slot pin definition

IrDA Pin Header (CN1: 5x2-pin header 2.54mm pitch):

1		Pin	Signal Name
I		1	+5V
		2	NC
Б	0	3	IRRX
		4	GND
5		5	IRTX

Table 2-12. Digital I/O Pin Header pin definition

Digital I/O Pin Header (CN2: 5x2-pin header 2.54mm pitch):

PIN	SIGNAL	PIN	SIGNAL
1	DOO	2	DIO
3	D01	4	DI1
5	D02	6	DI2
7	D03	8	DI3
9	+5V	10	GND



Table 2-13. Digital I/O Pin Header pin definition

SMBus Wafer (CN3: 2x1-pin Wafer 2.0mm pitch):



Pin	Status
1	SMDAT
2	SMCLK
	Pin 1 2

Table 2-14. SMBus Header pin definition

Left Audio AMP Output Wafer (CN6: 2x1-pin Wafer 2.5mm pitch):

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Pin	Signal Name		
1	Speaker+		
2	Speaker-		

Table 2-15. Left Audio AMP Output Header pin definition

LVDS Backlight Inverter (CN7: 7x1-pin Wafer 2.0mm pitch):

	Pin	Signal Name
⊒↓	1	+12V
•	2	+12V
:	3	+5V
•	4	GND
:	5	GND
	6	Black Light Enable
	7	Back Light Control

Table 2-16. LVDS Backlight Inverter Header pin definition

Right Audio AMP Output Wafer (CN8: 2x1-pin Wafer 2.5mm pitch):





Table 2-17. Right Audio AMP Output Header pin definition

RS232/422/485 Serial Port Header (COM2: 5x2 box header 2.54mm pitch):



Table 2-18. COM2 RS232/422/485 Serial Port Header pin definition

RS232 Serial Port Header (COM3-6: 5x2 box header 2.54mm pitch):



⁽x=3,4,5,6)

Table 2-19. COM3-6 RS232 Serial Port Header pin definition

Fan Connectors (Fan1-3: Wafer 2.54mm pitch):

PIN	SIGNAL
1	RPM
2	+12V
3	GDN

	1
0	2
0	3

Table 2-20. Fan Connectors pin definition

Power LED Pin Header 1 (FP1: 2x1-pin 2.54mm pitch):



Table 2-21. Power LED Pin Header 1 pin definition

Front Panel Pin Header 2(FP2: 5x2-pin 2.54mm pitch):

PIN	SIGNAL	PIN	SIGNAL	
1	HDD LED +	2	Power LED +	
3	HDD LED -	4	Power LED -	
5	Reset Swatch -	6	Power Switch +	RST_SW + OOO - PWR_SW
7	Reset Swatch +	8	Power Switch -	90110
9	NC	10	Кеу	

Table 2-22. Front Panel Pin Header 2 pin definition

IDE1 Connector (IDE1: 22x2	box header 2.0mm pitch):
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PIN	SIGNAL	PIN	SIGNAL
1	Reset IDE	2	GND
3	IDE Data 7	4	IDE Data 8
5	IDE Data 6	6	IDE Data 9
7	IDE Data 5	8	IDE Data 10
9	IDE Data 4	10	IDE Data 11
11	IDE Data 3	12	IDE Data 12
13	IDE Data 2	14	IDE Data 13
15	IDE Data 1	16	IDE Data 14
17	IDE Data 0	18	IDE Data 15
19	Ground	20	NC
21	DREQO	22	GND
23	IDEIOW#	24	GND
25	IDEIOR#	26	GND
27	IDEIORDY	28	CBSEL
29	DACKO#	30	GND
31	IDEIRQ14	32	NC
33	IDE Address 1	34	PDIAG#
35	IDE Address 0	36	IDE Address 2
37	IDE Chip select 1#	38	IDE Chip select 3#
39	IDE activity	40	GND
41	+5V	42	+5V
43	GND	44	NC



Table 2-23. IDE1 Connector pin definition

81

39

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PIN	SIGNAL	PIN	SIGNAL	
1	IDE RESET	2	GND	
3	DATA7	4	DATA8	10
5	DATA6	6	DATA9	40
7	DATA5	8	DATA10	
9	DATA4	10	DATA11	
11	DATA3	12	DATA12	
13	DATA2	14	DATA13	
15	DATA1	16	DATA14	
17	DATAO	18	DATA15	
19	GND	20	N.C	
21	REQ	22	GND	
23	IO WRITE	24	GND	
25	IO READ	26	GND	
27	IO READY	28	GND	
29	DACK	30	GND	
31	IRQ14	32	N.C	2
33	ADDR1	34	UDMA DETECT	
35	ADDRO	36	ADDR2	
37	CS#1	38	CS#3	
39	LED	40	GND	

IDE2 Connector (IDE2: 20x2 box header 2.54mm pitch):

Table 2-24. IDE2 Connector pin definition

Internal PS/2 KB (KB1: Wafer 2.5mm pitch):

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Pin	SignalName
1	+12V
2	+5V
3	KBCLK_SIO
4	KBDAT_SIO
5	KBCLK_PS2
6	KBDAT_PS2
7	GND

Table 2-25. Internal KB Wafer pin definition

			Pin	Signal	Pin	Signal
Γ		0 2 0 2	1	Strob#, Line printer strobe	2	AutoFeed
			3	PDO, parallel data O	4	Error / +5V Note: Selected by JP7
	00		5	PD1, parallel data 1	6	Initialize / +5V Note: Selected by JP7
			7	PD2, parallel data 2	8	Select In / +5V Note: Selected by JP7
		9	PD3, parallel data 3	10	GND	
			11	PD4, parallel data 4	12	GND
		13	PD5, parallel data 5	14	GND	
	00		15	PD6, parallel data 6	16	GND
	00		17	PD7, parallel data 7	18	GND
25	00	26	19	ACK, acknowledge	20	GND
L]	21	Busy	22	GND
			23	Paper empty	24	GND
			25	Select	26	NC

Parallel Port Box Header (LPT1: 2.54mm):

Table 2-26. Parallel Port pin definition

LVDS1-2 Channel 1-2 Connector (LVDS1-2: Hirose DF13 1.25mm):

Г	וערעו	ъ Г	Signal Name	Pin	Pin	Signal Name
			+3.3V / +5V	1	2	+3.3V / +5V
2	600	1	Note: Selected by JP10	1	2	Note : Selected by JP10
	00		+3.3V / +5V	2	,	+3.3V / +5V
	00		Note:Selected by JP10	5	4	Note: Selected by JP10
	00		LVDS_TX0-	5	6	LVDS_TX3-
	00		LVDS_TX0+	7	8	LVDS_TX3+
	00		GND	9	10	GND
	00		LVDS_TX1-	11	12	LVDS_CLK-
ane.	00	23833	LVDS_TX1+	13	14	LVDS_CLK+
20	00	19	GND	15	16	GND
			LVDS_TX2-	17	18	GND
			LVDS_TX2+	19	20	GND

Table 2-27. LVDS1-2 Connector pin definition

Internal PS/2 Mouse (MS1: Wafer 2.5mm pitch):

	Pin	SignalName
1	1	+5V
	2	MSCLK_SI0
	3	MSDAT_SIO
	4	MSCLK_PS2
	5	MSDAT_PS2
	6	GND

Table 2-28. Internal Mouse Wafer pin definition

External PS/2 KB/Mouse Switch (SW1):



Table 2-29. External PS/2 KB/Mouse switch

USB2-3 Ports Header (USB1: 5x2-pin header 2.54mm pitch):

PIN	SIGNAL	PIN	SIGNAL
1	+5V	2	+5V
3	USBD2-	4	USBD3-
5	USBD2+	6	USBD3+
7	GND	8	GND
9	"key"	10	GND



Table 2-30. USB1 Header pin definition

USB4-5 Ports Header (USB2: 5x2-pin header 2.54mm pitch):

PIN	SIGNAL	PIN	SIGNAL
1	+5V	2	+5V
3	USBD4-	4	USBD5-
5	USBD4+	6	USBD5+
7	GND	8	GND
9	"key"	10	GND



Table 2-31. USB2 Header pin definition

Pin Definitions - Rear Panel

Location	Function	
AUDI01	Audio Phone Jack	
COM1	RS-232 Port-1 DB9 Connector	
CN9	RJ-45 + USB Port-0&1 Connector	
CN11	Mini-DIN PS/2 KB/MS Connector	
VGA1	CRT DB-15 Connector	

Table 2-32. KEOD-4014 Rear Panel Connector Descriptions

Audio Jack Connector (AUDI01: audio jack connector):

COLOR	SIGNAL
Blue	Line-in
Green	Line- out
Pink	MIC-in



Table 2-33. Audio Jack Connector pin definition

COM1 RS-232 Serial Port Connector (COM1: D-Sub 9-pin male):



Pin	Signal		
1	+5V / +12V / DCD, Data carrier detect		
	Note : Selected by JP1		
2	RXD, Receive data		
3	TXD, Transmit data		
4	DTR, Data terminal ready		
5	GND, ground		
6	6 DSR, Data set ready		
7	RTS, Request to send		
8	8 CTS, Clear to send		
9	+5V / +12V / RI, Ring indicator Note: Selected by JP1		

Table 2-34. COM1 RS-232 Serial Port Connector pin definition

PIN	SIGNAL	PIN	SIGNAL
1	Mouse data	2	NC
3	Ground	4	+5V
5	Mouse clock	6	NC

PS/2 Mouse Connector (CN11: 6-pin green Mini DIN):



Table 2-35. PS/2 Mouse Connector pin definition

PS/2 Keyboard Connector (CN11: 6-pin purple Mini DIN):

PI	N	SIGNAL	PIN	SIGNAL
1		Keyboard data	2	NC
3		Ground	4	+5V
5		Keyboard clock	6	NC



Table 2-36. PS/2 Keyboard Connector pin definition

VGA Display Connector (VGA1: D-Sub 15-pin female):

PIN	SIGNAL	PIN	SIGNAL
1	Red	2	Green
3	Blue	4	NC
5	Ground	6	Ground
7	Ground	8	Ground
9	VCC	10	Ground
11	NC	12	DDCData
13	HSync	14	VSync
15	DDCClk		



Table 2-37	. VGA Display Connector pin definition
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RJ-45 + 2 USB0-1 Connector (CN9):

PIN	SIGNAL	PIN	SIGNAL
1	Transmit output (+)	9	+5V
2	Transmit output (-)	10	USB1-
3	Receive in put (+)	11	USB1+
4	NC	12	GND
5	NC	13	+5V
6	Receive input (-)	14	USB2-
7	NC	15	USB2+
8	NC	16	GND



Table 2-38. RJ-45 + 2 USB 2.0 Connector pin definition

CHAPTER 6

Hardware Specification

	Motherboard
CPU	Intel® Celeron® M Processor 1.5GHz
System Memory	2 x DDR 266MHz SODIMMs, maximum 2GB
Chineat	Intel® 852GM Graphic Memory Controller Hub
Chipset	Intel® I/O Controller Hub 4 (ICH4)
Graphics	852GM GMCH internal ; VGA controllerCRT 2048x1536x8bit@60Hz
Chaphics	2 channels LVDS ; Dual Display ; Shared Memory up to 64MB
Network	10/100 Base-T Ethernet RTL8100C
Audio	6-Channel AC'97 Audio CODEC ALC655 ; Stereo 2W Power Amplifier LM4838
BIOS	Award PnP 4Mb Flash with console redirection
Expansion	Mini-PCI Socket x 1
	Storage
HDD	Internal 1 x 3.5" HDD (20G or above) or Internal 2 x 2.5" HDD
Flash Memory	Compact Flash (Type I & II)
	Display
LCD	12.1" TFT
Max. Resolution	1024 x 768
Brightness	250 ~350cd/m ²
Touch Screen	Resistive
	External I/O Ports
USB	6 x USB 2.0 ports for future expansion (2* Internal, 4*External)
Serial	2x User available Com ports (Com 1&Com 2) 。
Parallel	1 x Bi-directional Parallel Port Support ECP/EPP (IEEE 1284)
LAN	1 x RJ-45 Interface(10/100 Base-T Ethernet)
Keyboard	1 x PS/2 keyboard port
Mouse	1 x PS/2 mouse port
2nd VGA Output	VFD Customer Display (20 x 2)
Audio Jack	MIC-in, Line-out, Line-in
Cash Drawer	2 x RJ11 Single/Dual Cashdrawer port(with 12V output.)
	Power
Power Supply	ATX 80W, Input 100V~240V to output 5V/12V power supply
Rower Concumption	60-80W Idle
	(Standard system & secondary LCD panel while accessing HDD).
Power management	I/O peripheral devices support power saving management
	Integrated Options
IDE Peripheral	1 x External IDE Device
Smart Card Reader	1 x Built-In Smart Card Reader, compatible with Microsoft PC/SC (USB Interface)
Magnetic Stripe Reader	1 x Build-In Magnetic Stripe Reader (PS2/KB) : ISO Standard (up to 3 tracks)
Wireless LAN	Wi-Fi IEEE 802.11b/g
	Control/ Indicator
Power Button	1
Power Led	1
HDD Led	1

Physical Dimensions					
Dimension	Physical: 27.5(W) x 29.5(L) x 13.5 (H)cm				
(W)x(L)x(H)cm	Pagage: 34(W) x 53(L) x 53 (H)	cm			
W/eight	N.W: 6 kgs				
weight	G.W: 7 Kgs				
Color	Dark Gray or White				
Environment					
Operating Temperature	0°C∼ 45°C (32°F ~ 113°F)	Storage Temperature	-20° C ~ 60°C (-4°F ~ 140°F)		
Operating Humidity	0% ~ 80% RH non condensing	Storage Humidity	10% ~ 90% RH non condensing		
	Certific	cation			
EMC & Safety	FCC, CE, RoHS, Class B				
Operation Systems					
OS supportWindows XP, XP Embedded, XP Professional for Embedded, WIN 2000 Professional Embedded, WIN NT 4.0, Redhat 7.2, WIN 98/ME, Linux			edded, WIN 2000 Professional Ix		



Appendix I: Power Supplely



80W with 8.6CFM forced air- cooling, 60W convection cooling Compact size with ATX output PG/PF Signal +5V Stand by & Remote On/Off MTBF>130,000 hr. MIL-217F.

1. Description

MPI-806H is a compact size, ATX output power supply for industrial and embedded system application. The device utilizes a thermally efficient U channel chassis design. Designed to be convection cooling but however provided with optional cover and fan for customers' reference.

Output Voltage	Mini. Output Current	Rated Output Current	Max output Current (Note 1)	Line Regulation	Load Regulation	Ripple & Noise p-p (Note 2)	Initial Setting Accuracy (Note 3)
+5V	1A	5A	8A	1%	2%	50mV	5.08V to 5.13V
+12V	0A	1.5A	3A	1%	4%	120mV	11.4V to 12.6V
-12V	0A	0.5A		1%	5%	120mV	-11.4V to -12.6V
+3.3V	0A	4A	6A	1%	4%	50mV	3.10V to 3.50V
+5Vsb	0A	0.75A		1%	4%	120mV	4.80V to 5.20V

Total Output Power: 80W at 50°C environment temperature

Note: 1) The maximum total combined output power on the +3.3V and +5V rails is 40W.

- 2) Measured by a 20MHz bandwidth limited oscilloscope and the each output is connected with a 10µF Electrolytic Capacitor and a 0.1µF Ceramic Capacitor.
- 3) The +5V output is set between 5.08V to 5.13V by variable resistor and all output at 60% rated load and the other Outputs are checked to be within the accuracy range.
- 4) Total maximum load cannot exceed 80W with 8.6 CFM forced air-cooling and 60W convection cooling.

2. Input Specification

Parameter	Conditions/Description	Min.	Nom.	Max	. Units
Input Voltage-AC	Continuous input range.	90 115/	230	264	VAC
Input Frequency	AC input.	47		63	Hz
Hold Up Time	Nominal AC Input Voltage (230VAC), rated load.	20			ms
Input Current	Nominal AC Input Voltage (115VAC/230VAC), rated load.			2/1	А
Inrush Current	Nominal AC Input Voltage (115VAC/230VAC), one cycle at 25°C.		3	0/60	А
Input Protect	Non-user serviceable internally located AC input line fuse.				

3. Output Specification

Parameter	Conditions/Description	Mi	Nom. Max.	Units
		n.		
Efficiency	Rated load, 115VAC. Varies with distribution of loads among output.		70	%
Minimum load		See (Chart of Description	
Ripple & Noise	Rated load, 20MHz bandwidth	See C	Chart of Description	
Output Power	Continuous output power.	See (Chart of Description	
Line Regulation	Less than $\pm 1\%$ at rated load with $\pm 10\%$ changing in input voltage.	See (Chart of Description	
Load Regulation	Measured from 60% to 100% rated load and from 60% to 20%			
	rated load (60% \pm 40% rated load) for each output, and others	See (Chart of Description	
	Voltage setting at 60%.			
Turn-on Delay	Time required for initial output voltage stabilization	0.3	4	Sec

4. Interface Signals and Internal Protection

Parameter	Conditions/Description
Power On/Off	The power supply will be turned on when the power On/Off pin is connected to secondary GND
Power Good Signal	When power is turned on, the power good signal will go high 100ms to 500ms after all output DC
	Voltages are within regulation limits.
Power Fail Signal	The power fail signal will go low at least 1 mS before any of the output voltages fall below the regulation
	Limits.
Over Load Protection	n Fully protected against output overload and short circuit. Automatic recovery upon of overload condition.

5. Safety Approvals, EMI and EMS Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
	UL, UL 60950, 3rd edition				
Safety Approvals	CB, IEC 60950-1		Appro	ved	
	TUV, EN 60950-1: 2001				
Hi-Pot	Input to output	4242			VDC
Hold Up Time	Nominal AC Input Voltage (230VAC), rated load.	20			mS

Radiation	EN 55022 / CISPR 22 & FCC Part 15	В	
Conduction	EN 55022 / CISPR 22 & FCC Part 15	В	Class
EMS	IEC 61000-4-2, 8KV air discharge and 6KV contact discharge	3	
	IEC 61000-4-3, 3V/M	2	
	IEC 61000-4-4, 2KV line & PE	3	
	IEC 61000-4-5, 2KV	3	Level
	IEC 61000-4-6, 10V	3	
	IEC 61000-4-8, 10A/M	3	
	IEC 61000-4-11		

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