MP5000I2 ALL-IN-ONE TOUCH SCREEN COMPUTER SYSTEM

User’s Guide
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1.0 Introduction
The All-in-One touch screen computer with adjustable viewing angle has the flexibility of a PC-based computer and architecture combined with advanced LCD and touch screen technology to form a low cost, small-sized computer that runs all PC-based software. Its unique design allows for ease of use with any applications. With networking capability, this computer is ideal for information kiosk, point of sales, and practically anything one can imagine.

2.0 Standard Features

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Atom™ /Core 2 duo with up to 1.8 GHz front side bus speed CPU’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bios</td>
<td>AMI 16 Mbit SPI BIOS</td>
</tr>
<tr>
<td>Memory</td>
<td>Up to 4 GB, 1X DDR3 1033 SODIMM</td>
</tr>
<tr>
<td>Storage Devices</td>
<td>SATA hard disk drive interface (one 2.5 inch):</td>
</tr>
<tr>
<td></td>
<td>- Three on-board SATA connector with data transmission rates of up to 300 MB</td>
</tr>
<tr>
<td></td>
<td>- Compact Flash – one CF type I/II slot</td>
</tr>
<tr>
<td>Watchdog Timer</td>
<td>Can generate a system reset at 1 ~ 62 second interval.</td>
</tr>
<tr>
<td>CMOS Backup</td>
<td>CMOS data backed up in Flash BIOS to avoid configuration loss</td>
</tr>
</tbody>
</table>

3.0 Input/Output

<table>
<thead>
<tr>
<th>Serial Ports</th>
<th>4X RS-232, 1 internal used for touch screen, 2 external DBB9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parallel Port</td>
<td>1X with EPP/ECP support</td>
</tr>
<tr>
<td>Ethernet Port</td>
<td>2X RJ45 Giga ethernet port</td>
</tr>
<tr>
<td>Keyboard/Mouse</td>
<td>2X PS/2 style connector</td>
</tr>
<tr>
<td>USB</td>
<td>6X USB 2.0 ports, 4 external, 2X internal</td>
</tr>
<tr>
<td>Audio Ports</td>
<td>Line-in, line-out and microphone</td>
</tr>
</tbody>
</table>
4.0 Graphics

<table>
<thead>
<tr>
<th>Display Controller</th>
<th>Intel® mobile GMA3100 integrated graphic interface, up to 384 MB shared RAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>Supports VGA/DVI and flat panel LCD dual displays</td>
</tr>
</tbody>
</table>

5.0 Touch Screen

| Touch Screen | 5 wire resistive technology integrated USB controller, using mouse emulation |

6.0 Power Supply

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>Full range auto sensing 100-250 V, 50-60Hz external power adapter, max. 96W, typical 40~60W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td></td>
</tr>
</tbody>
</table>

7.0 Environment

<table>
<thead>
<tr>
<th>Operating Temperature</th>
<th>0 ~ 40° C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temperature</td>
<td>-20 ~ 60° C</td>
</tr>
</tbody>
</table>

8.0 Physical Dimensions

<table>
<thead>
<tr>
<th>Weight</th>
<th>9 pounds without alloy stand and 16 pounds with stand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>14.25 inches</td>
</tr>
<tr>
<td>Depth</td>
<td>3.0 inches without stand</td>
</tr>
<tr>
<td>Height</td>
<td>10.75 inches without stand</td>
</tr>
</tbody>
</table>
9.0 Optional Accessories

<table>
<thead>
<tr>
<th>Magnetic Stripe Reader</th>
<th>1~3 track HID USB reader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Display</td>
<td>2 lines by 20-character LCD with backlight</td>
</tr>
<tr>
<td>Barcode Scanner</td>
<td>CCD miniature scanner</td>
</tr>
</tbody>
</table>

10.0 Set Up and Installation of the All-in-One

10.1 Unpacking. What you should have:

- ✓ MP5000i2 computer monitor base unit
- ✓ Screws to attach the base unit to the computer monitor
- ✓ Power adapter and power cord
- ✓ Drivers and manual files (included on the hard drive)

10.2 Site Selection:

Consider the following when selecting sites:

- ✓ The area should be well ventilated
- ✓ Avoid glare from bright overhead lighting
- ✓ The system should be placed on a hard surface
- ✓ There should be easy access for power and other cabling requirements

10.3 Installation Checklist:

☐ Route cables through the cast alloy stand and position the cables to the side of the stand
- Insert stand front tabs into slots on back of MP5000i2
- Remove the screw on the center top of the MP5000i2 and use it to secure the stand to the computer

- Route all other peripheral cables through the stand
- Connect them to the MP5000i2 computer. Set the computer in upright position.
- Connect all the peripherals to the cables
- Turn the computer on
- Install operating system software (pre-installed if purchased with system)
- Install software driver’s
- Install application software

11.0 BIOS Introduction
The MP5000i2 BIOS has been integrated into many motherboards and has been very popular for over a decade. People sometimes refer to the AMI BIOS setup menu as BIOS, BIOS setup or CMOS setup. With the AMI BIOS Setup program, you can modify BIOS settings and control the special features of your computer. The Setup program uses several menus for making changes and turning special features on or off. This chapter describes the basic navigation of the setup screens.
11.1 BIOS Setup
The MP5000i2 system has AMI BIOS built in, with a CMOS SETUP utility that allows users to configure required settings or to activate certain system features. The CMOS SETUP saves the configuration in the CMOS RAM of the motherboard. When the power is turned off, the battery on the board supplies the necessary power to preserve the CMOS RAM.

When the power is turned on, press the <Del> button during the BIOS POST (Power-On Self-Test) to access the CMOS SETUP screen.

11.2 BIOS Main Menu
Press <Del> to enter AMI BIOS CMOS Setup Utility, the Main Menu will appear on the screen. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

Control Keys
< ↑ > Move to select item
<Enter> Select Item
<Esc> Main Menu - Quit and not save changes into CMOS
Sub Menu - Exit current page and return to Main Menu
<Page Up/+> Increase the numeric value or make changes
<Page Down/-> Decrease the numeric value or make changes
<F1> General help, for Setup Sub Menu
<F2> Item Help
<F5> Load Previous Values
<F7> Load Setup Defaults
<F10> Save all CMOS changes
11.3 BIOS Operation

The Main BIOS setup screen has two main frames. The left frame displays all the options that can be configured. Grayed-out options cannot be configured; options in blue can. The right frame displays the key legend.

Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

Use the “System time / System date” option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time must be entered in HH:MM:SS format.
11.4 Advanced BIOS Feature

Select the “Advanced” tab from the setup screen to enter the Advanced BIOS Setup screen. You can select any of the items in the left frame of the screen, such as CPU Configuration, to go to the sub menu for that item. You can display an Advanced BIOS Setup option by highlighting it using the <Arrow> keys. All Advanced BIOS Setup options are described in this section. The Advanced BIOS Setup screen is shown below. The sub menus are described on the following pages.

12.0 CPU Configuration

- Max CPUID Value Limit - This item allows you to limit CPUID maximum value. [ Disabled ]
- Execute-Disable Bit Capability - This item allows you to enable or disable the No-Execution page protection technology. [ Enabled ]
- Hyper Threading Technology allows you to enable or disable Intel Hyper Threading technology. [ Enabled ]
- Intel® SpeedStep(tm) tech. When set to disabled, the CPU runs at its default speed, when set to enabled, the CPU speed is controlled by the operating system.
- Intel® C-STATE tech allows the CPU to save more power under idle mode. [ Enabled ]
- CPU idle set to enhanced C-States, disabled by Intel®. C-STATE tech item. [ Enabled ]

13.0 IDE Configuration

- ATA/IDE Configuration can be configured as disabled, Compatible or Enhanced. [ Enhanced ]
- Configure SATA as can be configured as IDE or AHCI. [ IDE ]
- Primary, Secondary, and Third Master/Slave. While entering setup, the BIOS automatically detects the presence of SATA/CF devices. This displays the status of SATA device auto-detection. [ Not Detected ]
- Hard Disk Write Protect - Disable/Enable device write protection. This will be effective only if device is accessed through BIOS. [ Disabled ]
- IDE Detect Time Out (Sec) allows you to select the time out value for detecting ATA/ATAPI device(s). [ 35 ]
AHCI Configuration is a new interface specification that allows the SATA controller driver to support advanced features. While entering setup, BIOS auto detects the presence of AHCI devices. This displays the status of auto detection of AHCI devices.

14.0 Super I/O Configuration

This item enables users to set the Super I/O device status, including enabling of COMs.

- **Onboard Serial port 1 [3F8 / IRQ4]** allows user to adjust serial port 1 address and IRQ.
- **Onboard Serial port 2 [2F8/ IRQ3]** allows user to adjust serial port 2 address and IRQ.
- **Onboard Serial port 3 [C80/IRQ10]** allows user to adjust serial port 3 address and IRQ.
- **Onboard Serial port 4 [C88/IRQ5]** allows user to adjust serial port 4 address and IRQ.
- **Onboard Serial port 5 [C90/IRQ10]** allows user to adjust serial port 5 address and IRQ.
- **Onboard Serial port 6 [C98/IRQ11]** allows user to adjust serial port 6 address and IRQ.

15.0 ACPI Configuration

15.1 General ACPI Configuration

- Suspend mode - Select the ACPI state used for system suspend. [ Auto ]
- Report Video on S3 Resume allows you to invoke VA BIOS POST on S3/STR resume. [ No ]
15.2 Advanced ACPI Configuration
- ACPI Version Features allows you to enable RSDP pointers to 64-bit fixed system description tables. [ ACPI v 3.0 ]
- Include APIC table pointer to RSDT pointer list. [ Enabled ]
- Include OEMB table pointer to R(x)SDT pointer lists. [ Enabled ]
- Headless mode - Enable / Disable Headless operation mode through ACPI. [ Disabled ]

15.3 Chipset ACPI Configuration
- Energy Lake Feature allows you to configure Intel’s Energy Lake power management technology. [ Disabled ]
- Enable/Disable APIC ACPI SCI IRQ. [ Disabled ]
- Enable/Disable USB Device Wakeup from S3/S4. [ Disabled ]
- Enable/Disable High performance Event timer. [ Enabled ]
- HPET Memory Address - It will provide you with the means to get to it via the various ACPI methods. [ FED00000h ]

16.0 APM Configuration
- Enable or disable APM power management function. [ Enabled ]
- Restore on AC Power Loss - This option allows user to set system action when AC power restores after AC power loss. Available options include Power Off, Power On, Last Status. [ Power Off ]
- Disable/Enable RI wake event. [ Disabled ]
- Disable/Enable RTC wake event. [ Disabled ]

17.0 USB Configuration
- Legacy USB Support - Enables support for legacy USB. Auto option disables legacy support if no USB devices are connected. [ Enabled ]
- USB 2.0 Controller Mode - This item allows you to select HiSpeed (480 Mbps) or FullSpeed (12 Mbps). [ HiSpeed ]
- BIOS EHCI Hand-Off is a workaround for OSs without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver. [ Enabled ]
18.0 Advanced PCI/PnP Settings

Select the PCI/PnP tab from the AIMB-213 setup screen to enter the Plug and Play BIOS Setup screen. You can display a Plug and Play BIOS Setup option by highlighting it using the <Arrow> keys. All Plug and Play BIOS Setup options are described in this section. The Plug and Play BIOS Setup screen is shown below.

- Clear NVRAM - Set this value to force the BIOS to clear the Non-Volatile Random Access Memory (NVRAM). The Optimal and Fail-Safe default setting is No. [No]
- Plug & Play O/S - When set to No, BIOS configures all the devices in the system. When set to Yes and if you install a Plug and Play operating system, the operating system configures the Plug and Play devices not required for bootup. [No]
- PCI Latency Timer - Value in units of PCI clocks for PCI device latency timer register. [64]
- Allocate IRQ to PCI VGA - When set to Yes, will assign IRQ to PCI VGA card if card requests IRQ. When set to No will not assign IRQ to PCI VGA card even if card requests an IRQ. [Yes]
- Palette Snooping is designed to solve problems caused by some non-standard VGA card. [Disabled]
- PCI IDE BusMaster set to enabled, BIOS uses PCI busmastering for reading/writing to IDE drives. [Enabled]
- OffBoard PCI/ISA IDE Card - Some PCI IDE cards may require this to be set to the PCI slot number that is holding the card. Set to Auto works for most PCI IDE cards. [Auto]
- IRQ3 / 4 / 5 / 7 / 9 / 10 / 11 allows you respectively assign an interrupt types for IRQ-3, 4, 5, 7, 9, 10, 11. [Available]
- DMA Channel0 / 1 / 3 / 5 / 6 / 7 - When set to Available, will specify DMA is available to be used by PCI/PnP devices. When set to Reserved, will specified DMA is Reserved for use by legacy ISA devices. [Available]
- Reserved Memory Size allows you to reserve a set amount of memory for legacy ISA devices. [Disabled]
19.0 Boot Settings
- Quick Boot allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system. [Enabled]
- Quiet Boot option is set to Disabled, the BIOS displays normal POST messages. If Enabled, an OEM Logo is shown instead of POST messages. [Disabled]
- AddOn ROM Display Mode - Set display mode for option ROM. [Force BIOS]
- Bootup Num-Lock - Select the Power-on state for Numlock. [On]
- PS/2 Mouse Support for PS/2 Mouse. [Auto]
- Wait for the F1 key to be pressed if an error occurs. [Enabled]
- Hit .DEL. Message Display - Displays .Press DEL to run Setup. in POST. [Enabled]
- Interrupt 19 Capture allows option ROMs to trap interrupt 19. [Disabled]
- Bootsafe Function allows you to enable or disable bootsafe function. [Disabled]

20.0 Security Settings
Select Security Setup from the AIMB-213 Setup main BIOS setup menu. All Security Setup options, such as password protection and virus protection are described in this section. To access the sub menu for the following items, select the item and press <Enter>:
- Change Supervisor / User Password - Provides for either installing or changing the password.
- Boot Sector Virus Protection will warn if any program tries to write to the boot sector. [Disabled]
21.0 Chipset Configuration-North Bridge
- DRAM Frequency allows you to manually change DRAM frequency. [Auto]
- Configure DRAM Timing by SPD allows you to enable or disable detect by DRAM SPD. [Enabled]
- Initiate Graphic Adapter allows you to select which graphics controller to use as the primary boot device. [PCI/IGD]
- Internal Graphics Mode Select. Select the amount of system memory used by the Internal graphics. [Enabled 8MB]

21.1 Video Function Configuration
- DVMT Mode Select - Displays the active system memory mode. [DVMT Mode]
- DVMT/FIXED Memory specifies the amount of DVMT / FIXED system memory to allocate for video memory. [256MB]
- Select boot display device at post stage. [CRT]
- Flat Panel Type - This item allows you to select panel resolution. [1024X768 (18bit)]
- DVI Panel Type allows you to select DVI panel resolution. [1024X768]
- Spread Spectrum Clock allows you to enable or disable spread spectrum clock. [Disabled]

22.0 Chipset Configuration-South Bridge
- USB Functions - Select: Disabled, 2 USB Ports, 4 USB Ports, 6 USB Ports or 8 USB Ports. [10 USB Ports]
- USB 2.0 Controller - Enables or disables the USB 2.0 controller. [Enabled]
- LAN1 Controller - Enables or disables the GbE controller. [Enabled]
- LAN1 Option-ROM - Enables or disables GbE LAN boot. [Disabled]
- Resume on LAN1 - Enables or disables GbE LAN wake up from S5 function. [Disabled]
- LAN2 Controller - Enables or disables the GbE controller. [Enabled]
- LAN2 Option-ROM - Enables or disables GbE LAN boot. [Disabled]
- Resume on LAN2 - Enables or disables GbE LAN wake up from S5 function. [Disabled]
- HDA Controller - Enables or disables the HDA controller. [Enabled]
- SMBUS Controller - Enables or disables the SMBUS controller. [Enabled]
- SLP_S4# Min. Assertion Width allows you to set a delay of a set number of seconds. [1 to 2 seconds]

23.0 Exit Configuration
- Save Changes and Exit - When you have completed system configuration, select this option to save your changes, exit BIOS setup and reboot the computer so the new system configuration parameters can take effect.
  1. Select Save Changes and Exit from the Exit menu and press <Enter>. The following message appears: Save Configuration Changes and Exit Now?
  2. Select [Ok] or [Cancel].
- Discard Changes and Exit - Select this option to quit Setup without making any permanent changes to the system configuration.
  1. Select Discard Changes and Exit from the Exit menu and press <Enter>. The following message appears: Discard Changes and Exit Setup Now? [Ok] [Cancel]
  2. Select [Ok] to discard changes and exit.
- Discard Changes - Select Discard Changes from the Exit menu and press <Enter>.
- Load Optimal Defaults. The AIMB-213 automatically configures all setup items to optimal settings when you select this option. Optimal Defaults are designed for maximum system performance but may not work best for all computer applications. Do not use the Optimal. Defaults if your computer is experiencing system configuration problems. Select Load Optimal Defaults from the Exit menu and press <Enter>.
- Load Failsafe Defaults. The AIMB-213 automatically configures all setup options to failsafe settings when you select this option. Failsafe Defaults are designed for maximum system stability, but not maximum performance. Select Failsafe Defaults if your computer is experiencing system configuration problems.
  1. Select Load Failsafe Defaults from the Exit menu and press <Enter>. The following message appears: Load Failsafe Defaults? [OK] [Cancel]
  2. Select [OK] to load Failsafe defaults.
24.0 Jumper Settings

24.1 How to Set Jumpers
You can configure your motherboard to match the needs of your application by setting the jumpers. A jumper is a metal bridge that closes an electrical circuit. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” (or turn ON) a jumper, you connect the pins with the clip. To “open” (or turn OFF) a jumper, you remove the clip. Sometimes a jumper consists of a set of three pins, labeled 1, 2, and 3. In this case you connect either pins 1 and 2, or 2 and 3. A pair of needle-nose pliers may be useful when setting jumpers.

24.2 Clear CMOS (CMOS1)
The AIMB-213 motherboard contains a jumper that can erase CMOS data and reset the system BIOS information. Normally this jumper should be set with pins 1-2 closed. If you want to reset the CMOS data, set J1 to 2-3 closed for just a few seconds, and then move the jumper back to 1-2 closed. This procedure will reset the CMOS to its default setting.

<table>
<thead>
<tr>
<th>Function</th>
<th>Jumper Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Keep CMOS data</td>
<td>1-2 closed</td>
</tr>
<tr>
<td>Clear CMOS data</td>
<td>2-3 closed</td>
</tr>
<tr>
<td>*Default</td>
<td></td>
</tr>
</tbody>
</table>

25.0 Installing Software and Drivers
Drivers and utilities are in the “Drivers” of the hard drive.

25.1 Operating Systems
Your All-in-One computer is designed to work with a wide variety of operating systems including but not limited to Embedded OS, Windows XP, Windows Vista & Windows 7.

If you purchased the Windows operating system for your All-in-One computer, the operating system and drivers have already been installed for you.
25.2 Video Driver
The MP5000i2 series use The Mobile Intel® GM965 Express chipset, featuring the Mobile Intel® Graphics Media Accelerator X3100:

- Microsoft Windows Vista* Premium support with the highest level of Windows Aero* experience
- Intel® Clear Video Technology for excellent video quality
- Enhanced 3D graphics performance, delivering over 2X scores on 3DMark*06

25.3 Audio Driver
The MP5000i2 has a build-in audio controller. Windows driver can be installed by running the program in the respective audio directory.

25.4 Network Driver
The MP5000i2 has two Realtek 10/100/1000 network interface. Network driver can be installed by running the program in the respective LAN directory.

25.5 Touch Screen Driver
The MP5000i2 has an ELO serial touch controller. A universal driver is included in the respective ELO touch directory.

25.6 Tuning the Touch Screen Under Windows
If you wish to calibrate the touch screen while under Windows, go to “Control Panel” and select “Touch” icon. Choose “calibrate” to set the touch positions and click “OK” to save the setup.

25.7 Other Applications
Please refer to the manuals accompanying your additional software or hardware.

26.0 Troubleshooting
If your system does not operate correctly at first, re-read the instructions regarding the procedure being performed. If problems occur with third party software, consult the accompanying documentation. Please check this section for possible solutions. If the problem still cannot be resolved, contact your authorized dealer.
26.1 Initial Inspection
Oftentimes the simplest things can cause the most confusing errors. Always check the following:
1. The power cord is securely connected to both the AC outlet and your Panel Touch.
2. The Panel Touch is turned on.

26.2 Peripherals Configuration Problems
If one or more of your peripherals is not working correctly, it often can be the result of an improper configuration either with the device driver or the BIOS. To check device drivers, enter Windows and check the Control Panel for possible conflicts. Default IRQ settings are included in appendices. Enter the BIOS program to verify the configuration settings.

26.3 Connection Problems
If you are having problems with your peripherals and have checked the possible solutions above, the connection between your Panel Touch and the peripheral may be the problem. Verify the cable signal output.
27.0 Standard IRQ Settings

<table>
<thead>
<tr>
<th>IRQ</th>
<th>Priority</th>
<th>Standard Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>System Timer</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>Keyboard Controller</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>Redirect to IRQ#9</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>IRQ Holder for PCI Steering*</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>Communications Port (COM1)*</td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>IRQ Holder for PCI Steering</td>
</tr>
<tr>
<td>6</td>
<td>14</td>
<td>Floppy Disk Controller</td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>Printer Port (LPT)*</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>System CMOS/Rear Time</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
<td>IRQ Holder for PCI Steering*</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>IRQ Holder for PCI Steering*</td>
</tr>
<tr>
<td>11</td>
<td>6</td>
<td>IRQ Holder for PCI Steering*</td>
</tr>
<tr>
<td>12</td>
<td>7</td>
<td>PS/2 Compatible Mouse Port*</td>
</tr>
<tr>
<td>13</td>
<td>8</td>
<td>Numeric Data Processor</td>
</tr>
<tr>
<td>14</td>
<td>9</td>
<td>Primary IDE Channel</td>
</tr>
<tr>
<td>15</td>
<td>10</td>
<td>Secondary IDE Channel</td>
</tr>
</tbody>
</table>

28.0 Optional Magnetic Stripe Reader
MSR213U is a HID Keyboard emulation device. It accepts keyboard input from Windows applications.

28.1 Reader Test
The following process will test MSR213U installation:
1. Run the Notepad application from Start ? Programs ? Accessories ? Notepad under Windows
2. Swipe any card through the reader MSR213U.
3. The card data should appear on the Notepad if the MSR213U installed properly.
28.2 Changing Configuration
The MSR configurations can be changed through software installed on the system. They are factory preset and normally do not need to be changed by the user.
To enter the setting mode:
- Connect keyboard to your MP5000i2 computer.
- Run .MSR213U setting AP
- Follow instructions on the screen to change settings

28.3 Optional 2x20 LCD Character Display
The 2x20 character display is an alpha numeric LCD with back light. It is driven by a serial interface controller and normally set at COM4. The board receives control and character codes which are then displayed on the LCD. This is a receive-only device.

28.4 Power-Up Initialization
Upon power-up, the controller goes into its initialization sequence. The board is designed to initialize in two states:
1. physical power up
2. software power up.
After 250mS, the board is ready to receive software power up. YOU MUST SEND THE BOARD A CLEAR SCREEN COMMAND (HEX 0C) TWO TIMES AT HALF SECOND INTERVALS. This will initialize the controller completely. The LCD display is NOT hot pluggable or hot swappable!
29.0 Communications Settings: 9600,N,8,1, COMx

29.1 Character Codes

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<thead>
<tr>
<th></th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<td>'</td>
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<td>pass char</td>
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<td>Q</td>
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<td>Y</td>
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