PW-6000
Intelligent Controller
Installation and Configuration Guide
Part Number: PW6K1IC
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1 Notices

1.1 Warnings and Cautions

Before Installation

Warning: Before installation, TURN OFF the external circuit breaker which supplies power to the system.

Before connecting the device to the power supply, verify that the output voltage is within specifications of the power supply (see 'Technical Specifications' on page 11).

Do not apply power to the system until after the installation has been completed. Personal injury or death can occur, and the equipment can be damaged beyond repair, if this precaution is not observed.

Fire Safety and Liability Notice

Warning: Never connect card readers to any critical entry, exit door, barrier, elevator or gate without providing an alternative exit in accordance with all the fire and life safety codes pertinent to the installation.

These fire and safety codes vary from city to city and you must get approval from local fire officials whenever using an electronic product to control a door or other barrier. Use of egress buttons, for example, may be illegal in some cities. In most applications, single action exit without prior knowledge of what to do is a life safety requirement. Always make certain that any required approvals are obtained in writing. DO NOT ACCEPT VERBAL APPROVALS SINCE THEY ARE NOT VALID.

Honeywell Integrated Security never recommends using the PW-6000 or related products for use as a primary warning or monitoring system. Primary warning or monitoring systems should always meet the local fire and safety code requirements. The installer must also test the system on a regular basis by instructing the end user in appropriate daily testing procedures. Failure to test a system regularly could make the installer liable for damages to the end user if a problem occurs.
Earth Grounding

**Warning:** EARTH ground all enclosures for proper installation.

Use Suppressors

**Warning:** Use suppressors on all door strikes. Use S-4 suppressors for installation. Honeywell Integrated Security, Inc. recommends only DC strikes.

1.2 Damage During Shipment

**Caution:** IF ANY DAMAGE TO THE SHIPMENT IS NOTICED, A CLAIM MUST BE FILED WITH THE COMMERCIAL CARRIER RESPONSIBLE FOR THE DAMAGE.

1.3 Electro Static Discharge

**Caution:** Electro-static discharge (ESD) can damage CMOS integrated circuits and modules.

To prevent damage always follow these procedures:

- Use static shield packaging and containers to transport all electronic components, including completed reader assemblies.
- Handle all ESD sensitive components at an approved static-controlled workstation. These workstations consist of a desk mat, floor mat and an ESD wrist strap. Workstations are available from various vendors.

**Note:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation and user guides, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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**Note:** Any use of this product is subject to the terms and acceptance of the Honeywell Integrated Security, Inc. Software Agreement. Please request a copy from Honeywell Integrated Security, Inc. (http://www.honeywellintegrated.com/index.html), and review the agreement carefully.
1.4 Disclaimer – Product Liability; Mutual Indemnification

If a Customer receives a claim that a Product or any component thereof has caused personal injury or damage to the property of others, Customer shall immediately notify Honeywell Integrated Security in writing of all such claims. Honeywell Integrated Security shall defend or settle such claims and shall indemnify and hold Customer harmless for any costs or damages including reasonable attorneys’ fees which Customer may be required to pay as a result of the defective Product or the negligence of Honeywell Integrated Security, its agents, or its employees.

Customer shall hold harmless and indemnify Honeywell Integrated Security from and against all claims, demands, losses and liability arising out of damage to property or injury to persons occasioned by or in connection with the acts or omissions of Customer and its agents and employees, and from and against all claims, demands, losses and liability for costs of fees, including reasonable attorneys’ fees, in connection therewith.

1.5 Unpacking Procedure

Caution: If any damage to the shipment is noticed before unpacking, a claim must be filed with the commercial carrier.

All containers should be opened and unpacked carefully in order to prevent damage to the contents.

Follow these steps to unpack equipment in preparation for installation:

1. Open the container and remove the unit(s) and all packing material. Retain the container and all the packing materials. They may be used again for reshipment of the equipment, if needed.

2. Inspect the contents to see if anything is missing. If you notice any missing items, contact the order entry department at 1-800-323-4576 Option-1.

3. Visually check the contents. If you see any damage, do the following:
   a. If shipping has caused damage to the unit, a claim must be filed with the commercial carrier.
   b. If any other defect is apparent, call for a return authorization.

1.6 Shipping Instructions

To ship equipment back to Honeywell Integrated Security, contact the customer service department at 1-800-323-4576 before returning the equipment. When you call, please have available:

• A description of the problem or the reason you are returning the equipment.
• Your original purchase order number, invoice number and if the unit is still under warranty.
• A new purchase order number if the unit is not under warranty

From the customer service department, obtain the Return Authorization Number (RMA).
Show the RMA number on all packages shipped. Packages, which are not marked with an RMA number will be refused at the factory and returned to you COD.

Carefully pack the equipment for shipment. Use the original packing material whenever possible.

1.7 Limited Warranty

All Products sold or licensed by Honeywell Integrated Security include a warranty registration card which must be completed and returned to Honeywell Integrated Security by or on behalf of the end user for Honeywell Integrated Security to provide warranty service, repair, credit or exchange. All warranty work shall be handled through Customer which shall notify Honeywell Integrated Security and apply for a Return Merchandise Authorization (RMA) number prior to returning any Product for service, repair, credit or exchange. Honeywell Integrated Security warrants that its Products shall be free from defects in materials and workmanship for a period of two years from the date of shipment of the Product to Customer. The warranty on Terminals, Printers, Communications Products and Upgrade kits is 90 days from the date of shipment. Satisfaction of this warranty shall be limited to repair or replacement of Products which are defective or defective under normal use. Honeywell Integrated Security’s warranty shall not extend to any Product which, upon examination, is determined to be defective as a result of misuse, improper storage, incorrect installation, operation or maintenance, alteration, modification, accident or unusual deterioration of the Product due to physical environments in excess of the limits set forth in Product manuals. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THIS PROVISION. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. NO REPRESENTATION OR WARRANTY OF THE DISTRIBUTOR SHALL EXTEND THE LIABILITY OR RESPONSIBILITY OF THE MANUFACTURER BEYOND THE TERMS OF THIS PROVISION. IN NO EVENT SHALL HONEYWELL INTEGRATED SECURITY BE LIABLE FOR ANY RE-PROCUREMENT COSTS, LOSS OF PROFITS, LOSS OF USE, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES TO ANY PERSON RESULTING FROM THE USE OF HONEYWELL INTEGRATED SECURITY’S PRODUCTS.

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2 Product Overview

The Intelligent Controller is the heart of the PW-6000 and provides the real time processing for the connected I/O interfaces.

The PW-6000 is designed to operate without the need for a PC. It can be connected to a Pro-Watch host computer using direct serial communication, dial-up modem, or TCP/IP network connection. The PW-6000 holds the database for the subsystem configuration and card holders, and the event log buffer, which is in battery-backed memory.

Note: Please refer to the Pro-Watch Software Suite Guide for details on using the Pro-Watch interface.

2.1 PW-6000 and PW-5000

- The PW-6000 controller configuration and operation is similar to the PW-5000 controller; both use the Pro-Watch at the front end.
- You can use the PW-5000 controller interface to configure the PW-6000 hardware settings.

2.2 Port Settings

- **Port 0** provides the host-embedded Ethernet interface.
- **Port 1** is for RS-232 or RS-485 2-wire serial interface connections. An optional Lantronix CoBox-Micro interface daughter board (10Base-T/100Base-TX) is also supported on Port 1.
- **Ports 2 and 3** are for RS-485 2-wire downstream support for connecting 32 I/O devices. Note that the I/O communications must be mapped differently in Pro-Watch, according to the following table:

<table>
<thead>
<tr>
<th>PW-6000 Port</th>
<th>Pro-Watch Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

See Table 1 ‘PW-6000 Jumper Settings’ on page 8 for more information on how to configure the port settings.
2.3 Other

- An on-board real time clock maintains the date and time, taking into account leap year and accounting for global time zones and daylight savings time changes.
- The database for the system configuration and card holders are stored in FLASH memory.
- The event log buffer is stored in battery-backed memory.
- Configuration data and event/status reports are communicated to the host via on-board 10-BaseT/100Base-TX Ethernet port or Port 1.
- Transactions are stored in 1 MB of battery-backed SRAM. The maximum number of transactions stored while the host is offline is 50,000.
- Cards are stored in Flash memory and read into DRAM when the board is powered up. The amount of storage available for cards and biometric records is 15 MB. The maximum number of cards depends on the card record database configuration, but the number is approximately 300,000. This maximum is dependent on how the card is configured with more space per card used with longer card number, more clearance codes, and so on.
Figure 1: PW-6000 Connections, LEDs, and DIP Switches
3 Setting Up the PW-6000 Hardware

The PW-6000 processor is configured with 12 jumpers and a set of 4 DIP switches. These jumpers/switches set up the port interface, end of line termination, and operating mode configuration. Refer to the tables below to set the jumpers as required.

3.1 Setting the Jumpers

Table 1 PW-6000 Jumper Settings

<table>
<thead>
<tr>
<th>Jumpers</th>
<th>Set At</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J1</td>
<td>N/A</td>
<td>10Base-T/100Base-TX Ethernet Connection (Port 0)</td>
</tr>
<tr>
<td>J2</td>
<td>N/A</td>
<td>Factory Use Only</td>
</tr>
<tr>
<td>J3</td>
<td>OFF</td>
<td>Port 2 RS-485 EOL Terminator is OFF</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>Port 2 RS-485 EOL Terminator is ON</td>
</tr>
<tr>
<td>J4</td>
<td>OFF</td>
<td>Port 3 RS-485 EOL Terminator is OFF</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>Port 3 RS-485 EOL Terminator is ON</td>
</tr>
<tr>
<td>J5</td>
<td>OFF</td>
<td>Port 1 RS-485 EOL Terminator is OFF</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>Port 1 RS-485 EOL Terminator is ON</td>
</tr>
<tr>
<td>J6</td>
<td>N/A</td>
<td>Factory Use Only</td>
</tr>
<tr>
<td>J7</td>
<td>N/A</td>
<td>COBOX-MICRO Ethernet Module Connection (Port 1)</td>
</tr>
<tr>
<td>J8, J9, J10</td>
<td>232</td>
<td>Port 1 is RS-232</td>
</tr>
<tr>
<td></td>
<td>485</td>
<td>Port 1 is RS-485</td>
</tr>
<tr>
<td>J11</td>
<td>N/A</td>
<td>Factory Use Only</td>
</tr>
<tr>
<td>J12</td>
<td>N/A</td>
<td>Factory Use Only</td>
</tr>
</tbody>
</table>
3.2 Setting the DIP Switches

Dual In-line Package (DIP) switches are read when the system powers up, except where noted otherwise. The following table shows the setting options.

**Table 2 PW-6000 DIP Switch Settings**

<table>
<thead>
<tr>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>Normal Operating Mode.</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>When DIP switch 1 is ON, Port 0 communicates with the web browser. Port 1 is used for RS-232/485 communications. After the panel initialization, enable the default user name (admin) and password (password). The user name and password are read dynamically; you do not need to reboot the panel.</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>Use the factory default communication parameters.</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>Unless the network administrator reserves an IP address for the panel (based on the controller board’s Media Access Control (MAC) address), the PW-6000 uses Dynamic Host Configuration Protocol (DHCP) to obtain an IP address from the network DHCP server. When power is applied with the switches in this position, there is a ten second window (when LEDs 1 and 2 flash alternately with LEDs 3 and 4), during which memory is cleared if switch 1 or switch 2 is changed to OFF. When switch 1 or 2 is changed to OFF, only LED 2 flashes and memory begins to be cleared. This period of clearing lasts several minutes. When the memory has been cleared, the LED pattern changes to the flashing of LEDs 1 and 4. The panel then reboots by itself. All data in memory is erased except the serial number, MAC address, hardware revision, and OEM code.</td>
</tr>
</tbody>
</table>
The PW-6000 DIP switches need to be set twice:

1. Configure the **S4-S3-S2-S1** DIP switches to **off-off-on-off** to set the default TCP/IP address to 192.168.0.251.

2. Apply power to the panel to set the IP address.

3. Change the **S4-S3-S2-S1** combination to **off-off-off-on**. (DIP switch 1 is “read on the fly”). This sets the login to the default user ID (“admin”) and password (“password”) for Ethernet communications.


5. Set the **S4-S3-S2-S1** combination to **off-off-off-off**.

6. Configure the host port for TCP/IP and/or Serial communications. See 'Host Port' on page 18 for instructions. This will enable both TCP/IP and serial hardware networking when you log in again.
### 3.3 Technical Specifications

**Table 3  PW-6000 Technical Specifications**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WARNING:</strong> PW-6000 is manufactured for use in low-voltage, Class 2 circuits only.</td>
<td></td>
</tr>
<tr>
<td><strong>Primary Power</strong></td>
<td>12Vdc ± 10%, 300mA maximum. 12Vdc @ 240mA (325mA with CoBox-Micro) nominal.</td>
</tr>
<tr>
<td><strong>Memory and Clock Backup</strong></td>
<td>3Volts Lithium, type BR2325, BR2330, CR2330.</td>
</tr>
<tr>
<td><strong>Ports</strong></td>
<td><strong>Port 0</strong> 10Base-T/100Base-TX Ethernet. <strong>Port 1</strong> RS-232 or 2-wire RS-485: 9,600 to 115,200 bps, async. An optional Lantronix CoBox-Micro interface daughter board is supported (10Base-T/100Base-TX). <strong>Port 2 &amp; 3</strong> 2-wire RS-485: 2,400 to 38,400 bps, async.</td>
</tr>
<tr>
<td><strong>Inputs</strong></td>
<td>2 non-supervised, dedicated for cabinet tamper and power fault monitoring.</td>
</tr>
<tr>
<td><strong>Cable requirements</strong></td>
<td><strong>Power:</strong> 1 twisted pair, 18 AWG. <strong>RS-485:</strong> 24AWG, 4,000ft (1,200m) maximum, twisted pair with shield. 120 ohm. <strong>RS-232:</strong> 24AWG, 25ft (7.6m) maximum. <strong>Ethernet:</strong> Cat 5. <strong>Alarm input:</strong> 1 twisted pair, 30 ohms maximum.</td>
</tr>
<tr>
<td><strong>Environmental</strong></td>
<td><strong>Temperature:</strong> 0 to 50°C, operating -55 to +85°C, storage <strong>Humidity:</strong> 0 to 95% RHNC</td>
</tr>
<tr>
<td><strong>Mechanical</strong></td>
<td><strong>Dimensions:</strong> 5.5 in. (137.7mm) W x 9 in. (228.64mm) L x .75 in. (19.05mm) H <strong>Weight:</strong> 7.1 oz. (201 gm) nominal</td>
</tr>
<tr>
<td><strong>Lantronix NIC support</strong></td>
<td><strong>Standoff size</strong> Diameter 0.125 inch x 0.4375 inch long <strong>Richco Plastics part number</strong> LMSP-7-01, 3 pieces (not supplied)</td>
</tr>
</tbody>
</table>

Specifications subject to change without notice.
Caution: Locate the power source as close to this board as possible. Connect power with minimum of
18AWG wires.

Note: POLARITY for 12 VDC power is important. Make sure the +12 VDC is connected to the
terminal labeled +12V and the return is connected to the terminal labeled GND.

3.4 Status LEDs

The PW-6000 uses six on-board LEDs to provide status information during its initialization sequence
and normal run-time operation.

Initialization

Table 4 PW-6000 Status LED Combinations During Initialization

<table>
<thead>
<tr>
<th>LED 1</th>
<th>LED 2</th>
<th>LED 3</th>
<th>LED 4</th>
<th>LED 5</th>
<th>LED 6</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>Basic processor initialization</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>Internal SRAM test</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>External SDRAM, First Chip</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>External FLASH Test</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>External SDRAM, Second</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>External SRAM Test</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>External EEPROM Test</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>External RTC Test</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>Backup Battery and Reset</td>
</tr>
<tr>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>UART Test</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>Ethernet Interface, MII</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Final processor Initialization</td>
</tr>
</tbody>
</table>
Run Time
Supplying Power to the PW-6000 Interface

Table 5  PW-6000 Status LED Combinations During Run Time

<table>
<thead>
<tr>
<th>LED</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Off-Line / On-Line and Battery Status</td>
</tr>
<tr>
<td></td>
<td>Off-Line = 20% On, On-Line = 80% On</td>
</tr>
<tr>
<td></td>
<td>Double Flash means the Battery is Low</td>
</tr>
<tr>
<td>2</td>
<td>Primary Host Communication Activity (Ethernet or Port 1)</td>
</tr>
<tr>
<td>3</td>
<td>Port 2 Communication Activity</td>
</tr>
<tr>
<td>4</td>
<td>Port 3 Communication Activity</td>
</tr>
<tr>
<td>5</td>
<td>ON = Writing to Flash Memory. Do NOT cut off power when this LED is ON.</td>
</tr>
<tr>
<td>6</td>
<td>TBD</td>
</tr>
<tr>
<td>SPD</td>
<td>On-Board Ethernet Speed. OFF = 10MBS. ON = 100MBS.</td>
</tr>
<tr>
<td>ACT</td>
<td>OFF = No On-Board Ethernet Activity. ON = On-Board Ethernet Activity (YELLOW LED).</td>
</tr>
<tr>
<td>LNK</td>
<td>OFF = ON Link. ON = Good Link (GREEN LED).</td>
</tr>
</tbody>
</table>

3.5 Supplying Power to the PW-6000 Interface

The processor accepts 12Vdc for power. Locate power source as close to the unit as possible and connect it with minimum of 18AWG wires.

**Caution:** Observe POLARITY on 12 VDC.

*Figure 2:  PW-6000 Power Terminals*
3.6 Communications Wiring

The PW-6000 processor communicates to the host via on-board Ethernet 10Base-T/100Base-TX port or on port 1. Port 1 may be configured as RS-232, two-wire RS-485 or optional Lantronix Ethernet 10Base-T/100Base-TX CoBox-Micro interface. The RS-232 interface is for direct one to one connection to a host computer, or a modem.

Ports 2 and 3 use the two-wire RS-485 interface only. The interface allows multi-drop communication on a single bus of up to 4,000 feet (1,200 meters). Use shielded twisted pair (minimum 24 AWG) with 120-ohm impedance. Install termination jumpers only at the end-of-line unit.

Figure 3: PW-6000 Port Wiring

![PW-6000 Port Wiring Diagram]

3.7 Cabinet Tamper and Power Failure Input Wiring

Figure 4: PW-6000 TMP and FLT Terminals

![PW-6000 TMP and FLT Terminals Diagram]

Inputs TMP and FLT are used for monitoring cabinet tamper and power failure with normally closed contacts. These two inputs are for contact closure monitoring only; do not use end-of-line (EOL) resistor(s). If these inputs are not used, install a short piece of wire at the input to indicate a safe condition.

3.8 Memory and Real Time Clock Backup Battery

The event log buffer and the real time clock are backed up by a 3V lithium battery. This BR2325, BR2330, or CR2330 battery should be replaced annually.
4 System Configuration via Web Interface

The PW-6000 comes with Access Control Device Server Manager (ACDSM). The ACDSM is a built-in web server, through which you can configure network and other system settings.

Notes:

- If you are using Internet Explorer Enhanced Security Configuration, you cannot access the ACDSM web server. All pages will display “Bad Request!” You must uninstall the Enhanced Security option before you can access the ACDSM.
- The default factory-set TCP/IP address for the built-in system configuration web server is 192.168.0.251

4.1 Connecting to ACDSM for the First Time

1. Use the factory default controller IP address 192.168.0.251.
2. Set the DIP switches to S4=OFF, S3=OFF, S2=ON, S1=OFF.

   **Note:** S1 must be set to OFF for the factory default. After the panel powers up, change S1 to ON to enable the use of the default user name and password.

3. Connect the computer to host the web server via Ethernet Port 0. Connection should be via crossover Ethernet cable or by the regular Ethernet cables connected via the hub.

4. Set the host computer to the static IP address 192.168.0.250 to be able to connect to the factory-default PW-6000 controller at address 192.168.0.251.

5. Power up the PW-6000 controller.

4.2 Login Page

1. Click the “Click Here to Login” link to display the User Name and Password fields.

   **Figure 5:** PW-6000 Web Server Login Screen

2. Enter your User Name and Password.

   **Note:** Default User ID is admin and the default Password is password.
4.3 Home Page

The first screen after the login is the home page which displays all the available configuration links on the left navigation bar:

*Figure 6: PW-6000 Web Server Home Page*
4.4 Network Settings

Click the Network link on the navigation bar to display the Network Settings screen where you can select the appropriate option button for dynamic or static IP address configuration:

*Figure 7: PW-6000 Web Server Network Settings Screen*

### Network Settings: IP Configuration

**Use DHCP Method to Obtain IP address automatically**
- **Dynamic**
- **Static**

**Notes:**
- The Host Name of This Device field contains the Media Access Control (MAC) address of the PW-6000 controller board.
- The IP address configuration is same as using the Lantronix Ethernet board on a PW-5000. The users can select the **Dynamic IP** option button and reserve an IP address for the MAC address, or they can select the other option button and assign a **Static IP** address as well.

### Dynamic IP Configuration Method

1. Click the **Dynamic IP** option button to select the Dynamic Host Configuration Protocol (DHCP) method to obtain IP address automatically.

2. Click **OK**.

**Note:** The Pro-Watch communicates with the PW-6000 panel using an IP address. If you must use the Dynamic IP option because of your network policies or configuration, you must reserve an IP address at the DHCP server for the MAC (Media Access Control) address in the PW-6000 panel. The MAC address is a unique identifier attached to network adapters. Each time the PW-6000 panel requests an IP address, the DHCP server will assign the address that was reserved for it.
**Static IP Configuration Method**

1. Click the **Static IP** option button to assign a static IP address, and enter the following information in the appropriate fields:
   - IP Address
   - Subnet Mask
   - Default Gateway

2. Click **OK**.

**4.5 Host Port**

Click the **Host Port** link on the navigation bar to display the Host Connection Configuration screen where you can select the appropriate settings for the Primary Host Port and Alternate Host Port:

**Note:** Some of the fields change dynamically depending on the Connection Type selected.

**IP Server Connection Type**

*Figure 8: PW-6000 Host Port Configuration Screen with IP Server Connection*

<table>
<thead>
<tr>
<th>Host Connections Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PW6000 Communication Address:  1</td>
</tr>
</tbody>
</table>

**Primary Host Port**

- Connection Type: **IP Server**
- Data Security: **None**
- Port Number: 3001
- Authorized IP Address: 

**Alternate Host Port**

- Connection Type: **SerialRS232**
- Data Security: **None**
- Baud Rate: 38400
- Flow Control: **None**
1. From PW6000 Communication Address drop-down list, select one of the eight (0 to 7) available **communication addresses** for the PW-6000 board.

   **Note:** In the previous panels, this selection was made manually by setting the DIP switches.

2. For the **Primary Host Port**, make the following selections:
   a. **Connection Type.** Select **IP Server** (the standard connection type), so that the Pro-Watch Host will poll the PW-6000 panel. The panel does not currently support the **IP Client** option, which would cause the PW-6000 panel to poll the Pro-Watch Host and the Host to reply to the panel.
   a. **Data Security.** Select one of the following:
      - **None**
      - **Password/AES** from the drop-down list. If you select **Password/AES**, communications between the Pro-Watch Host and the PW-6000 panel are encrypted. Note that encryption must be enabled in Pro-Watch for the appropriate Pro-Watch channel. See Chapter 7, “Hardware Configuration,” in the *Pro-Watch Guide* for channel encryption instructions.
   b. **Port Number.** Enter the port number through which the host computer can communicate with the PW-6000 board.
   c. Select either **Allow All** or the **Authorized IP Address Required** option button.
      - **Allow All**, as the label suggests, allows all IP addresses to communicate with the PW-6000. Select this option for web page browser access.
      - If you select the **Authorized IP Address Required** option, also enter in the **Authorized IP Addresses** fields all the IP addresses that would be allowed to communicate with the PW-6000. Use this option only for Host communication.

3. For the **Alternate Host Port**, make the following selections:
   a. **Connection Type.** Select one of the following values from the drop-down list: **IP Server, Serial-RS232, Serial-RS485, Serial-Modem, Serial-CoBox**. Note that the **IPClient** option is listed, but it is not supported by the panel and should not be selected.
   b. **Data Security.** Select one of the following values from the drop-down list: **None, Password/no AES, Password/AES**.
   c. Select a **Baud Rate** from the drop-down list.
   d. Select a **Flow Control** from the drop-down list.

4. Click **OK**.
## IP Client Connection Type

*Figure 9: PW-6000 Host Port Configuration Screen with IP Client Connection*

### Host Connections Configuration

<table>
<thead>
<tr>
<th>PW6000 Communication Address:</th>
<th>1</th>
</tr>
</thead>
</table>

#### Primary Host Port

<table>
<thead>
<tr>
<th>Connection Type:</th>
<th>IP Client</th>
<th>Data Security:</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host IP:</td>
<td></td>
<td>Port Number:</td>
<td></td>
</tr>
<tr>
<td>Connection Mode:</td>
<td>Continuous</td>
<td>Retry Interval:</td>
<td>5sec</td>
</tr>
</tbody>
</table>

#### Alternate Host Port

<table>
<thead>
<tr>
<th>Connection Type:</th>
<th>Disabled</th>
<th>Data Security:</th>
<th>None</th>
</tr>
</thead>
</table>

---

*Note:* The PW-6000 panel does not currently support an IP Client connection.
Serial-RS232, Serial-RS485, Serial-Modem, or Serial-CoBox Connection Types

*Figure 10: PW-6000 Host Port Configuration with Serial RS-232 Connection*

### Host Connections Configuration

<table>
<thead>
<tr>
<th>PW6000 Communication Address:</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Host Port</strong></td>
<td></td>
</tr>
<tr>
<td>Connection Type:</td>
<td>Serial-RS232</td>
</tr>
<tr>
<td>Data Security:</td>
<td>None</td>
</tr>
<tr>
<td>Baud Rate:</td>
<td>9600</td>
</tr>
<tr>
<td>Flow Control:</td>
<td>None</td>
</tr>
<tr>
<td><strong>Alternate Host Port</strong></td>
<td></td>
</tr>
<tr>
<td>Connection Type:</td>
<td>Disabled</td>
</tr>
<tr>
<td>Data Security:</td>
<td>None</td>
</tr>
</tbody>
</table>

1. From the PW6000 Communication Address drop-down list, select one of the eight (0 to 7) available communication addresses for the PW-6000 board.

**Note:** In the previous panels, this selection was made through setting the virtual DIP switches.

2. For the Primary Host Port, make the following selections:
   a. **Connection Type.** From the drop-down list, select Serial-RS232. Select one of the following as appropriate: Serial-RS232, Serial-RS495, Serial-Modem, Serial-CoBox.
   b. **Data Security.** Select one of the following values from the drop-down list: None, Password/no AES, Password/AES.
   c. Select a **Baud Rate** from the drop-down list.
   d. Select a **Flow Control** from the drop-down list.
3. For the **Alternate Host Port**, make the following selections:
   a. **Connection Type.** If you choose to configure an alternate host port, and if you have selected Serial-RS232 for the primary host port, select **IP Server** from the drop-down list for the alternate host port.
   b. **Data Security.** Select one of the following values from the drop-down list: **None**, **Password/no AES**, **Password/AES**.
   c. Select a **Baud Rate** from the drop-down list.
   d. Select a **Flow Control** from the drop-down list.

4. Click **OK**.

### 4.6 Device Information

Click the **Device Info** link on the navigation bar to display the read-only Access Control Device Hardware Information screen:

*Figure 11: PW-6000 Web Server Device HW Info Screen*

**Access Control Device Hardware Info**

<table>
<thead>
<tr>
<th>Product ID-Version: 40-8</th>
<th>Firmware Revision: 1.1.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial Number: 0000001</td>
<td>OEM Code: Not Loaded</td>
</tr>
<tr>
<td>Hardware ID-Revision: 122-0</td>
<td>CPU: 59MHz Part ID-0x20 Part Revision-1</td>
</tr>
<tr>
<td>Ethernet: 10/100 Mbps MAC 00:0F:E5:00:00:00</td>
<td>Host Name of This Device: MAC00FE5000000</td>
</tr>
<tr>
<td>Memory: 1 MB of SRAM, 32 MB of SDRAM</td>
<td>I2C Bus Devices: RTC is present</td>
</tr>
<tr>
<td>Flash ID 0x8973466 16 MB of Flash</td>
<td>256 Byte of EEPROM</td>
</tr>
<tr>
<td>Ports: 3 serial ports</td>
<td>Battery: Low</td>
</tr>
<tr>
<td>Dip Switch: 1 2 3 4</td>
<td>OFF OFF OFF OFF</td>
</tr>
<tr>
<td>Time: - Local Time: 02-04-2022 Friday 06:58:38 - GMT Time: 02-04-2007 Friday 10:58:38 (+0)</td>
<td></td>
</tr>
</tbody>
</table>
4.7 User Configuration

Click the Users link on the navigation bar to display the User screen where you can add, edit, and delete user records:

Figure 12: PW-6000 Web Server User Info Screen

<table>
<thead>
<tr>
<th>Username</th>
<th>Level</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>pw6k</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>admin</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>macyt</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>rolandm</td>
<td>2</td>
<td>intern</td>
</tr>
<tr>
<td>forrestl</td>
<td>1</td>
<td>contractor</td>
</tr>
<tr>
<td>listerp</td>
<td>1</td>
<td>tech support</td>
</tr>
</tbody>
</table>

Adding a User

Follow these steps:

1. Click New Account to display the new user account screen.
2. Enter the following:
   - User name – a unique character string that identifies the user.
   - Level – level of privileges the user will have. Level 1 grants the user read/write privileges to all panel features; level 2 grants the user read-only privileges to the Notes, Network, Host Port, and Device Info features; level 3 grants the user read-only privileges to just the Notes and Device Info features.
3. Specify the maximum period of time a session will remain open without user activity. If the period expires without user activity, the user is logged out. After specifying the time period, click **Save Session Timer** to save the setting.

4. Configure the auto-save timer. This feature, if enabled, automatically saves the hardware configuration in non-volatile Random Access Memory (RAM) at the specified time interval. If you select Enable Auto-Save, then select a time interval from the drop-down list, and click **Save Auto-Save Timer** to save the setting.

**Editing a User**

To edit a user record, click to select the user from the Username column and then click **Edit**. Use the information provided in the previous section, “Adding a User,” to edit the record.

**Deleting a User**

To delete a user record, click to select the user from the Username column and then click **Delete**.

### 4.8 Restore Default Screen

Click the **Restore Default** link on the navigation bar to restore the default configuration values for the PW-6000:

*Figure 13: PW-6000 Web Server Restore Default Screen*

<table>
<thead>
<tr>
<th>Restore Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restore Default</strong></td>
</tr>
<tr>
<td>Reload Factory Settings</td>
</tr>
<tr>
<td><strong>Restore Current</strong></td>
</tr>
<tr>
<td>Reload Current Operating Settings</td>
</tr>
</tbody>
</table>

1. Click **Restore Default** to reload the default factory settings for all the configuration variables.
2. Click **Restore Current** to reload the current operational settings for all the configuration variables.
4.9 Apply Setting Screen

Click the **Apply Setting** link on the navigation bar to apply the selected configuration values:

*Figure 14: PW-6000 Web Server Apply Setting Screen*

---

**Apply Configuration**

- Apply, Reboot

  * The Access Control Device will reboot after Apply Configuration!

---

Click **Apply, Reboot** to apply all the configured values and reboot the PW-6000.

4.10 Log Out

Click the **Log Out** link on the navigation bar to log out of the web server.
Appendix A

PW-6000 Web Server and Pro-Watch Channels

The PW-6000 web server’s host port configuration requires corresponding changes in the way the Pro-Watch’s channels are configured. The PW-6000 web server host ports and the Pro-Watch channel ports must have the correct values to communicate with each other.

Follow these steps:

1. Set the PW-6000 hardware configuration:
   a. On the controller board, set the jumpers J8, J9, J10 on Port1 to RS-485.
   b. On Port1, connect the pins as follows:
      - pin1 = TR+
      - pin2 = TR-
      - pin5 = GND to RS-485 terminals of the Intelligent “Auto” Converter PW5K1CVT1 (i.e., PW-5000 RS-232/RS-485 converter)
   c. Connect the RS-232 terminal of the PW5K1CVT1 converter to the serial port of your Pro-Watch application server.

2. Set the host port configuration of the PW-6000 web server:
   a. Login to the Access Control Device Server Configuration Manager.
   b. Set the Primary Host fields as follows:
      - Connection Type = IP Server
      - Port Number = 3001
      - Data Security = Allow All
   c. Set the Alternate Host Port fields as follows:
      - Connection Type = Serial-RS-485
      - Baud Rate = 38400
      - Data Security = None
      - Flow Control = RTS Toggle
d. Click OK.

e. From the Setting menu, select Apply, Reboot. The system will display the “Board is Restarting” message.

3. Set the port configuration for the Pro-Watch channel:

a. In Pro-Watch, click Hardware Configuration on the left navigation bar.

b. Right click on your Site to launch the mini pop-up menu.

c. Select New > Channel to display the Create a Channel dialog box.

d. Click the Channel Type drop-down list and select PW-5000. The icon of the newly created PW-5000 channel will display in the right pane.

e. Right click on the icon of your PW-5000 channel and select Properties to display the Edit Channel Screen dialog box.

   This screen displays configuration fields for the Primary Port (related to the Primary Host on the web server) as well as the Secondary Port (related to the Alternate Host Port on the web server).

f. For both Primary and Secondary ports, select the appropriate values for the following configuration fields:
   
   – If the Port Type is Hard Wired (related to Serial-RS485 web server host port), then fill in the following settings:
      
      • ComPort
      • Baud

   – If the Port Type is TCP/IP (related to IP Server web server host port), then fill in the following settings:
      
      • IP Address
      • Port Number

   Note: If you are using a modem, and the modem uses a procedure that calls Pro-Watch, then the modem must be the primary port.