



## Wiring

### IZAC Comm. Bus:

Wire the IZAC communication bus to COM2. Use the supplied terminal block to wire only the B+ and B- wires to the i3. Wire the B+ wire to the left terminal and the B- to the right terminal.

### Power:

The i3 is shipped with a 5vdc power supply that must be used for proper operation. Figure 1 shows the +5V connector where the power supply plug should be inserted.

### Ethernet:

The ethernet port on the i3 is used for TCP/IP communication. The RJ-45 connector labeled ETH is the i3's Ethernet port which supports all 10/100 Mbps network connections.

### Serial Tunneling Feature:

The i3's serial tunneling feature is used in conjunction with Solidyne's ICMS Windows based programming application. It allows the ICMS software to connect to the IZAC network through the i3. This is done by using an M204AN plugged into the serial port COM1 of Figure 1. This tunneling feature used TCP port 7001 along with 3<sup>rd</sup> party software programs for serial-to-IP conversion. For more information about this serial tunneling feature, please contact a Solidyne Technical Support Representative.

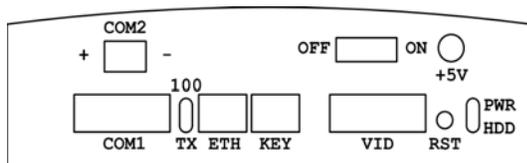


Figure 1

## TCP/IP Communication

### IP Addressing:

Every i3 ships from the factory with the default IP address of 10.0.0.1

The easiest method of changing this address is to use the built-in configuration web pages of the i3. To view these pages you must plug the i3 ethernet cable into a hub/switch or directly to a computer using a crossover cable. You must also configure the computer attached to the i3 with an IP address of 10.0.0.x (x – any number from 2-254 since the i3 is using 1 as its 4<sup>th</sup> number).

- Open the admin page by browsing to <http://10.0.0.1/admin> with your browser.
- You will be asked for a username (cti) and password (super), both entered in lowercase.
- Click the link Configure/Settings Page
- The configuration page will open with a large red "Stop" button near the top of the page.
- Click this large red "Stop" button and the page will refresh with a large green "Start" button.
- Click the second gray button below the green "Start" button titled "Configure".
- This will take you to a page where the 3<sup>rd</sup> field from the bottom is the current IP address of the i3.
- Change this IP address field to whichever address was given to you by the system administrator.
- The two fields below are also open for editing. The Mask Size (default value = 8) is the equivalent of a Subnet Mask of 255.0.0.0 and the Mask Size of 24 is the equivalent of a Subnet Mask of 255.255.255.0.
- After changing this IP address parameters, click the Configure button to save the changes.
- After these changes are saved, you must repeat the steps above to click the large green "Start" button in order for the i3 to operate properly.

## TCP/IP Communication (cont'd)

### Firewall/Router Access:

In some cases, the web pages on the i3 may need to be viewed publicly via the internet. Configuration of a router or firewall will most likely be necessary. The TCP ports that will need to be opened/routed to the i3 are 21 (FTP – used to transferring files to/from the i3), 23 (TELNET – used for a command line interface to the i3 for more complex configuring), and 80 (HTTP – used to display web pages to your browser). The opening/routing of these ports is unnecessary if the i3 will be standing alone on the internet without a firewall or router or in a DMZ.

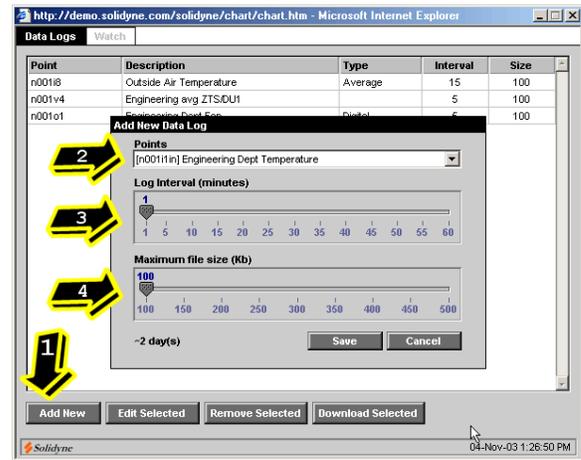


Figure 2

## Changing Passwords

### For Username "cti":

The username "cti" is the only username in the i3. It is used for all configuration needs and has the default password of "super". It is highly recommended that you change this password upon installation of any i3. To change this password, you must open the admin page by browsing to <http://10.0.0.1/admin> and clicking the Configure/Settings Page. Scroll to the bottom of the page and you will see 4 fields followed by a button labeled "Configure". In the username field, enter "cti". In the old password field enter "super". In the new password field enter the desired new password, and then re-enter into the final field. Click the "Configure" button when finished.

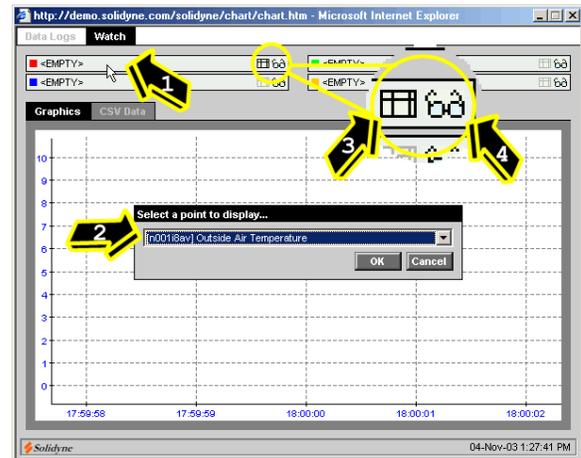


Figure 3

## Data Logging Applet

### Location:

The data logging applet is located at [http://<ip\\_address>/datalogs](http://<ip_address>/datalogs)

### Requirements:

The data logging applet requires Java Runtime Environment (JRE) version 1.4 or above. You can update your JRE by visiting [www.sun.com](http://www.sun.com)

### Usage:

The data logging applet is used for configuring, viewing downloaded logged data from IZAC control systems.

### Creating New Logs:

- Click the "Add New" button (Fig. 2, Item 1).
- Select the point that you wish to log (Fig. 2, Item 2)
- Slide to select the log interval (Fig. 2, Item 3)
- Slide to select the maximum file size (Fig. 2, Item 4)

### Viewing Logs:

The Data Logging applet can simultaneously graph 4 data streams in real time. To view a log:

- Click an empty selection near the top of the window (Fig. 3, Item 1)
- Select the point you would like to log (Fig 3, Item 2)
- Once the point is selected, you may change the color of the graph by clicking the color square next to the point
- If you have multiple data logs being graphed at once, you can toggle the view/hide button (Fig. 3, Item 4)
- If you would like to view the raw data in table format, click the table button (Fig. 3, Item 3)

You can also zoom into the data graph by holding your left mouse button down and dragging the mouse to select the portion of the graph you would like to zoom into. To undo the zoom feature, just double click anywhere on the graph.

## Email Alarm Applet

### Location:

The data logging applet is located at [http://<ip\\_address>/alarms](http://<ip_address>/alarms)

### Usage:

The Email Alarm Applet is designed to be used for the emailing of trouble alarms from the IZAC system that it is connected to. The widespread use of email means that you can receive an alarm from an i3 on your computer in form of an email, or by your cell phone using SMS text messaging.

### Setting up the Email Alarm Applet:

Figure 4 shows the main Email alarm applet window. The first step in the setup is to open the alarm system setup as shown in Figure 6.

**Building Name:** This will be part of the subject of the email that is sent to the recipient.

**SMTP Server:** This is the ip address of the SMTP server that the i3 will use to send the emails through. The SMTP Server field must only contain numbers. Contact the buildings Administrator for this ip address.

**"From" Email Address:** This will be displayed in the emails "From" address.

**i3 URL:** This is used for the datalog attachments. It is used to allow the user the ability to click a URL in the alarm email to download specified datalogs in Excel format.

**Test SMTP Server:** Enter any email address to test the above SMTP server to see if it is operational. A popup window will appear telling you of the error or no error.

### Entering Email Addresses in the Address Book:

Before creating any email alarms, you must first enter at least one email address in the address book. Clicking the "Address Book" button will open a window allow you to create, edit and delete email addresses from the address book.

### Creating a New Alarm:

From the main window click the "New Alarm" button. Fill in the fields as described below.

**Alarm Name:** Name of the alarm. Will show up in alarm history and in email.

**Alarm Description:** This is for additional alarm information. Will appear in email.

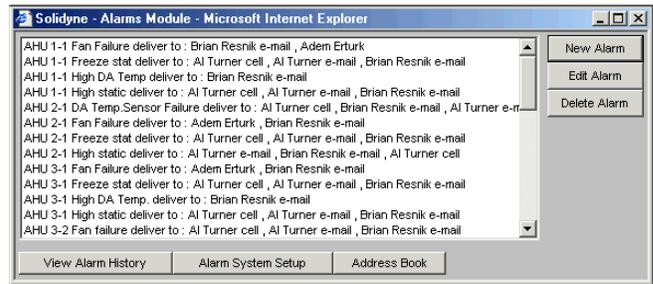


Figure 4

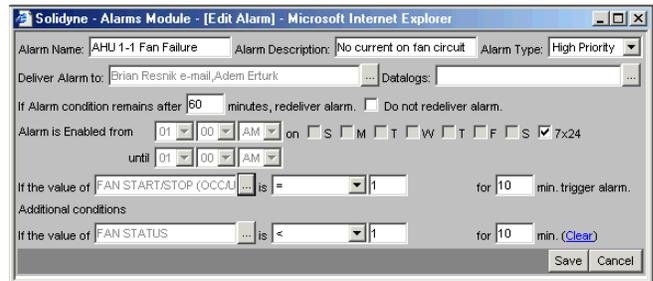


Figure 5

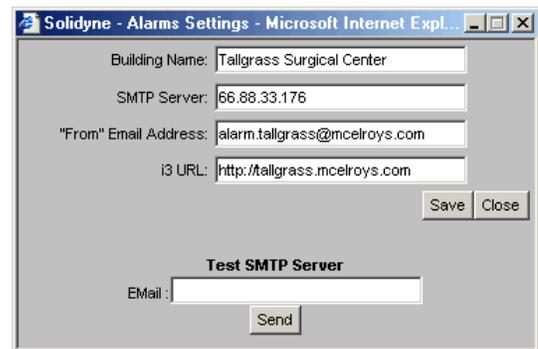


Figure 6

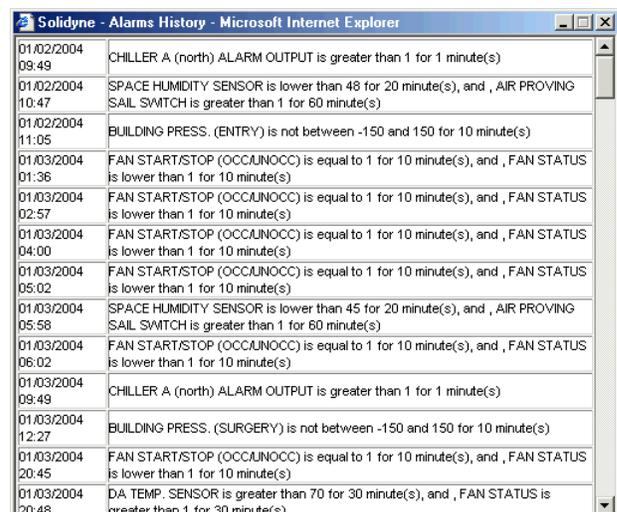


Figure 7

**Alarm Type:** Has no bearing on the delivery of the email. Used for notification purposes only. Will appear in email.

**Deliver Alarm to:** These will be the recipients of the email. Limit is 3 recipients.

**Datalogs:** The alarms can be configured to send a link to a datalog of any point in the system, when the alarm is triggered. Will appear in email as a link to click.

**If Alarm Condition Remains:** There are two selections in this item. A minutes field can be set to the amount of minutes for the alarm to be redelivered if the alarm condition remains. This selection can also be checked to not redeliver the alarm. This would require the alarm condition to be absent and then retrigged in order for the alarm to redeliver.

**Alarm is Enabled from:** Time parameter that a particular alarm is active.

**Alarm conditions:** Alarm conditions can be created using any point in the system. The value can trigger an alarm based on the point being less than, greater than, equal to, between or not between a particular set value for a particular set time period. The example in Figure 5 states that the Fan Start/Stop must be equal to 1 for 10 minutes, and the Fan Status must be less than 1 for 10 minutes in order for the alarm to trip and send an email to the specified recipients.

**Alarm History Window:**

The alarm history window shows all of the emails that have been sent by the email alarming system. The History window will show approximately the last 100 alarms that have occurred in the system.

## Halting and Rebooting

If you need to shutdown the i3 for any reason, instead of just unplugging the unit, the safest method is to halt the unit. To do this, go to the following webpage in the i3:

[http://<ip\\_address>/cgi-bin/haltrebootmg200.tcl](http://<ip_address>/cgi-bin/haltrebootmg200.tcl)

The page will have two buttons, Halt Enflex Host and Reboot Enflex Host. Clicking the Halt Enflex Host button will shut the unit down for safe removal of power. Clicking Reboot Enflex Host will restart the unit. Rebooting of the i3 will take around 1 minute. When halting the i3, you will hear a jingle about 30 seconds after clicking the button to halt.

## Common Used TCP Ports

The following ports must be opened in order to view and configure web pages on the i3 from a remote location on the internet. These ports only need to be opened on a router/firewall if remote internet access to the i3 is required.

**HTTP Port:**

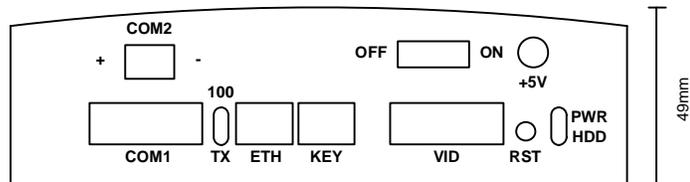
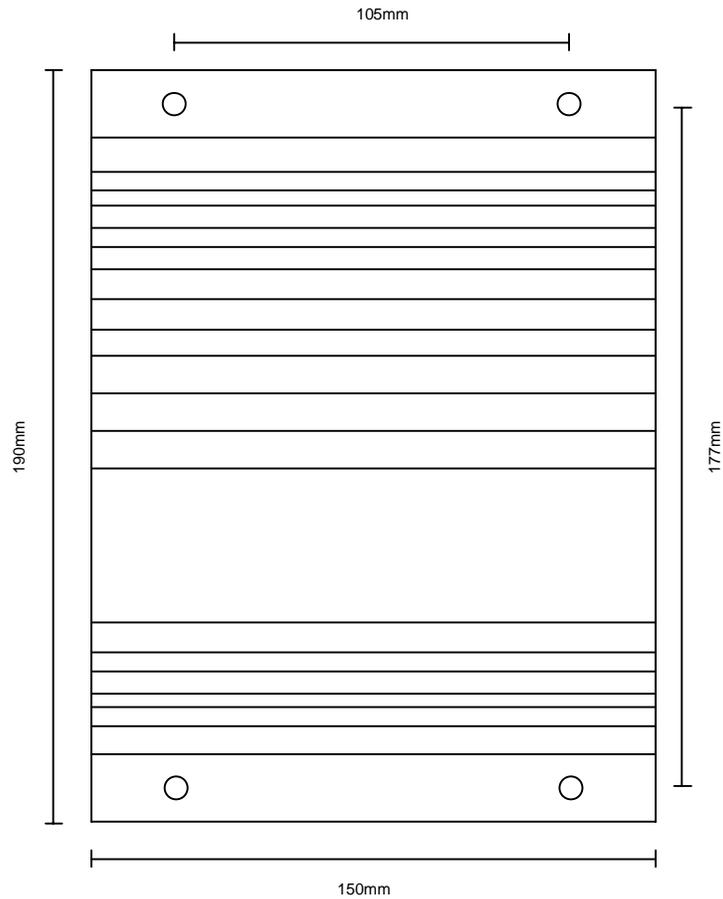
This port is required at a minimum to view the pages on the system. This port is typically port 80.

**FTP Port:**

This port is required to send files such as software updates to the i3. This port is typically port 21.

**TELNET Port:**

This port is required to configure csv and tcl files (see i3conf software help file) to the i3. This port is typically port 23.



## Specifications

### Power Requirements

- 5 VDC, 2.5 A regulated
- Power supply is furnished with the G-100.
- Plugs into standard 120 VAC outlet
- 240 VAC available

### Environmental (Operational)

- 0° C to +60° C
- 90% RH, non-condensing

### Hardware Configuration

**Feature**  
Processor

#### Description

Embedded Geode GX1-233 (Pentium class, 233MHz)  
 - Full peripheral support  
 - Full floating point operation  
 - No cooling fan required

RAM  
 BIOS  
 Real Time Clock  
 Watchdog Timers  
 Data Storage

32Mb SODIMM/SDRAM (64Mb SODIMM/SDRAM on i3-6412)  
 Award  
 Lithium battery backup  
 Independent hardware and software watchdog timers (1.6 sec)  
 20 Mb Solid State Compact Flash Disk (128Mb Disk on i3 6412)