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Quick Installation Guide

V2000 READER INTERFACE / ACCESS CONTROLLER

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Contents

Introduction

VertX™ CS is the first family of access controllers designed specifically for alarm dealers for direct connection to central stations. Because it was designed with central station in mind, VertX CS works with software from leading central station automation providers, including Bold Technologies, DICE and GE MAS.

The V2000 is designed to control two sets of door devices (such as two-doors, two-readers, associated contacts and relays) as well as manage communications with the central station automated software.

Parts List

Description	Quantity
VertX™ V2000 Reader Interface/Access Controller **Note:** The V2000 controller has a plastic base and is covered with a Plastic or Mylar cover.	1
- Lithium Battery	1
- Mounting screws	4
- 2.2K EOL resistors	8
- Quick Installation Guide	1
- Installation Wiring Diagram Example	1

Product Specifications

Description	Specification
Power Supply	12-16VDC
Maximum current at 12VDC per V2000	1 Amp
Average operating current at 12VDC	625 mA (with two R40 ***iCLASS*** Readers)
Operating temperature range	32°-122°F (0°-50°C)
Humidity	5% to 95% non-condensing

Cable Specifications

Cable Type	Length	Specification
Input Circuits *	500 feet (150 m)	2-conductor, shielded, using ALPHA 1292C (22AWG) or Alpha 2421C (18AWG), or equivalent.
Output Circuits *	500 feet (150 m)	2-conductor, using ALPHA 1172C (22AWG) or Alpha 1897C (18AWG), or equivalent.
Wiegand	500 feet (150 m) to reader	ALPHA 1299C, 22AWG, 9-conductor, stranded, overall shield. Fewer conductors needed if all control lines are not used.
Ethernet	328 feet (100 m)	Cat5, Cat5E, and Cat6
Power Supply +12 VDC IN	----	Refer to your Power Supply Installation Guide.

* Minimum wire gauge depends on cable length and current requirements.

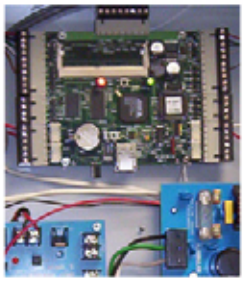
Overview

The following outlines what is required to install the V2000.

1 Preparations

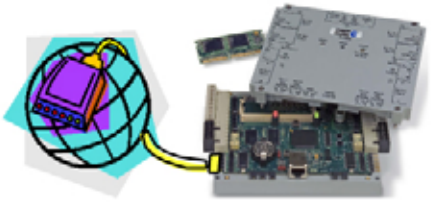
Preparations includes:
1. Reading through this document.
2. Gathering information found in the Pre-Installation Checklist.

2 Hardware Installation



Hardware Installation includes:
Mounting and wiring the controller and panels.

3 Communication Configuration



Communication Configuration includes:
Establishing communication so the central station automation software can push down the detailed configuration data.

4 Reboot and Test with the Central Station

Reboot and Test with Central Station includes:
1. Rebooting the controller to ensure that the configuration changes have taken affect.
2. Contacting the central station to verify that they can communicate with the VertX controller.

Step 1 Preparations

1.1 What you need before getting started

Prior to starting the installation, please completely read this guide.

CAUTION: The V2000 is sensitive to Electrostatic Discharges (ESD). Observe precautions while handling the circuit board assembly by using proper grounding straps and handling precautions at all times.

1.2 V2000

1. Remove the plastic or Mylar cover.
2. Verify the battery is installed. If the battery is not installed, complete these steps:
   a. Remove the button cell battery from the accessory kit.
   b. Install the button cell battery (+ side up) in the battery holder, BT1.
   c. Verify that the battery jumper is in the ON position (or OUT position on old covers), P10 (V2000), pins 2-3.
   d. Replace the plastic or Mylar cover.

Step 2 Hardware Installation

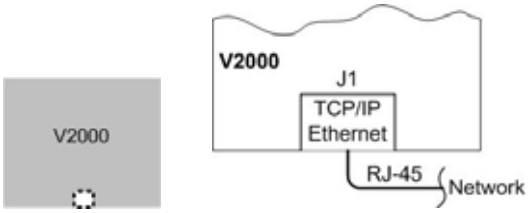
2.1 Mounting Instructions

1. The V2000 should always be mounted in a secure area.
2. Mount the V2000 using the four mounting screws (provided) or other appropriate fasteners. Place the fasteners in the corner holes of the base.
3. The V2000 can be stacked with or without the cover. Do not remove the plastic base. Make sure you position the V2000 in such a way as to provide room for wiring, air flow and cable runs.

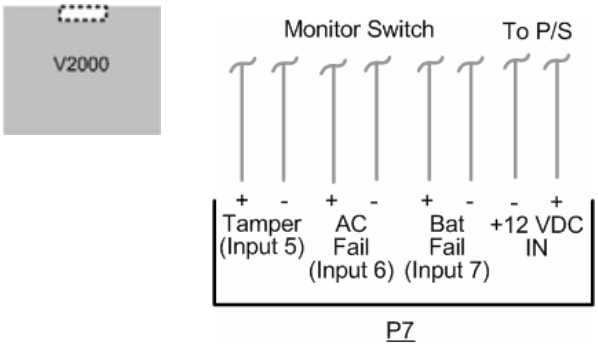
2.2 Wiring VertX

CAUTION: Connectors on the V2000 sides are positioned to be mirror images and are not interchangeable once the installation is complete. Therefore, you cannot unplug the connector from one side of the board and plug it into the corresponding connector on the other side of the board.

1. **Network Connection:** Connect the V2000 to the network using a standard Cat5 network patch cable. Connect one end of the Cat 5 network patch cable to the **J1** (RJ-45) connector on the V2000 and the other end to the network connection point (network jack, hub, switch, or router) on your site.



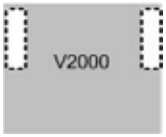
2. **Power and Alarm input connections:** Connect power by providing 12VDC to the **P7** connector. +12VDC goes to **Pin 1** and Ground on **Pin 2**. The Bat Fail, AC Fail, and Tamper switch inputs are wired as shown in the table. Connect the Bat Fail and AC Fail inputs to battery low/failure and AC failure contacts provided on the power supply. Connect the Tamper input to a tamper switch on the enclosure.



Pin #	P7
1	+12VDC
2	Ground
3	Bat Fail -
4	Bat Fail +
5	AC Fail -
6	AC Fail +
7	Tamper -
8	Tamper +

3. **Reader Connections**: Connect Wiegand or clock-and-data interfaces using the connection table shown. You can connect up to 10 signal lines for the reader. Use as many signal lines as are required for your reader interface.

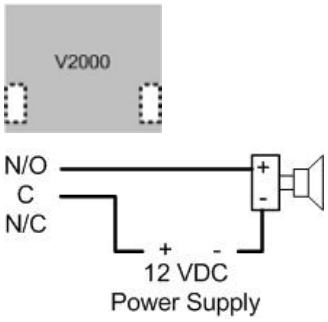
   Note: Connect the data return line to the same ground as the reader power, if the reader is not powered by the VertX controller's 12VDC.



Pin #	V2000 P1	V2000 P4
1	Reader Power	Shield Ground
2	Ground	Hold
3	Data 0 / Data	Beeper
4	Data 1 / Clock	Red LED
5	Data Return	Green LED
6	Green LED	Data Return
7	Red LED	Data 1 / Clock
8	Beeper	Data 0 / Data
9	Hold	Ground
10	Shield Ground	Reader Power

4. **Output Connections –** All Output connections are used for general purpose controls. The following table shows where the various outputs are located among the various VertX types. Pin numbers shown use the convention "NO/C/NC". For example, Output 1, V2000: P3 Pin1 is NO (Normally Open) and Pin 2 is C (Common) and Pin 3 is NC (Normally Closed).

   Note: Relay contacts are rated for 2Amps @ 30VDC.



Output number	V2000	V1000	V100	V200	V300
1	P3 Pins 1/2/3 *Strike (lock) Relay 1*	P14 Pins 2/3/4	P3 Pins 1/2/3 *Strike (lock) Relay 1*	P3 Pins 2/3/4	P1 Pins 1/2/3
2	P3 Pins 4/5/6 *Aux Relay 1*	P11 Pins 6/5/4	P3 Pins 4/5/6 *Aux Relay 1*	P6 Pins 3/2/1	P1 Pins 4/5/6
3	P6 Pins 6/5/4 *Strike (lock) Relay 2*		P6 Pins 6/5/4 *Strike (lock) Relay 2*		P1 Pins 7/8/9
4	P6 Pins 3/2/1 *Aux Relay 2*		P6 Pins 3/2/1 *Aux Relay 2*		P2 Pins 1/2/3
5					P2 Pins 4/5/6
6					P2 Pins 7/8/9
7					P4 Pins 9/8/7
8					P4 Pins 6/5/4
9					P4 Pins 3/2/1

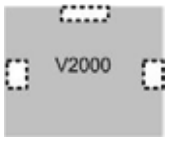
Output number	V2000	V1000	V100	V200	V300
10					P5 Pins 9/8/7
11					P5 Pins 6/5/4
12					P5 Pins 3/2/1

5. **Input Connections** – Input connections are used for a combination of specific functions such as Request-to-Exit (REX), Door monitor, etc. They can also be used as general purpose monitoring. Connect one side of the switch or contact to the **+** (plus) lead and the other to the **–** (minus) lead. The following table shows where the inputs are located among the different VertX units. Pin numbers shown on the cover use the convention **+/–**.

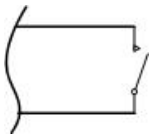
   The default REX switch configuration is normally open (NO) unsupervised (no EOL resistors), while the default door switch (DS) configuration is Normally Closed (NC) unsupervised (no EOL resistors). All other input points are defaulted for NO switches and are unsupervised (no EOL resistors).

   Any input can be configured as a supervised input. They can be configured for resistors of 1K – 6K Ohm. The setup of supervised inputs should be done during configuration of the VertX units via the central station automation software (host) or by using the Calibrate Input tool, see section 4.1 Calibrate Input.

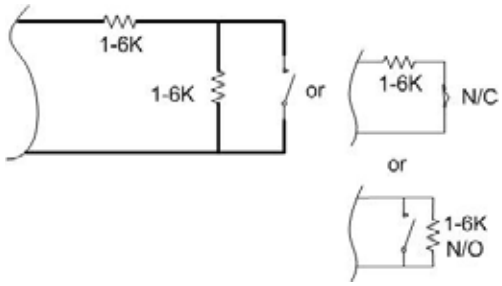
   Example: Input 1, V1000 is: P14 Pin1 is + and Pin 2 is -.



All default inputs will be:



Supervised inputs can be configured for:



Input number	V2000	V1000	V100	V200	V300
1	P2 Pins 1/2 *Door Monitor*	P14 Pins 1/2	P2 Pins 1/2 *Door Monitor*	P1 Pins 1/2	P6 Pins 2/1
2	P2 Pins 3/4 *REX input*	P11 Pins 4/3	P2 Pins 3/4 *REX input*	P1 Pins 3/4	P3 Pins 1/2
3	P5 Pins 4/3 *Door Monitor*	P7 Pins 8/7 *Tamper*	P5 Pins 4/3 *Door Monitor*	P1 Pins 5/6	P7 Pins 8/7 *Tamper*
4	P5 Pins 2/1 *Rex Input*	P7 Pins 6/5 *AC Fail*	P5 Pins 2/1 *Rex Input*	P1 Pins 7/8	P7 Pins 6/5 *AC Fail*
5	P7 Pins 8/7 *Tamper*	P7 Pins 4/3 *Batt Fail*	P7 Pins 8/7 *Tamper*	P1 Pins 9/10	P7 Pins 4/3 *Batt Fail*
6	P7 Pins 6/5 *AC Fail*		P7 Pins 6/5 *AC Fail*	P2 Pins 1/2	

Input number	V2000	V1000	V100	V200	V300
7	P7 Pins 4/3 *Batt Fail*		P7 Pins 4/3 *Batt Fail*	P2 Pins 3/4	
8				P2 Pins 5/6	
9				P4 Pins 10/9	
10				P4 Pins 8/7	
11				P4 Pins 6/5	
12				P4 Pins 4/3	
13				P4 Pins 2/1	
14				P5 Pins 6/5	
15				P5 Pins 4/3	
16				P5 Pins 2/1	
17				P7 Pins 8/7 *Tamper*	
18				P7 Pins 6/5 *AC Fail*	
19				P7 Pins 4/3 *Batt Fail*	

Step 3 Communications Configuration

This section describes the communications configuration.

There are two methods of communication possible on a V2000:

- **Error! Reference source not found.**
- Static TCP/IP Addressing

Follow only the communication instructions that relates to your sites specific installation.

3.1 Firewall Configuration

If the VertX controller is being installed were it communicates through a firewall, then the firewall must be configured to allow TCP data transfer on the specified port(s).

The port(s) that must be opened on the firewall for the VertX controller are the "**`connection_port`**" and "**`listen_port`**" specified in the **CommCfg** configuration file (The **Setup Host Communication** screen will take you to the **Edit Configuration Files** screen. The configuration files described in this section will enable DHCP TCP/IP host communications. See sections 3.2, 3.3, and 3.4 for instructions on how to start.

Select a file from the list the appropriate configuration file and click **Edit File**. If you need to clear the selection, click **Clear Selection**.

While following these instructions edit the circled areas shown.

Note: In addition to these configuration file edits, you may be interested in changing the "hostname". See /mnt/flash/etc/conf.d/hostname for instructions on changing the host name.

/mnt/flash/TaskConfig/CommCfg) as well as the Pre-Installation Checklist.

If you are **not** familiar with configuring a firewall for the network, contact the Network/IT administrator or manager.

CAUTION: If the firewall is not configured properly the controller will not be able to communicate with the host.

3.2 Computer to VertX Controller Connection

Note: This step is necessary if you are configuring your communications for DHCP or Static TCP/IP.

3.2.1 Hardware Requirements

The following outlines the hardware requirements for configuring a static TCP/IP connection.

- Computer with administration rights and a Internet browser, Internet Explorer 5.0 (or greater), or equivalent.
- Ethernet cable
- Optional Hub – Required if primary communication channel is Ethernet.

Connect the computer to the VertX controller using an Ethernet cable.

3.3 Windows TCP/IP Configuration

Prior to proceeding, document your **Network Connections** settings, in order to change your settings back to their original configuration.

CAUTION: During the timeframe in which you have changed the TCP/IP settings on your computer, you will not have access to the Internet or E-mail.

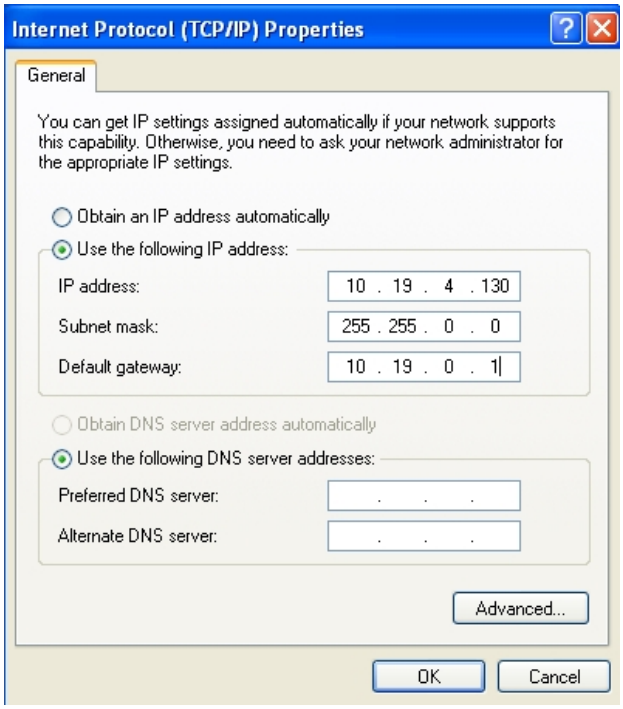
Depending on your operating system, follow one of the listed procedures.

- Windows XP Computers
- Windows 2000 Computers
-

Windows Millennium Computers

3.3.1 Windows XP Computers

1. Set the computer IP address.
2. Click the Windows **Start** menu > **Settings** > **Network Connections**. The **Network Connections** screen displays.
3. Double-click  Local Area Connection. The **Local Area Connection Status** dialog displays.
4. Click Properties. The **Local Area Connection Properties** dialog displays.
5. Within the **This connection uses the following items:** window, click **Internet Protocol (TCP/IP)**, and click **Properties**. The **Internet Protocol (TCP/IP) Properties** dialog displays.
6. Select the **Use the following IP address** radio button. This action will enable the fields **IP address**, **Subnet mask** and **Default gateway**. Use the space bar to tab between fields, the tab key will not work.
7. Enter the IP address **10.19.4.130**. If the VertX board's IP address is different than what is shown, the computer IP address must be modified accordingly. The two IP addresses need to be in line with each other and separated by one digit (for example: 10.19.4.130 is one digit greater than 10.19.4.129).
8. Enter the Subnet mask: **255.255.0.0**.
9. Enter the Default gateway: **10.19.0.1**.
10. Click **OK**.
11. Click **Close** to complete the computer configuration.
12. Restart your computer.



3.3.2 Windows 2000 Computers

1. Go to the **Network** screen by clicking the **Start** button. Click **Settings** and then **Control Panel**. From there, double-click the **Network Connections** icon.
2. Select the **Local Area Connection** icon for the applicable Ethernet adapter (usually it is the first Local Area Connection listed). Double-click the **Local Area Connection**. Click the **Properties** button.
3. Select **Internet Protocol (TCP/IP)**, and click the **Properties** button.
4. Select the **Use the following IP address** radio button. This action will enable the fields **IP address**, **Subnet mask** and **Default gateway**. Use the space bar to tab between fields, the tab key will not work.

5. Enter the IP address **10.19.4.130**. If the VertX board's IP address is different than what is shown, the computer IP address must be modified accordingly. The two IP addresses need to be in line with each other and separated by one digit (for example: 10.19.4.130 is one digit greater than 10.19.4.129).
6. Enter the Subnet mask: **255.255.0.0**.
7. Enter the Default gateway: **10.19.0.1**.
8. Click **OK**.
9. Click the **OK** button again to complete the computer configuration.
10. Restart your computer.

3.3.3 Windows Millennium Computers

1. Go to the **Network** screen by clicking the **Start** button. Click **Settings** and then **Control Panel**. From there, double-click the **Network** icon.
2. On the **Configuration** tab, select the **TCP/IP line** for the applicable Ethernet adapter. Do not choose a TCP/IP entry whose name mentions DUN, PPPoE, VPN, or AOL. If the word **TCP/IP** appears by itself, select that line. Click the **Properties** button.
3. Click the **IP Address** tab and select **Use the following IP address.** Enter the IP address **10.19.4.130.**
4. Now click the **Gateway** tab to enter the **Installed Gateway** content. Enter the Default Gateway **10.10.0.1**. Click the **OK** button.
5. Click **OK** again. Windows may ask you for the original Windows installation disk or additional files. Supply them by pointing to the correct file location, e.g., D:\win98, D:\win9x, c:\windows\options\cabs, etc. (if "D" is the letter of your CD-ROM drive).
6. Restart your computer.

3.4 How to Edit Configuration Files

Before configuring a VertX controller to communicate through DHCP or Static TCP/IP Addressing, learning the following conventions is necessary.

First, you must become familiar with editing conventions to successfully configure the VertX controller.

3.4.1 Conventions

The rules described are basic guidelines for editing the configuration files successfully.

- Lines beginning with "#" are comments and are ignored.
    - The term "uncomment" means that you should remove the "#" symbol from the referenced line in the configuration file.
    - The term "comment" means to add a "#" symbol to the referenced line in the configuration file.
- White spaces must be space characters, and not tabs.
- In the Installer Tools, do **not** uncheck **Convert CRLF to LF** (found at the top of the **Edit** screen). This checkbox ensures that Carriage Returns are converted correctly to line feeds for the VertX Controller.

CAUTION: Currently there is minimal error checking on configuration parameter data. If errors occur during startup, you must verify that all configuration data is within valid ranges.

3.4.2 Accessing the Installer Tools

When configuring for a DHCP or Static TCP/IP connection, access the **Installer Tools** to edit the configuration files.

1. Open your Internet Browser.
2. Enter the URL of the controller into the **Address** field.
    - Static TCP/IP Communication, ***Assigned VertX IP*/InstallerTools.html**
    - DHCP TCP/IP Communication, **VertX_Controller.*yourdomain.suffix*/InstallerTools.html**

Note: The URL is case sensitive and must be entered precisely as shown.

3. Click Go. The **Installer Tools** menu will display.

3.4.3 Accessing the Installer Tools

When configuring for a DHCP or Static TCP/IP connection, access the **Installer Tools** to edit the configuration files.

1. Open your Internet Browser.
2. Enter the URL of the controller into the **Address** field.
   - Static TCP/IP Communication, ***Assigned VertX IP*/InstallerTools.html**
   - DHCP TCP/IP Communication, **VertX_Controller.*yourdomain.suffix*/InstallerTools.html**

Note: The URL is case sensitive and must be entered precisely as shown.

3. Click Go. The **Installer Tools** menu will display.

3.5 DHCP TCP/IP Addressing

The VertX controller's default communication configuration is DHCP addressing. When a DHCP address is not provided, the controller will default to a static IP address of 10.19.4.129. When the controller successfully obtains an IP address from a DHCP server, the V1000 communications will use the controller's hostname. The default hostname of a V2000 is "VertX_Controller." Access the controller by completing the following steps:

1. Connect an Ethernet cable from the controller connecting it to the computer or Ethernet Hub. See **Error! Reference source not found. Error! Reference source not found.**.
2. Open your Internet Browser.
3. Enter the URL of the controller into the **Address** field.

The default DHCP URL is VertX_Controller.yourdomain.suffix/InstallerTools.html.

Domain names identify one or more IP addresses. For example, the domain name microsoft.com represents about a dozen IP addresses. Domain names are used in URLs to identify particular Web pages. Every domain name has a suffix, examples of a suffix include .com, .net, .org etc.

Note: If access to the controller is not successful, use the default static IP address (10.19.4.129).

CAUTION: For the DHCP communications to function properly the network must have a functioning DNS (Domain Name Server) or you will be unable to communicate with the controller.

The following configuration files require editing to enable DHCP.

The **Setup Host Communication** screen will take you to the **Edit Configuration Files** screen. The configuration files described in this section will enable DHCP TCP/IP host communications. See sections 3.2, 3.3, and 3.4 for instructions on how to start.

Select a file from the list the appropriate configuration file and click **Edit File**. If you need to clear the selection, click **Clear Selection**.

While following these instructions edit the circled areas shown.

Note: In addition to these configuration file edits, you may be interested in changing the “hostname”. See /mnt/flash/etc/conf.d/hostname for instructions on changing the host name.

- /mnt/flash/TaskConfig/CommCfg
- /mnt/flash/TaskConfig/CommHosts

3.5.1 Configuration File Edits

The **Setup Host Communication** screen will take you to the **Edit Configuration Files** screen. The configuration files described in this section will enable DHCP TCP/IP host communications. See sections 3.2, 3.3, and 3.4 for instructions on how to start.

Select a file from the list the appropriate configuration file and click **Edit File**. If you need to clear the selection, click **Clear Selection**.

While following these instructions edit the circled areas shown.

Note: In addition to these configuration file edits, you may be interested in changing the "hostname". See /mnt/flash/etc/conf.d/hostname for instructions on changing the host name.

3.5.1.1 /mnt/flash/TaskConfig/CommCfg

From the **Edit Configuration Files** screen, then edit the **`/mnt/flash/TaskConfig/CommCfg`** configuration file.

1. Select **`/mnt/flash/TaskConfig/CommCfg`** from the list.
2. Click **Edit File**. The **Edit File** window will display.
3. Enter the appropriate configuration data, see the Pre-Installation Checklist – Ref #4, **page 23**, for the VertX controller to communicate to the host.

Example:

```
#
# commtask configuration parameters
# ----------------------------------------------------
# Connect to host on startup (1=>yes)
connect_on_start 1
# If contacted by a host, maintain connection without callback (1=>yes)
maintain_host_connection 0
# Call the host machine on this port
connection_port 4070
# Listen on this port for host connection requests
listen_port 4050
# If a connect attempt fails, wait this interval (~secs)

# before attempting to connect to the next host in CommHosts
reconnect_interval 15
# If no messages are received from the host within this interval (~min)
# then disconnect. (timeout = 0 => no timeout, continuous connection)
timeout 0
# Encrypt host communications (0=no, 1=yes)
use_encryption 0
# If a response to a host request is not received within this time (~secs),
```

```
# then disconnect.
message_response_time 20
```

3.5.1.2 /mnt/flash/TaskConfig/CommHosts

Finally, edit the **/mnt/flash/TaskConfig/CommHost** configuration file to communicate with the central station automation software (host).

This is the last configuration file requiring edits for Ethernet setup.

1. From the **Edit Configuration Files** screen, select **/mnt/flash/TaskConfig/CommHost** from the list.
2. Click **Edit File**. The **Edit File** window will display.

For Static TCP/IP configuration edit the first two lines (lines 1 and 2 shown in the example).

Change "**10.19.4.130**" and/or "**VertXProductionTest**" to include the IP Address or host name of the host(s) in which you are working. **See the Pre-Installation Checklist – Ref #5, page 23.**

Example of Ethernet primary only:

```
# commtask connection file
# cmid WaitTime MaxPings Username Script IPAddress(or Hostname) CommChannel(1-3)
1      1    2    *          *       10.19.4.130            1
2      1    2    *          *       VertXProductionTest    1
#3     20   4    router1    Router  10.10.10.2             2
#4     20   4    modem1     Modem   10.19.4.131            2
```

3.6 Static TCP/IP Addressing

The following outlines hardware requirements and provides a detailed configuration procedure to aid you in connecting to the V2000 through the static TCP/IP addressing configuration only.

See sections 3.2, 3.3, and 3.4 for instructions on how to start.

3.6.1 Configuration File Edits

The **Setup Host Communication** screen will take you to the **Edit Configuration Files** screen. The configuration files available for editing will enable TCP/IP Static host communications using the Static TCP/IP addressing communications method.

Select a file from the list and click **Edit File**. If you need to clear the selection, click **Clear Selection**.

While following these instructions edit the circled areas shown.

3.6.1.1 /mnt/flash/etc/conf.d/net.eth0

First, edit the **/mnt/flash/etc/conf.d/net.eth0** configuration file.

1. Select **/mnt/flash/etc/conf.d/net.eth0** from the list.
2. Click **Edit File**. The **Edit File** window will display.

Modify the following lines to match the controller's specified configuration.

See the Pre-Installation Checklist – Ref #1, page 23.

1. IP (Controller's IP Address).
2. NETMASK (Subnet Mask).
3. Gateway (Network Gateway).

Example:

```
# Network configuration:
# Valid boot protocols are "dhcp" (anything else implies "none").
# DHCP is configured to fail after a single server connection attempt,
#      we will then revert to the statically configured address.
BOOTPROTO="dhcp"
DHCP_CLIENT="/bin/dhclient -1 -cf /etc/conf.d/dhclient.conf -lf /etc/dhclient.leases"

# Valid media types are "auto", "10baseT-HD", "10baseT-FD", "100baseTX-HD",
# "100baseTX-FD" and "" (nothing).
MEDIA="auto"
# If you are using DHCP the following variables will not be used.
IP="10.19.4.129"
NETMASK="255.0.0.0"
BROADCAST="10.255.255.255"
GATEWAY="10.19.0.1"
```

*If using static TCP/IP, change the "**dhcp**" to "**none**".*

3.6.1.2 /mnt/flash/etc/conf.d/hostname

From the **Edit Configuration Files** screen, continue by editing the **`/mnt/flash/etc/conf.d/hostname`** configuration file.

1. Select **`/mnt/flash/etc/conf.d/hostname`** from the list.
2. Click **Edit File**. The **Edit File** window will display.
3. Modify the "**`Hostname`**" (shown in the example as "**`V1000_Demo`**") with the specified Hostname.

See the Pre-Installation Checklist – Ref #2, page 23.

Example:

```
HOSTNAME="V1000_Demo"
```

3.6.1.3 /mnt/flash/etc/resolv.conf.def

Next, from the **Edit Configuration Files** screen edit the **`/mnt/flash/etc/resolv.conf.def`** configuration file.

1. Select **`/mnt/flash/etc/resolv.conf.def`** from the list.
2. Click **Edit File**. The **Edit File** window will display.
3. Modify the "**`aaitg.com`**", "**`10.7.2.220`**" and "**`10.7.2.221`**" values with the specified DNS IP addresses.

See the Pre-Installation Checklist – Ref #3, page 23.

Example:

```
search aaitg.com\000
nameserver 10.7.2.220
nameserver 10.7.2.221
```

3.6.1.4 /mnt/flash/TaskConfig/CommCfg

From the **Edit Configuration Files** screen, edit the **/mnt/flash/TaskConfig/CommCfg** configuration file.

1. Select **/mnt/flash/TaskConfig/CommCfg** from the list.
2. Click **Edit File**. The **Edit File** window will display.
3. Enter the appropriate configuration data**, see the Pre-Installation Checklist – Ref #4,** **page 23**, for the VertX controller to communicate to the Host.

Example:

```
#
# commtask configuration parameters
# ----------------------------------------------------
# Connect to host on startup (1=>yes)
connect_on_start 1
# If contacted by a host, maintain connection without callback (1=>yes)
maintain_host_connection 0
# Call the host machine on this port
connection_port 4070
# Listen on this port for host connection requests
listen_port 4050
# If a connect attempt fails, wait this interval (~secs)

# before attempting to connect to the next host in CommHosts
reconnect_interval 15
# If no messages are received from the host within this interval (~min)
# then disconnect. (timeout = 0 => no timeout, continuous connection)
timeout 0
# Encrypt host communications (0=no, 1=yes)
use_encryption 0
# If a response to a host request is not received within this time (~secs),
# then disconnect.
message_response_time 20
```

3.6.1.5 /mnt/flash/TaskConfig/CommHosts

From the **Edit Configuration Files** screen, edit the **/mnt/flash/TaskConfig/CommHost** configuration file to communicate with the central station automation software (host).

This is the last configuration file requiring edits for Ethernet setup.

1. Select **/mnt/flash/TaskConfig/CommHost** from the list.
2. Click **Edit File**. The **Edit File** window will display.

Change "**10.19.4.130**" and/or "**VertXProductionTest**" to include the IP Address or Hostname of the Host(s) in which you are working. **See the Pre-Installation Checklist – Ref #5, page 23**.

Example of Ethernet primary only:

```
# commtask connection file
# cmid WaitTime MaxPings Username Script IPAddress(or Hostname) CommChannel(1-3)
1      1    2    *          *       10.19.4.130              1
2      1    2    *          *       VertXProductionTest      1
#3     20   4    router1    Router  10.10.10.2               2
#4     20   4    modem1     Modem   10.19.4.131              2
```

3.6.1.6 Reconfigure to the original Windows TCP/IP Settings

As discussed in 3.3 Windows TCP/IP Configuration, return your computers TCP/IP settings to their original configuration.

Step 4 Reboot and Test with the Central Station

NOTE: Dependant on the central station automation software that is being utilized, proceed to Central Station Automation Provider Instructions on page 23 before continuing with Step 4 Reboot and Test with the Central Station.

Now that the V2000 is installed and configured.

1. Reboot the controller by removing and reconnecting the power supply to the controller. The controller should be functional within 20-60 seconds.
2. Contact the central station to test communications.

4.1 Calibrate Input

The Calibrate Input tool is available for calibrating the input devices through the Installer Tools.

CAUTION: Only use the Calibrate Input tool if instructed to use it by the central station.

1. Find the Installer tools by opening a browser and entering the controllers URL into the **Address** field. **See the Pre-Installation Checklist – Ref #5, page 23.**
2. Enter the following URL depending on your communication configuration:
   - Static TCP/IP Communication, ***Assigned VertX IP*/InstallerTools.html**
   - DHCP TCP/IP Communication, **VertX_Controller.*yourdomain.suffix*/InstallerTools.html**
3. Select **Calibrate Input**
4. If more information is required, click **Installer Tools Documentation**.

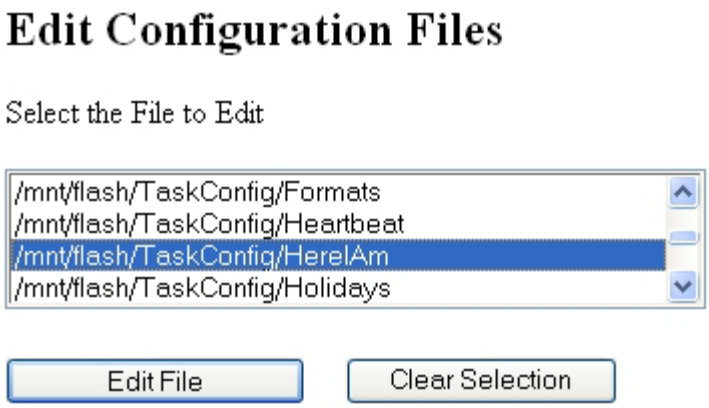
Central Station Automation Provider Instructions

Dice Corporation

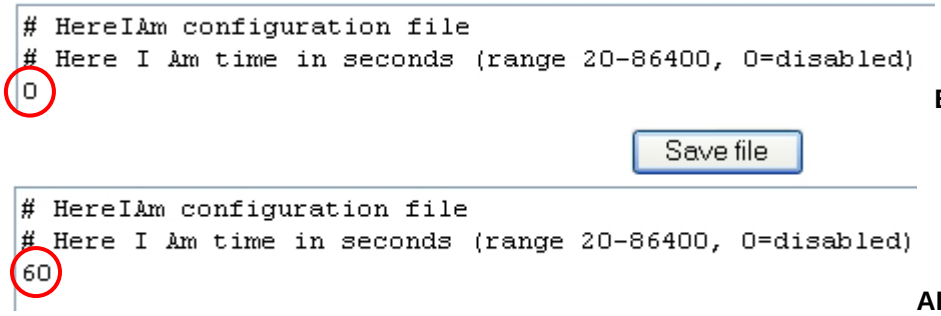
Perform the following steps if the central station uses Dice software.

1. Open your Internet Browser.
2. Enter the V2000 URL into the **Address** field. The URL is gathered from the central station.

   See the Pre-Installation Checklist – Ref #5, page 23.
3. Click Go.
4. Click **Edit Configuration Files**
5. From the **Edit Configuration Files** screen, click **Here I am.** Then, click **Edit File** to modify the file.



6. From within the **Here I am** configuration file, on the third line, change **0** to **60**.



7. Click **Save File**, when complete and the change will become activated once the controller is rebooted.
8. Close the browser window(s) when completed.

Continue to Step 4 Reboot and Test with the Central Station.

GE MAS

If using GE Monitoring Automation Systems (MAS) as a central station automation software, no additional steps are necessary for configuring the V1000 controller.

Bold Technologies

If using Bold Technologies as a central station automation software, no additional steps are necessary for configuring the V1000 controller.

Contact Information

HID Corporation	**929274 Jeronimo Road, Irvine, CA 92618-1905**
Web Site	**http://www.hidcorp.com**
Main Phone	**(949) 598-1600**
Fax	**(949) 598-1698**
Sales	**(800) 210-4744**
Technical Support	**(800) 237-7769**

All National and local Electrical codes apply.

- **This equipment is intended to be powered from a limited power source output of a previously certified power supply.**
- **Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

Class A Digital Devices

FCC Compliance Statement: 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 instruction manual, 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.

Class B Digital Devices

FCC Compliance Statement: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Pre-Installation Checklist

Hardware			
	Name	**Source**	**Part Number**
☐	Ethernet Cable		
☐	Computer with Web Browser		
☐	Hub (Optional)		
☐	AC Electrical Outlet or Surge Protector (Optional)		

Configuration Data				
	Doc Ref	**File Name/Data**	**Configuration Data**	**Collected Data**
☐	1	/mnt/flash/etc/conf.d/net.eth0	Bootproto (for DHCP)	
			IP Address	
			Netmask	
			Gateway	
☐	2	/mnt/flash/etc/conf.d/hostname	Hostname	
☐	3	/mnt/flash/etc/resolv.conf.def	Domain Name for Search	
			DNS IP Address (Primary)	
			DNS IP Address (Secondary)	
☐	4	/mnt/flash/TaskConfig/CommCfg	Connect_on_start	
			Maintain_host_connection	
			Connection_port	
			Listen_port	
			Reconnect_interval	
			Timeout	
			Use_encryption	
			Message_response_time	
☐	5	/mnt/flash/TaskConfig/CommHost	Host Name (“john.abc.com”)	
			Host IP Address	
			Connection Type(s)	