

# HYPER SCADA SERVER (HSS001)



## QUICK START GUIDE

HSS Serial Number	HSM Serial Number
NIM Serial Number	NSM Serial Number
PSM Serial Number	

HSM IP Address: \_\_\_\_\_

NIM IP Address: \_\_\_\_\_

Backup Computer IP Address: \_\_\_\_\_

## NOTICE

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Data Flow Systems also reserves the right to make changes to the specifications of the Hyper SCADA Server, Hyper Server Module, Network Interface Module, Fiber Interface Module, Network Fiber Module, Network Switch Module, and the HT3 SCADA software and to the information contained in this document at any time without notice.

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This document describes the basic procedures for cabling and configuring the Hyper SCADA Server (HSS001). For detailed cabling and installation information, see the Hyper SCADA Server Installation and Operation Manual, available for download from DFS' web site ([www.dataflowsys.com](http://www.dataflowsys.com)). For detailed information on configuring the HT3 SCADA software, see the HT3 User Guide (available from within the HT3 software and also available on the DFS website).

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## **PARTS LIST**

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Hyper SCADA Server (HSS002-1 or HSS002-2), which includes the following components:

- One Hyper Server Module (HSM)
- One 100 W Power Supply Module (PSM)
- One on the following: Network Interface Module (NIM); Fiber Interface Module (FIM); or Network Fiber Module (NFM)
- One Network Switch Module (NSM)
- One 3.0 AH battery
- Two telephone line connectors
- Two serial ports
- One RCA mono jack
- AC power cord (10 feet) (optional power cord plug is available)
- 4 (four) mounting brackets
- 4 (four) mounting screws
- Hyper SCADA Server Quick Start Guide

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## **WHAT YOU'LL NEED**

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- Two (2) static IP addresses - one for the HSM and one for the NIM
- (Optional) One (1) static IP address for a Tunnel CTU
- CAT5 cables terminated with RJ-45 connectors
- Telephone cable terminated with RJ-11 connectors
- Computer with Windows operating system installed
- PS-2 keyboard and VGA monitor (for connecting to HSM when configuring IP address)

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**INSTALLATION CHECKLIST**

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- ✓ Mount HSS001 to wall
- ✓ Connect to network or primary workstation
- ✓ Connect to serial device(s)
- ✓ Configure NIM's IP address
- ✓ Connect telephone lines for dial in and dial out
- ✓ Connect audio device (optional)
- ✓ Connect external alarm light/horn (optional)
- ✓ Connect power
- ✓ Connect keyboard and monitor to HSM and configure HSM's IP address
- ✓ Configure hosts file on workstation
- ✓ Connect to HT3 (modify browser settings; install plug-ins and java policy file; start HT3)
- ✓ Configure remote system backup location

**WARNING**

The HSS should only be installed and serviced by DFS personnel or other qualified technicians.

The HSS must be installed in accordance with all national and local wiring rules.

The rated voltage and current for the HSS001 are 120 VAC and 2 Amperes

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**WORKSTATION SPECIFICATIONS**

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With the HT3 system, you can use Windows-based computers, or workstations, to access the Hyper SCADA Server (HSS). The HSS is a Linux-based server that runs the HT3 SCADA software and MySQL database. You can have multiple Windows workstations connected to the HSS through a local area network. A Windows-based workstation provides you with access to all HT3 functions.

We recommend that one computer be designated as a dedicated primary workstation. This computer's main function would be to interface with the HSS and would remain on at all times.

**Minimum Requirements for a Workstation Computer\***

- Windows XP with SP2
- Internet Explorer 8.0
- Java 1.5

\*Microphone required for recording voice alarm announcements

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## PROTECTING AGAINST ELECTROSTATIC DISCHARGE

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Static electricity can harm delicate components inside the HSS. To prevent static damage, put on an electrostatic discharge wrist strap before touching any of the HSS' electronic components.

In addition to the preceding precautions, the following steps can be taken to prevent damage from electrostatic discharge (ESD):

- When unpacking a static-sensitive component from its shipping carton, do not remove the component's antistatic packing material until ready to install the component in the HSS. Be sure to put on an electrostatic discharge wrist strap before unwrapping the antistatic packaging.
- When transporting a sensitive component, first place it in an antistatic container or packaging.
- Handle all sensitive components in a static-safe area. Place the equipment on a grounded surface. If possible, use antistatic floor pads and workbench pads.

**Note:** Contact DFS if electrostatic discharge packaging is needed for return shipments. See Return Authorization (RA) Procedure, p. 19 for more information on returning equipment.

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## UNPACK THE HSS

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**IMPORTANT:** When handling the HSS001's components, follow the instructions in "Protecting Against Electrostatic Discharge" (previous section).

1. Carefully open the box in which the HSS001 was shipped and remove the unit.
2. Your HSS001 is shipped with the modules preinstalled in their appropriate slots with packing material placed between the modules to help prevent shipping damage. Before mounting the HSS001, open the enclosure's door and remove the packing material.
3. Visually inspect the enclosure and the modules. If any equipment appears damaged, read the information in the Return Authorization (RA) Procedure (p. 23) for instructions on having the equipment replaced or repaired.

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## MOUNT THE HSS

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**IMPORTANT:** The HSS must be mounted to the wall in a vertical position to ensure proper airflow through the vents in the enclosure. These vents are used to help keep the unit and its components from overheating. Do not

install the unit in a horizontal position or lay the unit down on its front, top, back, or sides.

The HSS is designed to operate in an air conditioned, moisture-free, office-type environment [41-86°F (5-30°C)]. When selecting an installation site, make sure that it provides an acceptable environment.

There are four mounting bosses on the back of the unit for attaching the brackets to the enclosure. Attach the four (4) mounting brackets to the back of the HSS' enclosure using the supplied screws. Use all four brackets to ensure that the unit will be securely mounted. The mounting brackets may be aligned vertically or horizontally. After attaching the brackets to the enclosure, securely fasten the HSS to the wall in the desired location.

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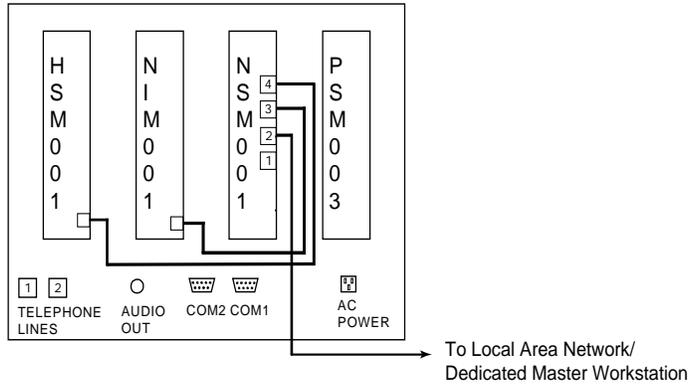
### CONNECT HSS TO LAN / MASTER WORKSTATION

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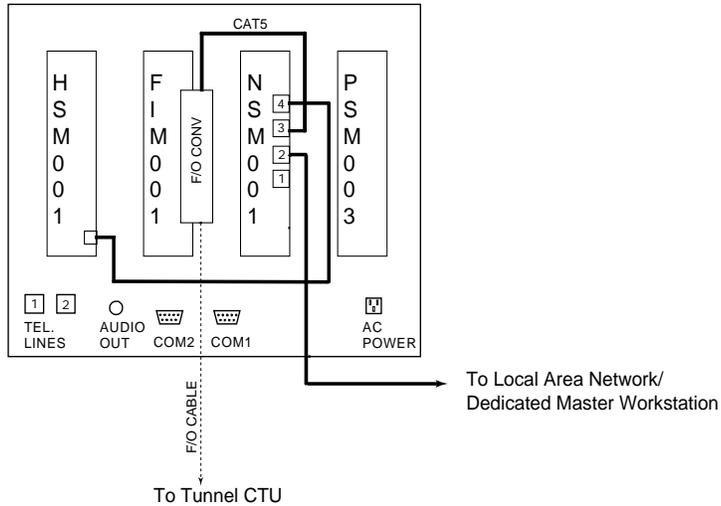
The HSS includes a NIM when using the unit's COM ports to connect to serial-type devices. A FIM/NFM is required in place of a NIM when the unit is connected to a Tunnel CTU.

When connecting the HSS to a local area network through a device such as a hub, switch, or router, or to a dedicated master workstation, connect any unused port on the NSM to a port on the other device.

#### HSS with NIM



## HSS with FIM/NFM




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## CONNECT THE HSS TO A SERIAL DEVICE

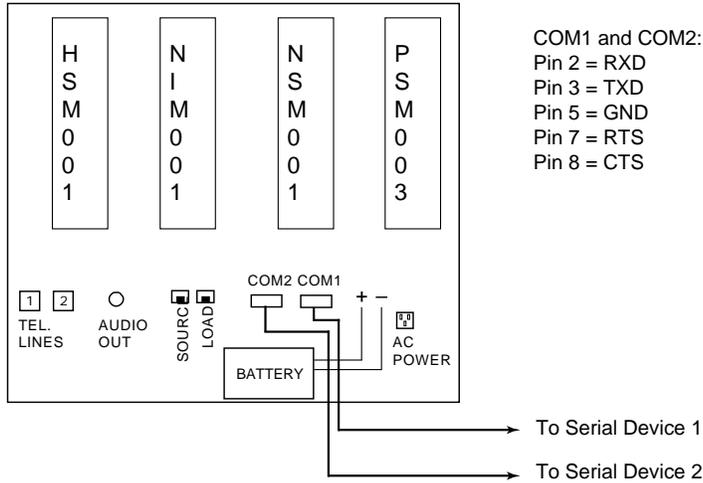
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The Hyper SCADA Server (HSS001) features two ports (COM1 and COM2) for connecting serial-type devices, including Modbus devices. These ports are connected to the HSS' NIM, which allows the serial devices to pass their data to network devices. This is accomplished through a process called serial tunneling. In serial tunneling, the HSM bundles serial data into network packets and forwards it to the NIM. When the NIM sees an incoming packet, it switches

to serial tunnel mode, extracts the serial data, and sends the data out the appropriate COM port. When a serial device sends data to one of the NIM's COM ports, the NIM bundles the data into network packets and forwards them to the HSM.

COM1 and COM2 include RTS and CTS to support connections to equipment (such as radios and modems) that require hardware handshaking. RTS and CTS are optionally enabled via configuration of the driver in HT3.

Additionally, both COM1 and COM2 are used as stand-alone serial tunnels only; there is no bus communication.

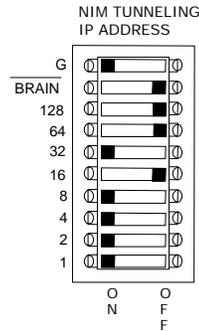


### CONFIGURE THE NIM'S IP ADDRESS

The HSS' NIM acts as an interface between the serial devices connected to the HSS and the network. The NIM is referred to as a "tunneling device," because its function is to pass - or tunnel - serial data through a network. As such, the NIM requires a valid IP address.

**IMPORTANT:** (1) The NIM cannot be addressed greater than 250. (2) The ground (G) switch must remain in the ON position. (3) The BRAIN switch, when set to the OFF position, allows an IP address to be configured when using a NIM/FIM. Set the BRAIN switch to ON when using a NFM.

The NIM features automatic IP addressing. It obtains the first three octets of its network address from an HSM broadcast (a network service called NIM Broadcast). The last octet comes from the NIM Tunneling IP Address block (located in the HSS to the left of the NIM). The last octet is configured by placing each of the DIP switches on the address block either in the ON or OFF position. The address is calculated by adding up the bits that are OFF. The example at right shows the NIM addressed at 208. The 128, 64, and 16 switches have been placed in the OFF position (128 + 64 + 16 = 208).



When the NIM boots up, it receives a broadcast from the HSM that says, "This is your subnet." The NIM reads its subnet, mates it with the tunnel address, and begins to talk at that IP address.

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## CONNECT THE HSS TO A TELEPHONE LINE

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**Note:** By default, HT3 software is configured for two phone lines. If only one phone line is used for the call-in and call-out functions, HT3's configuration must be changed. (See "Call In and Call Out: Configuring 911 & 411" in the HT3 User Guide for more information.)

### One Telephone Line Setup

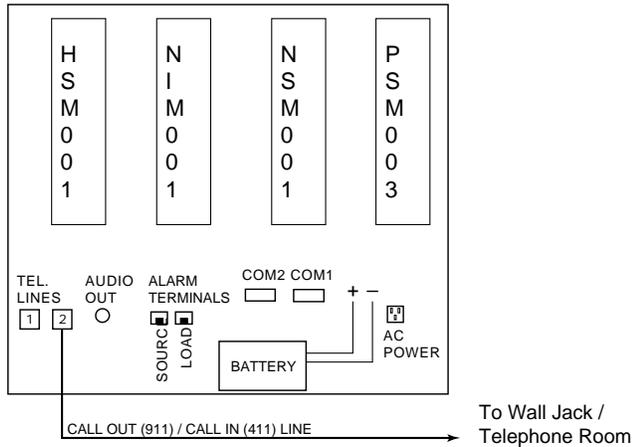
This setup requires a configuration change in HT3.

Follow these instructions when using one telephone line for both the Call Out and Call In functions.

Please note that if you are using only one line for both functions, call out (911) takes precedence. Therefore, if you are calling in and an alarm occurs (one with call out enabled), the system will disconnect your call in order to place the 911 call.

1. From your telephone room or telephone wall jack, locate the telephone line's tip and ring wires and terminate them using an RJ11 modular plug.
2. Insert the plug into the LINE 2 jack. The LINE 2 jack is prewired to the Line 2 termination points on the HSM's card edge.

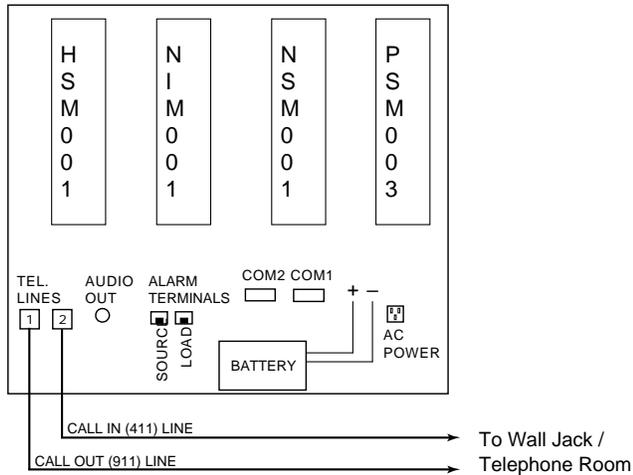
(See wiring diagram on next page.)



## Two Telephone Line Setup

Follow these instructions when using two separate telephone lines for the Call Out and Call In functions.

1. From your telephone room or telephone wall jack, locate line 1's and line 2's tip and ring wires. Terminate each line's tip and ring wires using an RJ11 modular telephone connector.
2. Plug the line that will handle call out (911 calls) in the LINE 1 jack. The LINE 1 jack is prewired to the Line 1 termination points on the HSM's card edge.
3. Plug the line that will handle call in (411 calls) in the LINE 2 jack. The LINE 2 jack is prewired to the Line 2 termination points on the HSM's card edge.




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## CONNECT HSS TO AUDIO DEVICE (OPTIONAL)

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The HSS' RCA mono jack (Audio Out) may be used to connect an audio device, for example, a PA system, an amplifier-plus-speaker system, or amplified speaker(s), to the HSS. With this type of set up, alarm announcements can be heard remotely in addition to being heard at the workstations.

Before connecting the HSS to a sound system:

- Ensure that the sound system has its own power source. Do not use the HSS to power the sound system.
- Turn off the sound system's power. This helps prevent damage to speakers as well as to any connected equipment.

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## CONNECT HSS TO EXTERNAL ALARM LIGHT/HORN (OPTIONAL)

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The HSS includes alarm terminals (source and load) that can be used to connect an external light or horn. The alarm terminals are rated for 125 VAC/60 VDC max./ .5 mA max.

An alarm silence button is not included. You can wire an external relay to function as an alarm silence button if this feature is necessary.

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## CONNECT THE HSS TO A POWER SOURCE

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**IMPORTANT:** When using the power cord included with the HSS, the power cord must be plugged into a grounded socket-outlet. The socket outlet must be installed near the HSS and be easily accessible.

Use the optional power supply kit (part no. 016-0181) when running your own conduit. This kit includes an IEC 320/C13 AC power plug assembly that features screw terminals and is rated at 10 Amps/250 Volts. The rated voltage and current for the HSS001 are 120 VAC and 2 Amperes.

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## CONFIGURE/CHANGE THE HSM'S STATIC IP ADDRESS

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Follow this same procedure if it becomes necessary to change the HSM's IP address.

1. Connect a PS-2 keyboard and VGA monitor to the HSM. Ports for connecting a keyboard and monitor are easily accessible and clearly marked.
2. Power up the HSS following the procedure outlined in the section "HSM Start Up and Shutdown Procedures," p. 20.
3. When the HSM is fully powered and booted up, a login prompt appears on the monitor. Login as MGR.
4. At the command prompt, type *change\_ip xxx.xxx.xxx.xxx* (where xxx.xxx.xxx.xxx represents the IP address of the HSM). Enter Y or N to confirm the IP change.
5. Reboot the HSM.
  - A. Press the power down button on the HSM and watch the HSM's LEDs. When the +CPU LED goes off, the HSM is fully powered down. After the HSM has been powered down, it cannot be restarted for 10 seconds. All inputs are ignored until 10 seconds have passed.
  - B. After 10 seconds have passed, press the power up button on the HSM and watch the HSM's LEDs. When the ACT LED begins to blink, the HSM is fully powered up.

We recommend that you keep the keyboard and monitor attached to the HSM until you verify that you can communicate with the HSM from a Windows workstation.

**Note:** NIMs and FIMs are designed to reset themselves and obtain an IP address after detecting that network communications have been lost and then restored. If you change the HSM's IP address and want to speed up this process, you can manually cycle power to all of the telemetry system's NIMs and FIMs (for example, those in the system's Network RTUs and Tunnel CTUs).

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## CONFIGURE HOSTS FILE ON WINDOWS WORKSTATION

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The hosts file allows you to associate a name with an IP address. After the hosts file has been configured, you can launch Internet Explorer and simply type *ht3* in the Address box to connect to HT3.

1. On the Window's taskbar, click the **Start** button, and then click **Run**.
2. In the **Run** box, type one of the following (depending on your OS level):  
 For Windows XP or newer, type:  
`edit c:\windows\system32\drivers\etc\hosts`  
 For Windows 2000/NT, type:  
`edit c:\winnt\system32\drivers\etc\hosts`
3. In the hosts file, place your cursor on a line below the file's comments [lines preceded by a pound sign (#)] and do the following:
  - A. Type *xxx.xxx.xxx.xxx* (where *xxx.xxx.xxx.xxx* represents the Hyper SCADA Server's IP address).
  - B. Press the Tab key
  - C. Type *ht3*

```

# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
# 102.54.94.97 rhino.acme.com # source server
# 38.25.63.10 x.acme.com # x client host
#
# localhost name resolution is handled within DNS itself.
# 127.0.0.1 localhost
# ::1 localhost
#
192.168.10.14 ht3
192.168.10.192 hypertacii
  
```

4. Select **Save As** from the **File** menu. Verify that the name hosts appears in the **File Name** field and click **OK**.

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### VERIFY CONNECTION TO HSM

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After the hosts file has been created and saved, use the ping command to verify that your computer can connect to the Hyper SCADA Server using the assigned host name.

1. On the Windows taskbar, click the **Start** button, and then click **Run**.
2. Type *ping ht3* in the **Run** dialog box and click **OK**.
3. A DOS window appears on screen and indicates if a reply has been received from the Hyper SCADA Server. A message similar to "Reply from xxx.xxx.xxx.xxx: bytes = 32 time < 1 ms TTL = 64" (where xxx.xxx.xxx.xxx represents the Hyper SCADA Server's IP address) indicates that the HSS responded.

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### CONNECT TO HT3

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#### Modify Browser Settings

Several changes must be made to Internet Explorer's security settings before you can successfully run HT3.

1. Start Internet Explorer.
2. Select **Internet Options** from the **Tools** menu.
3. Click the **Security** tab and select the **Local intranet zone**.
4. Click **Custom Level**.
5. In the **Security Settings** dialog box, enable the following:
  - All of the options listed under **ActiveX controls and plug-ins**.
  - All of the options listed under **Cookies**.
6. Click **OK** at the **Security Settings** dialog box.
7. Click **OK** at the **Internet Options** dialog box.

#### Install Plug-Ins and Java Policy File

1. Start Internet Explorer and type *ht3* in the **Address** box.
2. If the necessary plug-ins are not already installed, the HT3 Plug-Ins page is loaded. (**Note:** If the HT3 Plug-Ins page does not automatically load, type *http://ht3/ht3/plugins/index.html* in Internet Explorer's Address box.)
3. Follow the instructions on the page to install the required HT3 files and plug-ins.

**Start HT3**

1. When installation of the plug-ins and the Java policy file is complete, type *ht3* in Internet Explorer's Address box.
2. On the HT3 login page, enter your Login and Password and click **OK**.
3. Bookmark HT3 in your browser or create a shortcut to HT3 on your desktop.

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**CONFIGURE REMOTE SYSTEM BACKUP**


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HT3 features an automated backup routine that protects your system from critical data loss. Data is copied and stored locally in a designated backup folder on the Hyper Server Module (HSM).

As an additional protection against data loss, a Windows workstation can be configured as a remote backup location. A remote backup site protects you from loss of data in the event of an HSM hardware failure (the HSM itself stops functioning). The designated backup workstation should be equipped with a hard drive large enough to hold all of the system's backup data and must be configured as a remote backup location. (We recommend that the remote Windows backup machine have at least 5 gigabytes of free disk space.)

Backup is performed daily at a few minutes after midnight. The system first makes a local copy of the data (stored on the Hyper Server Module). It then attempts to locate the remote backup computer.

For remote backup to occur, the designated Windows workstation must be on and running. It is recommended that all power management be disabled (i.e., the network card is not allowed to sleep).

If HT3 does not find the remote location, it skips the creation of a remote copy. It will not attempt another remote backup until the following midnight. An entry is made in the current day's Access Log to indicate if the previous day's backup succeeded or failed.

More information on critical data redundancy, including data recovery, can be found in the Hyper SCADA Server Installation & Operation Manual.

1. If the backup directory is to be on a Windows NT/2000, or Windows XP or newer machine, it is recommended that a new user account be created on the machine.
2. Create a backup folder, or directory, on the Windows workstation that has been designated as the remote backup.
3. Share the backup folder. (Refer to your Windows Help for information on sharing folders.)

Windows 98/ME:

- A. Select **Full** for **Access Type**.

- B. Enter *HSU* for the **Shared as** name.
- C. Enter a password in the **Full Access Password** box.

Windows 2000/NT or XP or newer

- A. Change the share name of the folder to **HSS**.
  - B. Set all shared folder permissions to **Full Control**.
  - C. Give the user account created in step 1, above, full access to the shared drive.
4. Login to HT3 and open the System Backup tool by clicking **Configure** on the HT3 main menu and then clicking **Backup** on the Configure submenu.

The screenshot shows a dialog box with three tabs: 'Backup', 'Redundancy', and 'Purge'. The 'Backup' tab is active. It contains the following fields and controls:

- Enable Remote Backup
- Remote Machine Name: 192.168.10.75
- Remote Share Name: HSS
- Remote User Name: Bob
- Remote Share Password: telemetry
- Buttons: Ok, Reset

5. Configure the following:
- **Enable Remote Backup** – Select this option to turn on automated backup.
  - **Remote Machine Name** – Enter the IP address of the Windows workstation that has been designated the remote backup location.
  - **Remote Share Name** – Enter the share name of the backup folder. This should be **HSS**.
  - **Remote User Name** – Enter the name of the user account created in step 1, above (Windows 2000/NT or Windows XP or newer machines only).
  - **Remote Share Password**

Windows 98/ME: Enter the Full Access Password assigned to the shared backup folder.

Windows 2000/NT or XP or newer: Enter the password of the user account created in step 1, above.

6. Verify that all of the above information is correct and click **OK**.

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## HT3 OVERVIEW

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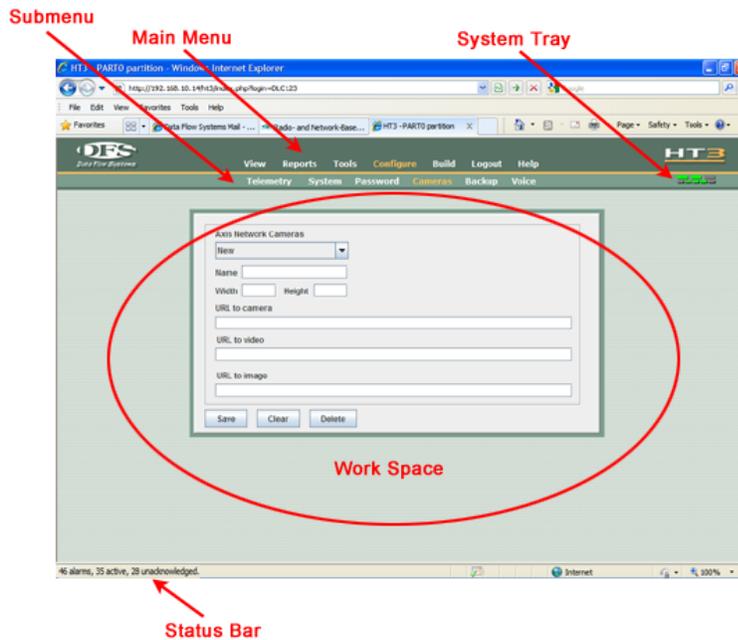
After the necessary hardware and software has been installed and the system is up and running, you can begin configuring HT3 to interface with your system's components (e.g., PLCs, surveillance cameras); set up user accounts; configure alarms for call out; and record alarm announcements. Once the basics are in place, you can begin using HT3's more advanced features, including canned reports, Screen Builder, and Virtual Logic Builder.

The sections below provide a brief overview of HT3's interface and its many features and tools. For more in-depth information, refer to the HT3 User Guide. To open the User Guide, click **Help** on the HT3 main menu and then click **Online Help** or **PDF Version**.

### HT3's Interface

HT3's user interface is made up of the following components:

- Menus (main and submenus)
- Work space
- System tray
- Status bar



## Menus

When you click an item on the HT3 main menu, the submenu for that item opens and the main menu item changes color. If you click another item on the main menu, the submenu changes to reflect the choices for that item.

When you click an item on the submenu, the submenu item changes color and the work space displays the interface for the chosen item except if Screen Builder, Logic Builder, or PCU Editor is selected. These applications open up in a new window.

## Work Space

The work space, located in the center of the user interface, displays the item you selected from the menu.

## System Tray

The system tray is located in the top right corner of the GUI (to the right of the submenu and below the HT3 logo). The system tray consists of three colored bars with a flashing line below them. When you place your mouse pointer over one of these items, information is displayed in the status bar.

- **Current User** - Place your pointer over the left bar to view the login name of the user currently logged in.
- **System Time and Date** - Place your pointer over the middle bar to view the current system time and date.
- **Alarm Information** - Place your pointer over the right bar to view total number of alarms, total number of active alarms, and total number of unacknowledged alarms. Click the right bar to open Alarm Viewer.
- **Server Connection** - Place your pointer over the flashing line to view server information (i.e., "server is online" or "server is offline").

## HT3's Applications

Brief descriptions of HT3's applications are provided below. For detailed information, refer to the HT3 User Guide.

### Status Viewing Tools

HT3 provides you with several methods for examining and analyzing - and from certain viewers, controlling - the status of your telemetry equipment. To access these tools, select **View** from HT3's main menu.

*System Statistics* displays information on the current status of important system-level points, including driver loop time, Hyper SCADA Server (HSS) AC power and battery voltage, active Hyper Server Module (HSM) CPU usage, and length of time active HSM has been running since its last

reboot. This screen (which comes with your system and is built with Screen Builder) uses built-in external status points that monitor the health of your system.

*Custom Screen Viewer* displays the custom screens (graphical representations of telemetry) that you create using HT3's Screen Builder application. When you click the Screens link, your base, or initial, screen is loaded. If you have not created your own custom base screen, the default HT3 base screen (an example of a custom screen) is loaded.

The *Station Status Viewer* allows you to quickly view the status of each point for a specific station. From this viewer, you can also perform a control for any control point configured at the station. By default, the station listing is sorted in ascending order by station address, or number. You can also have the list sorted alphabetically according to station name by clicking the "Station Listing" heading. Clicking "Station Listing" again resorts the list by address.

With *Alarm Viewer*, you can view and/or acknowledge alarm activity. The alarm list can be sorted by several different variables, including time, address, and description, and is color coded for quick alarm status identification.

*Camera Viewer* provides you with a means of viewing the video feed of your network surveillance cameras. With HT3 you can install an unlimited number of surveillance cameras on your network, which can be used to visually monitor important equipment or entrances to your plant.

With *Trender* you can view and analyze historical information for any telemetry point in your system. A trend can contain data from a single point or multiple points. Multiple points can be displayed in separate panels in the same window, or they can be combined to display in the same panel. Trender features tools for zooming in and out (to see more detail or more data) and for panning backward and forward in time. Any user can create and view a trend, but only users with "Configure Telemetry" permission can save a trend

## Reports

HT3 provides you with a variety of reports that allow you to monitor the activity and performance of your telemetry equipment.

To access these reports, select **Reports** from HT3's main menu.

The reports include those for:

- Averaging and totalizing analog flow meters.
- Creating an electronic journal of events that affect your utility's operation.

- Calculating the flow at sewage lift stations that aren't equipped with analog flow meters.
- Generating a chronological listing of all events that occurred at the requested telemetry addresses for the specified time period.
- Listing all DFS stations that are digipeating and providing their relay paths.
- Listing information on each DFS point that is emulating Modbus.
- Providing daily pulse count totals for equipment, such as rain gauges or flow totalizers.
- Reviewing data on the activity of a digital point.
- Viewing information on a selected station, including its partition, polling priority, volume, each module configured at the station, and the module's associated I/O points.

An Advanced Reporting Tool for creating access, alarm and control logs and radio error reports, and using advanced features to create analog flow, derived flow, detail, pulse, and pump activity reports is also available.

### System Troubleshooting and Maintenance Tools

HT3 includes tools to aid you in troubleshooting and maintaining your system. Although these tools are most effective in the hands of experienced DFS service technicians, system administrators and end users can benefit from their proper use.

To access HT3's troubleshooting and maintenance tools, select **Tools** from HT3's main menu.

The *Telemetry Traffic Tool* lets you monitor radio and network communications between your radio- and network-telemetry drivers, and the field hardware. You can also control the value of digital and analog points, set polling priority, and create a communications log. The Inject feature allows DFS Technicians to troubleshoot communication and other system errors from a remote location.

The *Server Control Center* allows users with "Shutdown System" permission to: stop and start telemetry; reboot the Hyper Server Module (HSM); test the Hyper SCADA Server's (HSS) battery power; reset hardware in the HSS; check the status of the MySQL database and repair any errors that exist in the datable tables.

The *File Upload Utility* easy-to-use tool that enables you to browse your Windows workstation or network and upload one of the following types of files to your Hyper Server Module: custom screen image; HT3 update; HTML image; custom HTML file

HT3's easy-to-use File *Download (and Delete) Utility* allows you to download the following files from the Hyper Server Module (HSM) to your

local Windows workstation: report .csv files; report .txt files; driver log files. You can also use this utility to delete files (.csv and .txt report files) from the server.

HT3's *Module Patching Utility* is designed to help maintain the latest patch levels (updates to the original program) on all DFS function modules. This tool can also be used to ensure that all network interface modules are running the latest program.

### Configuration Tools

HT3's configuration tools provide you with the means necessary to configure all aspects of your telemetry system.

To access HT3's configuration tools, select **Configure** from HT3's main menu.

*Configuration Editor's* many options let you set up your system to perform tasks and divide workflows in ways that are unique and meaningful to your operation. You can view and configure partitions, users, drivers, alarms, auto controls, and other telemetry items. These tasks can be completed from any configured Windows workstation.

From the *Registry Editor*, you can change your system's time zone and update the system's time and date.

Use HT3's *Password Maintenance* tool to change the password for your user account.

From the *Configure Cameras* utility, you configure the settings for your network surveillance cameras so that their video feed can be viewed from HT3.

HT3 features an automated backup routine that protects your system from critical data loss. From the *Backup* utility, you designate and configure the Windows workstation that is to be used as a data backup location. This utility is also used to configure a redundant system (HSS002-2 required) and set purge schedules for HT3's logs and journals.

HT3's *Voice Recording* tool enables you to create custom alarm announcement call-out (911) and call-in (411) recordings and command prompts.

### Building Tools

HT3 includes four applications that can be used to enhance and further automate your telemetry system.

To access HT3's building tools, select **Build** from HT3's main menu.

HT3's *Screen Builder* application lets you create a graphical representation of your telemetry system using text, images, objects, and animation. The screen's components can be linked to actual telemetry points; providing you with a quick, real-time view of your operation.

*Virtual Logic Builder* is a user-friendly application that enables you to construct "ladder logic"-style programs that run on the HT3 central computer.

*PCU Editor* enables you to modify the operational set points of a Pump Control Unit (PCU) from a Windows workstation.

With *PLC Editor*, you can transfer set point values to and from the PLC's non-volatile memory locations via telemetry.

### Exit HT3

The *Logout* tool (Portal) should be used to log out of the HT3 system.

### HT3 Help

HT3's release notes and user guide is available from HT3's Help menu.

Select *About* to view HT3's release notes and to view version information.

The HT3 User Guide is available in an HTML-based version and a PDF book-style version (select *Online Help* or *PDF Version*).

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## HSM START UP AND SHUT DOWN PROCEDURES

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### Start Up

1. Turn on the PSM.
2. Connect the battery. The HSS is now activated.
3. It is not necessary to use the HSM's CPU Power up button. The HSM will automatically power up when it senses power has been applied. LED sequence during power up is as follows:
  - A. The ACT LED is constant. The SDN LED blinks slowly and then more quickly. +CPU and +5V LEDs are constant and remain constant during and after power up.
  - B. The SDN LED goes off and the ACT LED is constant.
  - C. The ACT LED begins to blink indicating that the HSM is fully powered up.

### Shut Down

1. Press the HSM's CPU Power down button. The shutdown LED (SDN) begins to flash indicating that the shut down process has begun.

2. SDN then goes constant indicating that services to the HSM have been turned off.
3. After a few moments, the CPU power LED (+CPU) goes out indicating that it is now safe to remove power.
4. Disconnect the battery.
5. Turn off the PSM. The HSS is now deactivated.

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## **BACKUP BATTERY**

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The HSS' backup battery provides approximately 30 minutes of run time when primary AC power is lost.

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## **CARE AND MAINTENANCE**

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- Do not put any objects on top of the HSS001. The enclosure, although strong, is not made to support extra weight.
- When transporting the HSS001, we recommend that you put it in the original packaging materials.
- Avoid subjecting the HSS001 to extreme temperature changes. In cold temperatures, the enclosure can become brittle and easy to break. High temperatures can cause the enclosure to melt or warp.
- Avoid dusty or dirty work environments. Dust and dirt can clog and possibly damage the HSS001's internal components
- Keep all liquids away from the HSS001. Liquids, when spilled onto the HSS001's components, can result in severe damage and costly repairs.
- Do not walk on the power, phone, or network cables or allow anything to rest
  - on them.

### **Cleaning the HSS001**

#### **WARNING**

Even when all of the HSS001's modules are powered down, a small amount of electrical current may still be present. To avoid electrical shock, always unplug all power, phone, and network cables and disconnect the battery before cleaning the unit.

Use a damp, lint-free cloth to clean the exterior of the HSS001. Do not use abrasive or solvent cleaners.

The HSS001 is cooled by air circulated through the vents on the enclosure. It is important that the vents be kept dust free. Use a damp cloth to brush away dust. Be careful not to drip any water into the vents.

To clean the interior of the HSS001, use a dry, lint-free cloth, a mini computer vacuum, soft brush, or an aerosol can of compressed air.

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## REPLACEMENT PARTS

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Parts should only be replaced with parts recommended and approved by Data Flow Systems. Placing unapproved parts in the HSS001 voids the safety certification. See the Return Authorization (RA) Procedure on the next page for instructions on obtaining replacement parts.

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## RETURN AUTHORIZATION (RA) PROCEDURE

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In the event that a function module fails, during or after the warranty period, it may be returned to Data Flow Systems to be repaired or replaced.

All RA's will be subject to standard shipping and handling charges. Minimum handling charge will be assessed, in most cases, for work such as Radio Tuning, Backplanes, "No Problem Found," and other minor repairs. Handling charges will be waived on warranty equipment. Standard shipping and charges will be based on UPS ground, please advise if other arrangements are needed (UPS Red, FedEx, Pickup, Freight...). Standard cost of repairs and shipping charges can be obtained by contacting our RA Department by phone or e-mail.

**STEP 1:** Replace the failed module with a spare module of the same type, if one is available.

**STEP 2:** Contact Data Flow Systems Inc. in one of the following ways to receive an RA#:

- Email DFS at [rma@dataflowsys.com](mailto:rma@dataflowsys.com).
- Call DFS at 321-259-5009 ext. 1142 during normal operating hours.

The following information must be provided.

- Customer/Utility Name and Ship to Address
- Contact Name and Phone Number
- Products to be returned and Serial Numbers
- Detailed description of failure
- PO#

**Note:** The lack of "Detailed description of failure" could result in a bench test fee and equipment returned due to the inability to properly determine the nature of the failure or testing resulting in "No Problem Found."

**STEP 3:** Place the function module(s) individually in an electrostatic discharge bag and then wrap with foam or bubble wrap. Pack the wrapped module(s) in a sturdy box filled with popcorn-type or bubble wrap packing material. Include a packing slip with the following information:

- Module(s) model, serial number, probable cause of failure, and the RA number
- Shipping address
- Shipping instructions (shipping costs greater than UPS ground are charged to the customer)

**STEP 4:** Address the box to:

RA Department # {the RA number you received here}

Data Flow Systems, Inc.  
605 N. John Rodes Blvd.  
Melbourne, FL 32934-9105

**STEP 5:** Ship the box to DFS using any typical shipping carrier (for example, UPS, FedEx, etc.). NOTE: DFS employees are not permitted to hand carry RMA materials.

Modules are typically repaired and shipped back to the customer within a 2-week period starting at the time the module reaches the RA Department. If additional information is required during the repair of the module(s), the DFS service department will contact you.

To get information on the progress of any of your equipment in for repair, contact the DFS - RA Department at [rma@dataflowsys.com](mailto:rma@dataflowsys.com) or 321-259-5009 ext. 1142.

Replacement of equipment may be necessary in the event that the equipment and/or parts are unrepairable. Warranty equipment will be replaced with out prior notification as warranty replacement. The customer will be notified by phone, if equipment not under warranty cannot be repaired, with information of available options.

DFS reserve the right to return any material received without an RA# or not conforming to the requirements of this RA process.

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**WARRANTY**

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The warranty details Data Flow System's commitment to repairing or replacing parts and providing support during the warranty period. Refer to your Warranty Certificate, or the Warranty Statement included with your contract, for details on the terms of your warranty. If you lose your Warranty Certificate/Statement, contact Data Flow Systems' Sales Department to obtain the warranty terms and to replace your Warranty Certificate/Statement.

- Call 321-259-5009
- Email [sales@dataflowsys.com](mailto:sales@dataflowsys.com)

**Notes:**

**Notes:**



Data Flow Systems, Inc.  
605 N. John Rodes Blvd.  
Melbourne, FL 32934  
321-259-5009  
[www.dataflowsys.com](http://www.dataflowsys.com)