

**Honeywell**

# **Dolphin™ Net Base**

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Four-Slot Communication Cradle for the  
Dolphin 9700 Mobile Computer

## **User's Guide**



## ***Introduction***

The Net Base enables up to four Dolphin 9700 mobile computers to communicate with a host device over an Ethernet network. In addition, the Net Base provides a second RJ45 Ethernet port for connection to an additional device such as a printer, workstation, eBase, or another Net Base.



*We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.*

## ***Unpacking the Net Base***

Open the shipping box and inspect the package to see that the following standard items are included:

- One Dolphin Net Base Ethernet cradle
- One universal AC/DC power adapter for the Dolphin Net Base
- One power cord
- One Dolphin Net Base User's Guide

You will also need to provide a standard CAT-5 Ethernet network cable. These items are needed to set up, configure, and operate the Net Base. If any items are missing or anything appears to be damaged, contact your Customer Account Representative.

Keep the original packaging in case you need to return the Net Base for service or to store the Net Base while not in use.

## ***Software Requirements***

Before you connect the Dolphin terminal to the Net Base, make sure you have the most current software installed. To check the terminal's system information, tap **Start > Power Tools > SysInfo**.

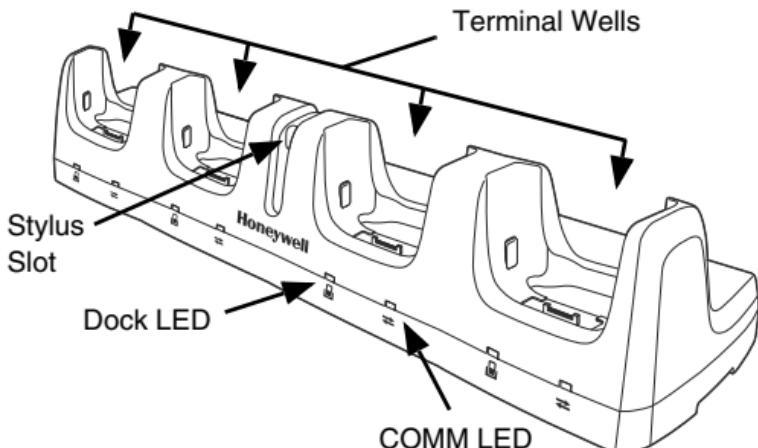
- The Kernel version must be 20.01 or later in terminals running Windows Mobile 6.5 Classic. In terminals running Windows Mobile 6.5 Professional, the kernel version must be 21.01 or later.
- The Power Tools version must be 4.12 or later.

## ***Applications on the Dolphin Terminal***

Applications running on the Dolphin terminal when it is connected to the Net Base should be designed specifically for a partially connected network. For more details, please refer to the *Best Practices for Partially Connected Networks* document available at [www.honeywellaidc.com](http://www.honeywellaidc.com).

# ***Hardware Overview***

## ***Front Panel***



## ***Terminal Wells***

The Net Base contains four terminal wells. Each well has its own dedicated Dock LED and COMM LED indicator.

Place the Dolphin terminal in any one of the four wells to communicate with a host device, power the terminal, and charge the installed battery pack. The Net Base completely charges the main battery in a Dolphin terminal in 6 hours.

## ***DOCK LED***

The Dock LED turns solid green when the terminal is properly seated in the Net Base.

## **COMM LED**

The COMM LED indicates the status of data transfer between the Dolphin terminal and the Net Base. Each terminal well has its own dedicated COMM LED.

*When the Dolphin terminal is not docked:*

### **This color and status means...**

<b>Red</b>	<i>Flashing</i>	<i>The Net Base has power but no Ethernet connection.</i>
<b>Orange</b>	<i>Flashing</i>	<i>The Net Base is acquiring an IP address.</i>
	<i>Solid</i>	<i>An Ethernet connection has been established between the network and Net Base.</i>

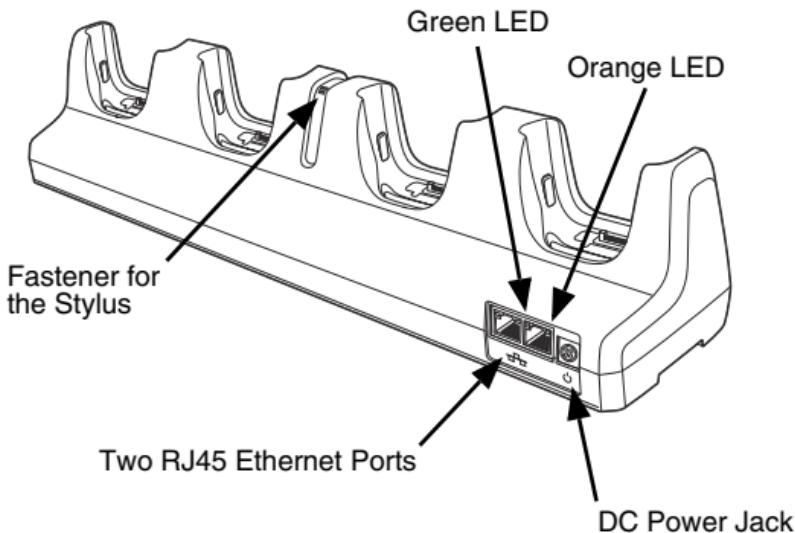
*When the Dolphin terminal is docked:*

### **This color and status means...**

<b>Red</b>	<i>Solid</i>	<i>No connection is established between the Net Base and terminal.</i>
<b>Red</b>	<i>Flashing</i>	<i>The Net Base has power but no Ethernet connection.</i>

<b>Orange</b>	<b>Solid</b>	<i>RASMan is attempting to establishing a connection between the Net Base and the terminal.</i>
<b>Green</b>	<b>Solid</b>	<i>RASMan has established a connection between the Net Base and the terminal.</i>

## **Back Panel**



## **DC Power Jack**

Use the power cable from Honeywell that comes with the Net Base to supply power to this power jack. For more information, see [Power](#) on page 7.

## RJ45 Ethernet Ports

The Net Base contains two RJ45 Ethernet ports. You can connect the Net Base to an Ethernet-compliant device to facilitate Ethernet communication to and from the terminal by plugging a standard CAT-5 Ethernet cable into one of the two Ethernet ports provided. The second RJ45 Ethernet port can be used for connection to an additional device such as a printer, workstation, eBase, or another Net Base.

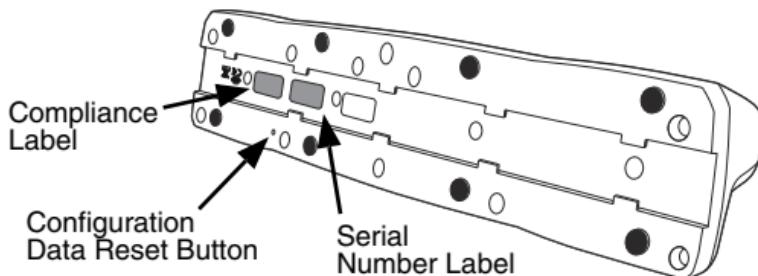
*Note: The Net Base does not use a Spanning Tree Protocol (STP). When both RJ45 Ethernet ports are used, do not connect both Net Base interfaces to the same layer 2 LAN.*

Each Ethernet port has a dedicated orange and green status LED.

<b>This color</b>	<b>and status</b>	<b>means...</b>
<b>Green</b>	<i>Flashing</i>	<i>Network activity</i>
<b>Orange</b>	<i>Solid</i>	<i>Ethernet link active</i>

## Bottom Panel

For details on how to mount the Net Base, see [Mounting the Net Base](#) on page 28.



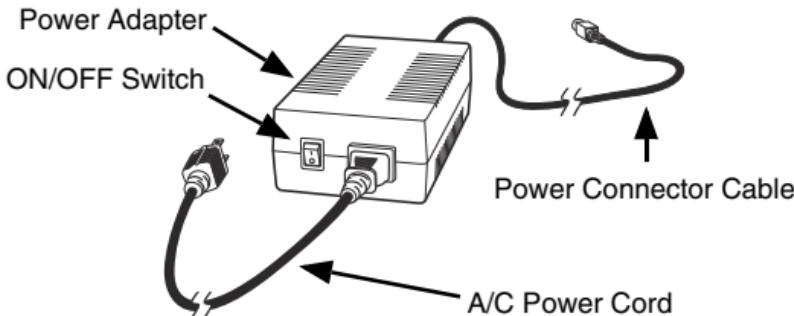
## Power

The terminal requires 9 Volts DC input for communications and battery charging; the power adapter on the power cable converts the voltage from the power source to 9 volts DC. **Only** the Honeywell 9 V/8.8A power supply provided with the Net Base converts the voltage appropriately.

Honeywell recommends that you leave the Net Base connected to its power source at all times, so that it is always ready to use.



*We recommend use of Honeywell peripherals, power cables, and power adapters. Use of any non-Honeywell peripherals, cables, or power adapters may cause damage not covered by the warranty.*



1. Make sure the ON/OFF switch on the power adapter is in the OFF position.
2. Plug the A/C power cord into the power adapter.
3. Plug the power connector cable into the power connector on the back of the Net Base.
4. Plug the A/C power cord into a standard wall outlet. The Net Base is now powered. All four COMM LEDs illuminate solid red for approximately 6 seconds, and then start flashing red.

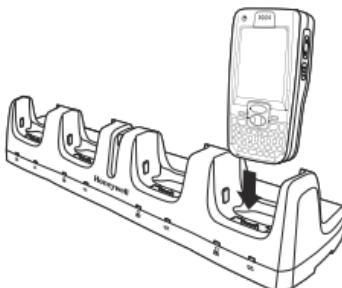
## ***Charging the Main Battery in the Dolphin Terminal***



*We recommend use of Honeywell Li-Ion battery packs.  
Use of any non-Honeywell battery may result in damage  
not covered by the warranty.*

The Net Base provides power to the Dolphin terminals and allows the charging of the main batteries in the terminal. The intelligent battery charging system incorporated into all Dolphin terminals prevents overcharging, which means that Dolphin terminals may be stored in the Net Base indefinitely without damage to the terminals, battery packs, or the Net Base.

1. Install the Li-ion battery pack into the back panel of the terminal; see the *Dolphin 9700 User's Guide* for battery installation instructions.
2. Slide the Dolphin terminal into the terminal well until the Dock LED illuminates green. Charging begins immediately if required by the Dolphin terminal.



*Make sure the terminal is dry before placing it in the Net Base. Do NOT place a wet terminal in the Net Base!  
Doing so may cause damage not covered by the warranty.*

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## ***Setting up the Net Base***

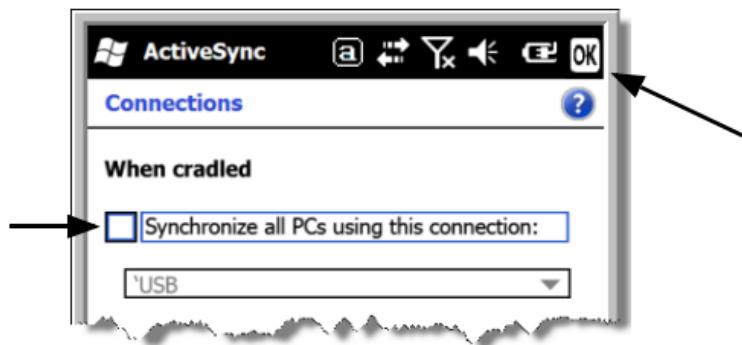
1. Make sure the ON/OFF switch on the power adapter is in the OFF position.
2. Plug the A/C power cord into the power adapter.
3. Plug the power connector cable into the power connector on the back of the Net Base.
4. Plug the A/C power cord into a standard wall outlet. The Net Base is now powered. All four COMM LEDs illuminate solid red for approximately 6 seconds, and then start flashing red.
5. Plug the CAT-5 Ethernet cable into one of the RJ45 connectors on the back of the Net Base.
6. Plug the Ethernet cable into the network.
7. All four COMM LEDs flash orange while the Net Base attempts to acquire an IP address. The COMM LEDs change to a solid orange when a network connection has been established.

## ***Connecting the Dolphin Terminal to the Net Base***

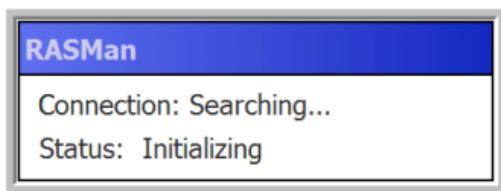
After the Net Base is installed, configured, and connected to the host computer, you must connect the Dolphin terminal to the Net Base.

1. Remove the Dolphin terminal you want connected from the Net Base if it is docked.
2. On the Dolphin terminal, tap **Start > ActiveSync > Menu > Connections**.

3. Remove the check from the box next to, “Synchronize all PCs using this connection”. Tap **OK**.

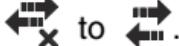


4. Insert the Dolphin into a terminal well on the Net Base. The Dock LED for the well lights green.
5. On the Dolphin terminal, tap **Start > Power Tools**.
6. Click the **RASMan** icon once. The terminal starts searching for a connection.



*Note: During the connection process, the following error message may appear. This error message requires no action. The message disappears when the connection process is complete.*



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- When the connection is established between the Dolphin terminal and the Net Base, the terminal plays a sound and the COMM LED on the Net Base lights green. The connection icon in the Dolphin's navigation bar changes from  to .
  - Upon connection, each of the Dolphin terminals docked in the Net Base is assigned a unique IP address. This IP address can be used by any application on the Dolphin terminal.
  - When you disable RASMan or remove the terminal from the Net Base, the terminal plays a sound and the disconnected icon  appears in the Navigation bar. The COMM LED on the Net Base lights orange.

*Note: A soft or hard reset of the terminal disables RASMan and the Ethernet connection. Tap **Start > Power Tools > RASMan** to restart the program and restore the connection.*

*To start RASMan automatically after each soft or hard reset, enable the RASMan Program section of the Autorun.exm file (see [AutoRun RASMan](#) on page 13).*

## **Troubleshooting**

If the COMM LED lights red while browsing a web page, refresh the page and RASMan will automatically reconnect. The COMM LED lights green when the connection is established.

## ***Displaying the Net Base Terminal Well and Dolphin IP Address***

Once the Dolphin terminal establishes communication, it shares the unique IP address assigned to the terminal well it is docked in on the Net Base. If four Dolphin terminals are successfully connected, then four different IP addresses are assigned to the Net Base, one for each terminal well.

1. Tap **Start > Power Tools > Network Utilities > IPConfig.**
2. On the Input tab, tap the **Display full configuration** button.
3. The Dolphin terminal retrieves and displays the IP configuration for the entire Dolphin terminal and the Net Base terminal well where the Dolphin is docked.
4. Locate the **IpAddress** field in the IP configuration list.

## ***DeviceConfig and RASMan Settings***

If your application requires frequent connecting and docking/undocking to the Ethernet, Honeywell recommends modifying the Dolphin's DeviceConfig.exm and RASMan.exm files to the following settings.

### ***Modifying the DeviceConfig.exm ActiveSync Setting***

1. Tap **Start > Power Tools > EZConfig Utilities > DeviceConfig.**
2. Locate **ActiveSync** under the *Connections* list.
3. Tap and hold the stylus on **ActiveSync**.

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4. Select **Enable** from the pop-up menu.
  5. Tap twice on **AutoConnect** in the Key column.
  6. Select **OFF** from the value pull down menu. Tap **OK** on the Navigation bar.
  7. Tap on **Connection** in the Key column, and then tap **File > Disable**.
  8. Tap **OK**, and then tap **Yes** to save your changes.

### ***Modifying the RASMan AutoActiveSync Setting***

1. Tap **Start > Power Tools > EZConfig Utilities > RASMan**.
2. Select **Settings** from the folder tree, and then tap **AutoActiveSync** under the Key column.
3. Tap **Edit > Modify**.
4. Select **Disable** from the Value pull down menu.
5. Tap **OK** on the Navigation bar.
6. Tap **OK**, and then tap **Yes** to save your changes.

### ***AutoRun RASMan***

To start RASMan automatically after each soft or hard reset, enable the RASMan Program section of the Autorun.exm file.

1. Tap **Start > Power Tools > EZConfig Utilities > AutoRun**.
2. Locate **RASMan** under the Programs list.
3. Tap and hold the stylus on **RASMan**.
4. Select **Enable** from the pop-up menu.

5. Tap **OK** on the Navigation bar.
6. Tap **Yes** to save your changes.

## ***RASMan Settings for Applications Requiring Net Base Configuration Changes***

If your application requires changes to the default Net Base configuration settings, Honeywell recommends modifying the Dolphin's RASMan.exm file to the following settings.

1. Tap **Start > Power Tools > EZConfig Utilities > RASMan**.
2. Select **Settings** from the folder tree, and then tap **AutoConnectOnDock** under the Key column.
3. Tap **Edit > Modify**.
4. Select **On RS232/USB Connect** from the Value pull down menu.
5. Tap **OK** on the Navigation bar.
6. Locate and tap **Retry** in the Key column.
7. Tap **Edit > Modify**.
8. Enter **50** as the Retry value.
9. Tap **OK**.
10. Locate and tap **RetryDelay** in the Key column.
11. Tap **Edit > Modify**.
12. Enter **1000** as the RetryDelay value.
13. Tap **OK**.
14. Tap **OK**, and then tap **Yes** to save your changes.

## **Configuring the Net Base**

By default, the Net Base is configured to obtain IP addresses automatically using a DHCP server. This means that in most cases, you would simply plug-and-play the unit. If necessary, you can use the Cradle Manager Configuration utility for dynamic network configuration.

*Note: After modifying the Net Base configuration settings, you may need to undock and then dock the Dolphin terminal to restore communication between the Net Base and Dolphin terminal. See [RASMan Settings for Applications Requiring Net Base Configuration Changes](#) on page 14.*

## **Accessing the Net Base Cradle Manager**

1. Connect the Ethernet cable to a host workstation on the same local area network (LAN) as the Net Base to facilitate communication.
2. Ping the Net Base to verify communication between the host workstation and the Net Base.
3. On your host workstation, open the web browser.
4. In the Address line, type the IP address assigned to the Net Base well where the Dolphin terminal is docked, see [Displaying the Net Base Terminal Well and Dolphin IP Address](#) on page 12.

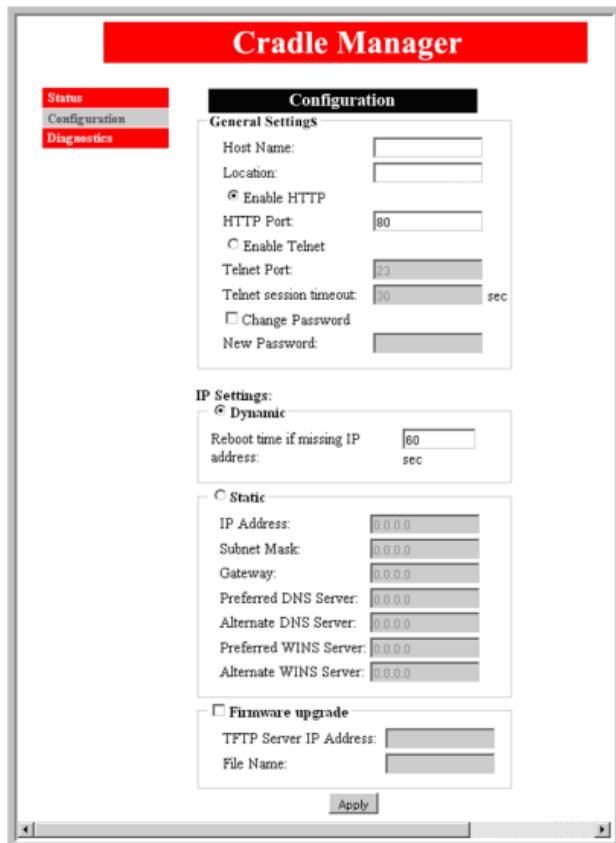
*Note: The Net Base acquires a unique IP address for each terminal well in which a Dolphin terminal is docked and connected. Configuration management is independent for each terminal well.*

5. Press **ENTER**.

6. A login prompt displays on the host workstation. Enter the user name <**Admin**> and default login password <**Dolphin**>.

*Note: The user name and password are case-sensitive.  
For information on how to change the password, see page 17.*

7. The Cradle Manager opens for the requested Dolphin and terminal well.

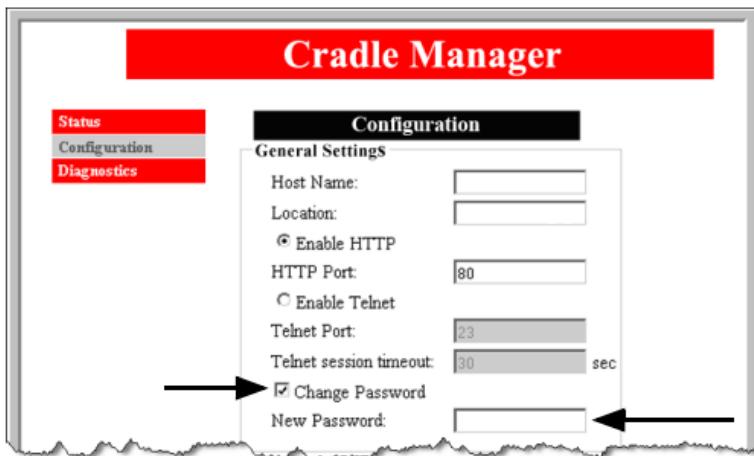


*Note: Under General Settings, the HTTP Port defaults to 80.*

## *Changing the Password*

You can change the password from the Cradle Manager window.

1. Under **General Settings**, select the check box next to, “Change Password”.
2. Enter the new password in the **New Password** field.



3. Click **Apply** at the bottom of the screen.

## *Changing the Dynamic Network Settings*

You can modify the Dynamic Network settings from the Cradle Manager window.

1. Under **IP Settings**, select **Dynamic**.
2. Enter the new settings in the fields supplied.  
*Note: The default reboot time if missing an IP address is 60 seconds.*
3. Click **Apply** at the bottom of the screen.

## *Changing the Static Settings*

You can modify the Static Settings from the Cradle Manager window.

1. Under **IP Settings**, select **Static**.
2. Enter the new settings in the fields supplied.
3. Click **Apply** at the bottom of the screen.

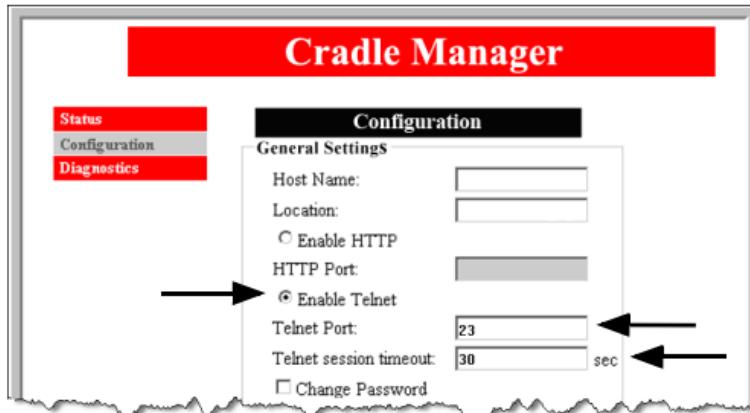
## *Using Telnet for Net Base Configuration*

By default, the Net Base allows use of a web browser for configuration management. From the Cradle Manager Window, you can modify the Net Base to allow use of a Telnet interface instead of a HTTP interface.

*Note: For information on how to access the Cradle Manager window, see page 15.*

### *Enabling the Telnet Interface*

1. Under **General Settings**, select the option button next to **Enable Telnet**.



2. Enter the new settings in the fields supplied. By default, the Telnet Port is set to 23 and the Telnet session timeout is set to 30 seconds.
3. Click **Apply** at the bottom of the screen.
4. Click **OK**, when prompted to reboot the EULink bridge. The COMM LEDs on the Net Base flash red during the reboot process.



*Note: A Net Base reboot is required when switching between HTTP and Telnet. The reboot process disables the HTTP interface and enables the Telnet interface.*

5. After the reboot process is complete, you can connect to the Net Base using a standard Telnet client.

### *Telnet Configuration Command Options*

Once a Telnet client connects to the Net Base, you can use the following commands to display and modify the Net Base configuration settings.

#### **User Mode Commands.**

<b>Command</b>	<b>Description</b>
stat	<i>Displays the status of the Net Base</i>

Command	Description
login	<p><i>Logs you into <b>ADMIN Mode</b> where you can modify configuration settings or reboot the Net Base, see <a href="#">ADMIN Mode Commands</a> below.</i></p> <p><i>Note: The default login password is &lt;Dolphin&gt;. The password is case sensitive.</i></p>
help	<i>Displays a list of supported USER mode commands with a brief description</i>
quit	<i>Quits the Telnet session</i>

## ADMIN Mode Commands

Command	Description and Options
conf	<p><i>Configuration Options</i></p> <p>conf h &lt;hostname&gt;      conf ad &lt;dynamic mode&gt;      conf as &lt;static mode&gt;      conf i &lt;iP address&gt;      conf m &lt;subnet mask address&gt;      conf g &lt;Gateway address&gt;      conf d1 &lt;DNS1 address&gt;      conf d2 &lt;DNS2 address&gt;      conf w1 &lt;WINS1 address&gt;      conf w2 &lt;WINS2 address&gt;      conf rt &lt;reboot time&gt;      conf l &lt;location string&gt;</p>

<b>Command</b>	<b>Description and Options</b>
passwd	<i>Changes the password</i>
portsel	<p><i>Changes the Net Base interface from Telnet to HTTP, or sets the Telnet Port and Telnet session timeout settings</i></p> <p><i>Options</i></p> <p>portsel hp &lt;http port&gt;          portsel tp &lt;telnet port&gt;          portsel tt &lt;telnet session timeout&gt;</p> <p><i>Note: By default the HTTP port is set to 80, the Telnet port is set to 23, and the Telnet session timeout is set to 30 seconds.</i></p>
upgrade	<i>Upgrades the Net Base Firmware, see <a href="#">Using Telnet to Upgrade the Net Base Firmware</a> on page 26.</i>
arpstat	<i>Displays the ARP Status</i>
routestat	<i>Displays the Route Status</i>
ping	<i>Ping</i>
reboot	<i>Reboots the Net Base</i>
restore	<i>Restores the Net Base to the factory default configuration</i>
logout	<i>Logs you out of ADMIN mode</i>

Command	Description and Options
help	<i>Displays a list of supported ADMIN mode commands with a brief description of each command</i>
quit	<i>Quits the Telnet session</i>

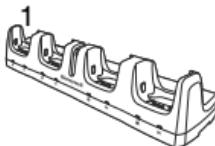
### *Disabling Telnet and Enabling HTTP*

1. At the command prompt, type <login>, and then press **Enter**.
2. At the password login prompt, type the default login password <**Dolphin**>, and then press **Enter**.
3. At the command prompt, type **portsel hp <HTTP Port>**, and then press **Enter**.

*Note: The HTTP Port default is 80.*

4. The Net Base initiates a reboot sequence for the terminal well specified. The reboot sequence disables the Telnet interface and enables the HTTP interface.

*Note: When changing terminal well one (1) from Telnet to HTTP, the Net Base initiates a reboot sequence for all four (4) terminal wells.*

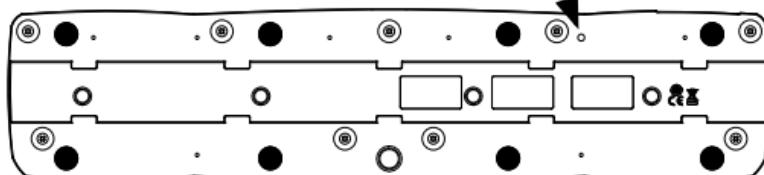


## ***Restoring the Net Base Factory Defaults***

To return the Net Base to the factory defaults:

1. Unplug the power cable on the Net Base.
2. Locate the reset button on the bottom of the Net Base.

Configuration Data Reset Button



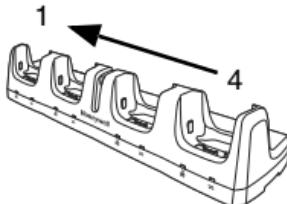
3. Push in and hold down the reset button.
4. While holding down the reset button, plug in the power cable.
5. Wait 15 seconds, and then release the button. Let the Net base finish the rebooting process.
6. Turn power to the Net Base OFF and then ON to finish resetting the base.

*Note: When the factory defaults are restored, the password reverts to the default password, <Dolphin>.*

## **Upgrading the Net Base Firmware**

To upgrade the firmware on the 9700 Net Base, you will first need a computer running TFTP server software that stores the firmware upgrade file.

*Note: The firmware upgrade process must be repeated for each of the four terminal wells on the Net Base. The recommended upgrade sequence is to start with terminal well four (4) and end with terminal well one (1).*



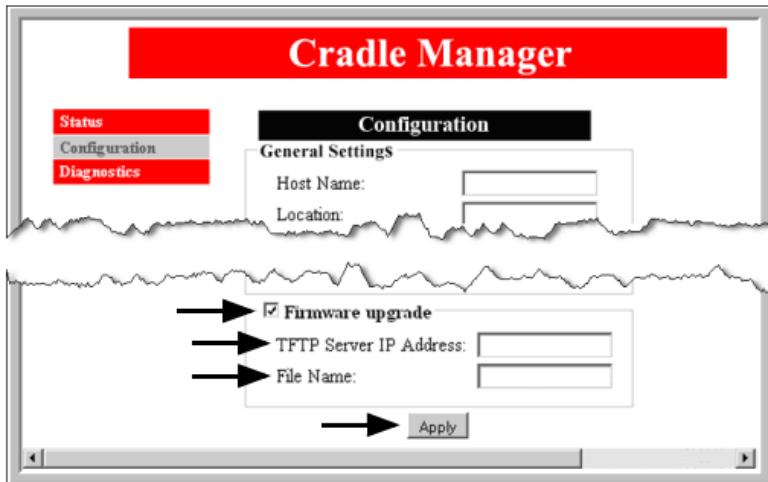
### **Using the Cradle Manager to Upgrade the Net Base Firmware**

1. Verify the Net Base is connected to Ethernet network.  
*Note: Firmware upgrades for the Net Base do not require a Dolphin terminal be installed in the Net Base.*
2. Connect the Ethernet cable to a host workstation on the same local area network (LAN) as the Net Base to facilitate communication.
3. Ping the Net Base to verify communication between the host workstation and the Net Base.
4. On your host workstation, open the web browser.
5. In the Address line, type the IP address assigned to the Net Base, see [Displaying the Net Base Terminal Well and Dolphin IP Address](#) on page 12.
6. Press **ENTER**.

7. Enter the user name <**Admin**> and default login password <**Dolphin**>.

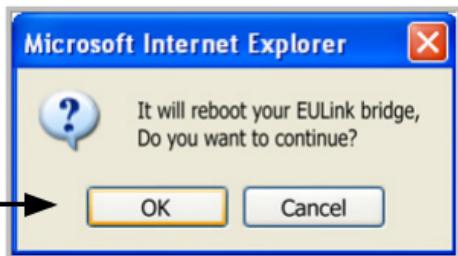
*Note: The user name and password are case-sensitive.  
For information on how to change the password, see page 17.*

8. The Cradle Manager window appears.
9. In the Cradle Manager window, check the box next to **Firmware upgrade**.



10. Enter the IP address of the server in the **TFTP Server IP Address** field.
11. Under **File Name**, enter the Net Base firmware upgrade file name.
12. Click **Apply**.

13. Click **OK**, when prompted to reboot the EULink bridge. The COMM LEDs on the Net Base flash red during the reboot process.



14. The COMM LEDs flash orange during IP verification and the firmware upgrade.
15. The Net Base automatically reboots. When the Net Base successfully auto-connects to the network, the COMM LED illuminates green for terminal wells with a docked Dolphin or orange for terminal wells without a Dolphin.

## *Troubleshooting*

If the Net Base does not auto-connect and COMM LED illuminates solid red after the upgrade process, remove and then reinsert the Dolphin terminal in the Net Base. The COMM LED illuminates solid green when the Net Base connects to the network.

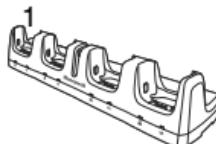
## ***Using Telnet to Upgrade the Net Base Firmware***

The following upgrade process requires the Net Base be configured to use the Telnet interface, see [Using Telnet for Net Base Configuration](#) on page 18.

1. At the command prompt, type <login>, and then press **Enter**.

2. At the password login prompt, type the default login password <**Dolphin**>, and then press **Enter**.
3. At the command prompt, type **upgrade t <ftp server IP address> f <firmware upgrade filename>**.
4. Press **Enter**.
5. The Net Base initiates a reboot sequence for the terminal well specified. The COMM LED for the terminal well flashes red during the reboot process.

*Note: When upgrading the firmware for terminal well one (1), the Net Base initiates a reboot sequence for all four (4) terminal wells.*



6. The COMM LEDs flash orange during IP verification and the firmware upgrade.
7. The Net Base initiates a reboot sequence for the terminal well specified (see note above). When the Net Base successfully auto-connects to the network, the COMM LED illuminates green for terminal wells with a docked Dolphin or orange for terminal wells without a Dolphin.

## *Troubleshooting*

If the Net Base does not auto-connect and COMM LED illuminates solid red after the upgrade process, remove and then reinsert the Dolphin terminal in the Net Base. The COMM LED illuminates solid green when the Net Base connects to the network.

## ***Mounting the Net Base***

Set the Net Base on a dry, stable surface, such as a desktop or workbench near an electrical outlet. Be sure to provide enough workspace with good lighting for the user to view and operate the Dolphin terminal while it is in the Net Base.

When choosing a location, bear in mind that the mounting location must allow users easy access to the terminal wells, the Ethernet ports, and the power jack.

### **Installation Hardware**

**Screw:** 3/16 in. dia x 5/8 in. long pan head screw

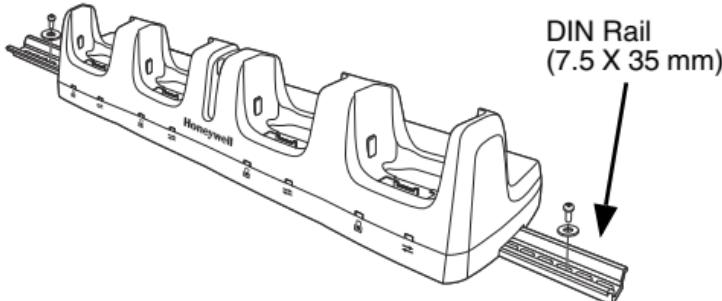
**Washer:** 1/2 in. OD x 7/32 in. ID x 3/64 in. thick

**Nut:** 3/16 in. dia

### ***Using the DIN Rail***

The DIN rail slot (7.5 X 35 mm) on the bottom panel enables secure mounting to a horizontal surface.

1. Slide the DIN rail into the DIN rail slot along the bottom panel of the Net Base.
2. Then, using the appropriate nuts and bolts, secure the DIN rail to the desk or flat surface.



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## ***Technical Assistance***

Contact information for technical support, product service and repair can be found at [www.honeywellaidc.com](http://www.honeywellaidc.com).

## ***Limited Warranty***

Refer to [www.honeywellaidc.com/warranty\\_information](http://www.honeywellaidc.com/warranty_information) for your product's warranty information.

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