**Application Note** 

## Configuring DMS Central Control Software to Communicate with VMS Signs Using the PortServer<sup>®</sup> TS H MEI Serial Server

### Introduction

This technical document provides instructions for configuring Skyline Products, Inc.'s DMS Central Control software to communicate with a sign's configured PortServer TS H MEI device (formerly called Digi One<sup>®</sup> TS). The instructions are intended for experienced technicians installing the PortServer TS H MEI device server to communicate with Skyline Variable Message Signs (VMS) using a Safetran 170E controller that includes a 470IB Prom module.

If you are not sure what this document describes, or if you have questions, please contact Skyline Customer Service at 719-392-9046, Option # 5.

PortServer TS H MEI is a product of Digi International<sup>®</sup>.



#### PortServer TS H MEI Digi International

The PortServer TS H MEI serial server is used for universal, high-performance serial-to-Ethernet connectivity. It is designed for use in remote applications to withstand more extreme temperatures ( $-35^{\circ}$  C to  $+74^{\circ}$  C).

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## **Configuring DMS Central Control**

**Important:** Before configuring the Skyline DMS Central Control software to communicate with the PortServer TS H MEI device, be certain that DMS Central can communicate with the sign. One method of verification is to connect a laptop running DMS Central, configured to communicate directly with the sign, to the local port in the sign and test the sign polling. Once you know the sign is working with a known good configuration, continue with the following step.

#### Updating the DMSServer.ini File

Add the following lines to the Config section of the DmsServer.ini file:

[Config] ForceDestinationPort=false DestinationPort=2101

#### **Creating a Communication Pool**

- 1. In the Skyline DMS Central Control, select Admin>>Comms. The Communication Settings dialog box appears.
- 2. Click Add. The Comm Pool dialog box appears.
- 3. In the Comm Pool Name text box, type a descriptive name. For example, Ethernet-Serial.
- 4. In the Protocol Stack>>Name text box, select Ethernet to Serial.
- 5. Click OK. Ethernet-Serial is added to the Communication Pools list.
- 6. In the Available Ports Define text box, type 2101 and then click Define. The port is added to the Available Ports list.
- 7. In the Available Ports list, double-click the 2101 port. The port is added to the Assigned Ports list. Double-click any other port numbers in the Assigned Ports list to move them to the Available Ports list. 2101 should be the only port in the Assigned Ports list.



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8. Click Done.

#### **Configuring Sign Communications**

- 1. In DMS Central Control, highlight a sign and then select **Signs>>Configure Sign**. The **Sign Configuration** dialog box appears.
- 2. Select the **Communications** tab.
- 3. In the **Comm Pool** drop-down list, select the communication pool you created. For example, **Ethernet-Serial**.
- 4. In the IP Address text box, type the sign's PortServer device's static IP address.

Sign Configuration - I-25 and I-70 WB
Surge Brightness Messages Data General Dimensions Equipment MULTI Defaults Communications One Wire
Comm Pool [Ethernet-Serial ] IP Address 127.0.0.1
Phone Number Multidrop Address
Callback Number Dffline (no comms)
✓ Auto Polling On       Comm Loss Message         Auto Polling Interval 0:00 (hh:mm)       Type       No Action         Comm Loss Time       0:00 (hh:mm)       Message
SNMP Community public
CHAP Name
Read From Sign Save/Download Cancel Help

5. Click Save/Download. The Save/Download Configuration dialog box appears.

Save/Download Configuration				
Select which information to send to the sign. All information is always saved to the central's database. These checkboxes specify which				
information should also be downloaded to the sign.				
<ul> <li>Brightness Table</li> <li>One-Wire Addresses</li> <li>Fonts</li> </ul>				
Cancel Help				



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6. Select **Basic Configuration** and then click **OK**. The Comm Pool and IP address changes are downloaded to the sign.

# Configuring the PortServer TS H MEI Device to Communicate with the VMS Sign

Use the following steps to configure the PortServer TS H MEI device so that DMS Central Control software can use the device to communicate with the sign.

#### Setting the Digi Network Configuration

- 1. Open a Web browser and type <a href="http://xxx.xxx.xxx">http://xxx.xxx.xxx</a> (IP address of the Digi device) as the URL address to open the PortServer Configuration and Management window.
- 2. To set the Static IP of the Digi PortServer TS device, select **Network** in the left hand menu. The **Network Configuration** work area appears.

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Digit	PortServer TS 1 H MEI Configuration and Management			<u> </u>
Connectware™			😗 н	əlp
Home	Network Configuration			
Configuration	▼ IP Settings			
Network	C Obtain an IP address automatically using DHCP *			
Serial Port Users	© Use the following IP address:			
Security	* IP Address: 192.168.1.1			
System				
Applications	* Subnet Mask: 255.255.255.0			
PPP	Default Gateway: 192.168.1.1			
Industrial Automation	* Changes to DHCP, IP address and Subnet Mask require a reboot to take effect.			
Management	changes to brier, ir address and subnet mask require a reboot to take enect.			
Serial Ports Connections				-
Power	Apply			
Administration	DNS Settings			
Backup/Restore Update Firmware	Advanced Network Settings			
Factory Default Settings Device Information				_
Reboot	Copyright © 1996-2005 Digi International. All rights reserved.			
Logout				
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- 3. In the IP Settings area, select Use the following IP address.
- In the IP Address text box, type the sign's PortServer TS H MEI device's static IP address. This
  address should match the address used in the Skyline DMS Central Sign
  Configuration>>Communications Tab.
- 5. In the **Subnet Mask** text box, type the subnet mask used on your network.



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- 6. In the **Default Gateway** text box, type the gateway address used by your network.
- 7. Click Apply.

### Setting the Port Profile

1. In the left hand menu, select Serial Port. The Select Port Profile work area appears.

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connectware"		<b>0</b> H
ne	Select Port Profile	
figuration twork	Profiles allow you to easily configure serial ports by only displaying those items that are relevant to the current profile.	
rial Port	Select the profile below that best matches your configuration.	
ors		
cunty	O RealPort	
stem	The RealPort Profile allows you to map a COM or TTY port to the serial port. More	
lications		
9	Console Monagement	
lustrial Automation	The Console Management Profile allows you to access a device's console port over a network connection. More	
agement	C TCP Sockets	
ial Ports	The Sockets Profile allows a serial device to communicate over a TCP network. More	
nnections		
ver	UDP Sackets	
inistration	The UDP Sockets Profile allows a serial device to communicate using UDP. More	
kup/Restore		
date Firmware story Default Settings vice Information boot	C scrial Bridging The Serial Bridging Profile configures one side of a serial bridge. A bridge connects two serial devices over the network as if they were connected with a serial cable. More	
aut	O Printer	
ouc	The Printer Profile allows you to connect a printer to the serial port. More	
	O Terminal	
	The Terminal Profile allows you to connect a terminal to the serial port. More	
	Industrial Automation The Industrial Automation (IA) Profile allows you to communicate and network-enable various IA devices and PLCs. More	
	the supported entering of the Lening and a Lening control of the second secon	
	O Chat Mode	
	The Chat Mode Profile is used to allow multiple dients to simultaneously connect to or manage a server connected to the same serial port similar to a chat room.	More
	Modern Emulation	
	The Modem Emulation Profile allows you to configure the serial port to act as a modem. More	
	O Modem	
	The Modem Profile allows you to connect a modem to the serial port in order to establish or receive connections from other systems and modems. More	
	O Power Management	
	The Power Management Profile allows you to control and manage a power controller to turn on and off outlets and devices. More	
	O Custom	
	The Custom Profile is an advanced option to allow full configuration of the senal port. More	
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2. Select **UDP Sockets** and then select **Apply.** The **Port Profile** configuration area appears.



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De	Changes have been saved successfully.	
ofiguration		_
etwork erial Port	Serial Port Configuration	
ers	▼ Port Profile	
scurity	Current Port Porfilo: UDP Sockets Change Profile	
rstem	The UDP Sockets Profile allows a serial device to communicate using UDP.	
olications	Profile Settings	
p dustrial Automation	UDP Server	
	The serial device receives data from one or multiple systems/devices on the network using the following UDP port (calculated from Base Socket).	
agement rial Ports	UDP Port: 2101	
nnections	UDP Client	
wer	Automatically send serial data to one or more devices or systems on the network using UDP sockets.	
inistration	Send data to:	
ickup/Restore	Description Send To UDP Part	
date Firmware ctory Default Settings	No destinations currently configured.	
vice Information	SampleName 10.1.1.115 (2101 Add	
boot		
out	Send data when the following string is found	
	CR (carriage return)	
	CR/LF (carriage return/line feed)	
	Custom string	
	Strip string before sending	
	Send data after the following number of idle milliseconds	
	25 ms	
	Always send data after the following number of bytes	
	1024 bytes	
	Apply	
	Basic Serial Settings	
	▶ Port Security Settings	
	Advanced Serial Settings	
	Restore Factory Serial Port Settings	

- 3. In the UDP Client Send data to table, type an informative description in the text box.
- 4. In the **Send To** text box, type the DMS Central Control server's static IP address.
- 5. In the **UDP Port** text box, type 2101.
- 6. Click Add.
- 7. Select the **Send data after the following number of idle milliseconds** check box and then type **25** in the **ms** text box. You may need to change this value if using modems, the value may need to be increased or decreased to optimize communications.
- 8. Click Apply.
- 9. Close PortServer Configuration and Management browser window.

#### Verifying Communications between the VMS Sign and the Digi Device

Poll the sign using Skyline DMS Central software to verify sign communications. See Skyline DMS Central Control User's Guide.

#### Note:

These instructions are for the PortServer TS H MEI; however, the information may be used as a general guideline for use with other Digi devices using similar configuration.



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