Application Note

Configuring DMS Central Control Software to Communicate with VMS Signs Using the PortServer[®] 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[®] 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[®].



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° 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 Vire
Comm Pool Ethernet-Serial IP Address 127.0.0.1
Phone Number Multidrop Address 2
Callback Number 🛛 🗍 Offline (no comms)
✓ Auto Polling On Comm Loss Message Auto Polling Interval 0:00 (hh:mm) 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				
 Basic Configuration Brightness Table 				
☐ One-Wire Addresses ☐ Fonts ☐ Libraries				
OK 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 <u>http://xxx.xxx.xxx</u> (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.

PortServer TS 1 H MEI Configurati	ion and Management - Microsoft Internet Explorer		_ 8 ×
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Security	* ID Addrocci 19216811		
System	1 Address, 132,100,1,1		
Applications	* Subnet Mask: [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 effort		
Management	changes to price, if address and subject mask require a rebott to take energy.		
Serial Ports			
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Device Information	Copyright © 1996-2005 Digi International. All rights reserved.		
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6		Internet	

- 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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figuration	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.	
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stem	The ReaiPort Profile allows you to map a COM or TTY port to the serial port. More	
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P	Console Management	
lustrial Automation	The Console Management Profile allows you to access a device's console port over a network connection. More	
agement	O TO Sackets	
ial Ports	The TYP Sectors Profile allows a could device be comparison over a TYP entrumb. Mana	
nnections	The FCP sockets prome allows a serial device to communicate over a FCP network, more,	
ver	UDP Sackets	
inistration	The UDP Sockets Profile allows a serial device to communicate using UDP. More	
kup/Restore		
date Firmware ctory Default Settings vice Information	C sarial inidging The serial inidging 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	
bobe	O Printer	
out	The Printer Profile allows you to connect a printer to the serial port. More	
	○ Terminal	
	The Terminal Profile allows you to connect a terminal to the senal port. More	
	Industrial Automation The Industrial Automation (IA) Profile allows you to communicate and network-enable various IA devices and PLCs. More	
	 A second s	
	C chat Mode The Chat Mode Profile is used to allow multiple clients to simultaneously connect to or manage a server connected to the same serial port similar to a chat room	. More
	Modern Emulation The Modern Emulation Profile allows you to configure the serial port to act as a modern. 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	
	Power Management The Dower Management Drefile allows you to control and manage a source controller to turn on and off outliets and devices. More	
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	The Custom Profile is an advanced option to allow full configuration of the serial port. More	

2. Select **UDP Sockets** and then select **Apply.** The **Port Profile** configuration area appears.



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stem	The ODP Socked Frome alows a senar cence to communicate damy oper.	
lications	Profile Settings	
dustrial Automation	UDP Server	
anement	The serial device receives data from one or multiple systems/devices on the network using the following UDP port (calculated from Base Socket).	
rial Ports	UDP Port: 2101	
nnections	UDP client	
wer	Automatically send senal data to one or more devices or systems on the network using UDP sockets.	
ninistration	Send data to:	
odate Firmware	Description Send To UDP Port	
ctory Default Settings	No destinations currently configured.	
vice Information	SampleName 10.1.1.115 2101 Add	
oode		
JUL	send data when the following strong is found	
	 CR (carriage return) 	
	Crypter (carrage recurryinine reed)	
	Coston song	
	Schip schip before senaing	
	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	

- 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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