

SERIAL PASS-THROUGH

SPT-1

User Manual

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REVISIONS

1.0 04/20/18 First Version

1. OVERVIEW

Another Go-To Solution that Saves Time, Budget and Gets the Job Done

SPT-1 Serial to IP Pass-Through Adapter

- Over IP infrastructure, pass serial commands from controller to device, and serial responses back to controller
- Broadcast industry solution for a common control headache
- Knows broadcast industry serial protocols, such as VDCP, to eliminate communication errors
- Replace long serial cable runs with IP infrastructure
- Web-browser friendly setup and configuration
- Diagnostic web page displays received data to simplify troubleshooting

The SPT-1 passes serial data from controller to device and back over the facility's local area network, eliminating the need to run serial cables over long distances.

One SPT-1 connects to the controller — a second to the device. Once configured, the two SPTs automatically establish a TCP connection between themselves to pass serial data in both directions — controller to device & device to controller.

DNF's SPT-1 knows broadcast industry standard serial protocols such as VDCP. It waits to receive the full command or response before forwarding to its paired SPT. This eliminates common communication failures due to improperly spaced data within the received command (or response) causing the receiver to ignore it.

SPT-1's web browser set-up makes it fast and easy to configure and connect to a controller, device, or paired SPT.

A diagnostic web page shows data received from the other SPT-1 and the serial connection to simplify system troubleshooting.

2. GETTING STARTED

1. Go to Installation Section to install the product.
2. Go to System Configuration Section to set static IP address, Subnet Mask, and Gateway address
3. Go to Remote Device Assignment Section to enter IP addresses for remote devices that product will communicate with.

DEFAULT STATIC ETHERNET CONFIGURATION

IP Address:	192.168.10.217
Subnet Mask:	255.255.255.0
Gateway:	192.168.10.1

The product is configured using a standard web-browser (Internet Explorer, Firefox, and Chrome). Enter the product's IP address in the Address/ URL bar, typically located at the top of the web-browser page, to access the Home Page. Use the links on the left side of the Home Page to access the desired configuration web pages.

All configuration settings are saved in non-volatile memory in the product. Settings are retained when power is removed.

Settings may be uploaded to a computer as a configuration file (.dnf) for storage. Configuration files may be downloaded from a computer into the product to restore a saved configuration. A configuration file contains all of the product's configurations except IP address, subnet mask, and gateway address. The product does not support partial configuration upload or download. The configuration file is a not a text formatted file. It cannot be viewed or modified with a text editor.

To access the System Configuration web page, use the following log-on when prompted:

Username: dnfuser
Password: controls

The user name and password cannot be changed.

3. EQUIPMENT LIST

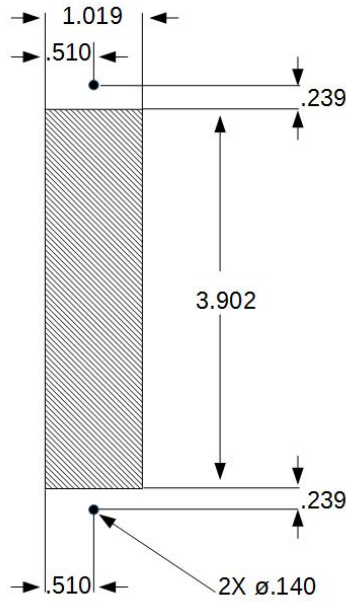
Qty	Component	DNF Part Number
1	IP Control Buddy	SPT-1
1	Power Supply & Power Cord	PS-IPCB

4. INSTALLATION

Mount product into rackmount panel, desktop, or other using the mechanical drawing below.

Note- All dimensions are in inches.

EB4X
Cutout and location of
mounting holes.



Rev 040516

Use mechanical drawing to mount product horizontally or vertically.

If required, wire GPI Inputs, GPI Outputs (GPO), and serial cables to screw terminal blocks on rear of product. See SPECIFICATIONS section for wiring details.



Connect Power Over Ethernet (POE) by inserting Ethernet cable into RJ45 connector on rear.

OR

Connect external power supply to 2-pin white power connector adjacent to RJ45 connector.

5. HOME WEB PAGE

DNF
CONTROLS

SPT-1 **SPT-1**

Home

Remote Device Assignment

Serial Port Configuration

Log Out

System Configuration

Label: SPT-1
Serial Number: 24927
Model: SPT-1
P1 Version: V1.18E
Web Version: V1.19D

IP Address: 192.168.10.207
Subnet Mask: 255.255.255.0
Gateway: 192.168.10.1
MAC: 00057980615F

TCP/IP Stack Version: v5.42

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The SPT-1 Home page will display the product details which will include the software version and network settings.

6. SYSTEM CONFIGURATION WEB PAGE

PARAMETER	DESCRIPTION
P1 Software Upgrade:	Use this link to install the P1 upgrade file provided by DNF Controls
Web Upgrade:	Use this link to install the Web pages upgrade file provided by DNF Controls
Save Configuration to PC:	Use this link to save the product's current configuration to a configuration file on a computer. The web browser will prompt for file name and directory. The file extension must be 'dnf'.

Restore Configuration from PC:	Use this link to download a configuration file from your computer to the product. The web browser will prompt for directory and configuration file name. The file extension must be 'dnf'.
Set Factory Defaults:	Use this link to reset all product configuration settings to factory defaults. This will NOT change the IP address, subnet mask or gateway address. The product will automatically reboot.
Enter Label:	Enter label to be displayed on top right of all web pages
Enter the new IP settings below:	Enter the new IP address, Gateway, and Subnet Mask. Click on <u>Save Config</u> to save the new entries. The product will automatically reboot.

(Remainder of page is blank)

7. REMOTE DEVICE ASSIGNMENT (ACTS LIKE VDCP DEVICE)

DNF CONTROLS SPT-1 SPT-1

Home

Remote Device Assignment

SPT-1 Serial	VDCP Device
1 TXB(+)	7 RXB(+)
2 RXA(-)	8 TXA(-)
3 TXA(-)	2 RXA(-)
4 RXB(+)	3 TXB(+)
5 GND	1 GND

Serial Port Configuration

Log Out

System Configuration

[Refresh](#)

REMOTE DEVICE LIST							
Device #	Remote Device Label	Device Type	Primary /Backup Pair	Connection Type	Connection Mode	UDP Attempts	IP Address / URL Add single forward slash '/' before URL. Do not add http:// or quotes to URL.
1	Remote Device 1	VDCP Device					192.168.10.205

[Save](#)

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Above diagram shows how to wire SPT-1 to a VDCP controller. Enter IP address of SPT-1 that is connected to the VDCP server

8. REMOTE DEVICE ASSIGNMENT (ACTS LIKE VDCP CONTROLLER)

DNF CONTROLS SPT-1 SPT-1

Home

Remote Device Assignment

SPT-1 Serial	VDCP Controller
1 TXB(+)	3 RXB(+)
2 RXA(-)	2 TXA(-)
3 TXA(-)	8 RXA(-)
4 RXB(+)	7 TXB(+)
5 GND	1 GND

Serial Port Configuration

Log Out

System Configuration

[Refresh](#)

REMOTE DEVICE LIST							
Device #	Remote Device Label	Device Type	Primary /Backup Pair	Connection Type	Connection Mode	UDP Attempts	IP Address / URL Add single forward slash '/' before URL. Do not add http:// or quotes to URL.
1	Remote Device 1	VDCP Controller					192.168.10.207

[Save](#)

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Above diagram shows how to wire SPT-1 Device side. Enter IP address of SPT-1 that is connected to the VDCP controller that will be sending commands to server.

9. SPECIFICATIONS

REAR PANEL CONNECTORS	
POWER:	Power Over Ethernet (POE) External Power: +12V DC, 1.0 Amp
ETHERNET:	RJ45 100baseT, Full Duplex

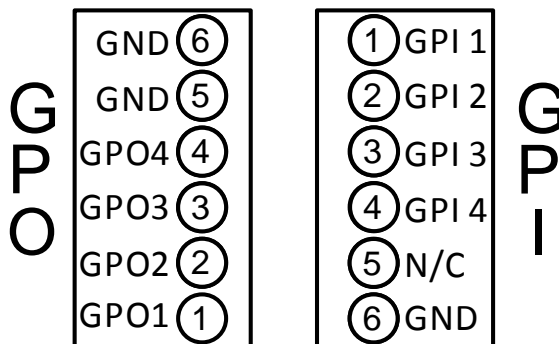
REAR PANEL TERMINAL BLOCKS

RS232 Wiring:
Pin 1 Transmit
Pin 2 Receive
Pin 5 Ground



RS422 Wiring:
Pin 1 Transmit B (+)
Pin 2 Receive A (-)
Pin 3 Transmit A (-)
Pin 4 Receive B (+)
Pin 5 Ground

When ON, GPO 1 – 4
is connected to GND

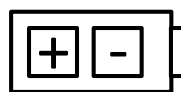


Connect GPI1 – 4 to GND
to turn on GPI

Set Defaults
Button



J17
External
Power



10. DNF CONTROLS LIMITED WARRANTY

DNF Controls warrants its product to be free from defects in material and workmanship for a period of one (1) year from the date of sale to the original purchaser from DNF Controls.

In order to enforce the rights under this warranty, the customer must first contact DNF's Customer Support Department to afford the opportunity of identifying and fixing the problem without sending the unit in for repair. If DNF's Customer Support Department cannot fix the problem, the customer will be issued a Returned Merchandise Authorization number (RMA). The customer will then ship the defective product prepaid to DNF Controls with the RMA number clearly indicated on the customer's shipping document. The merchandise is to be shipped to:

DNF Controls
19770 Bahama St.
Northridge, CA 91324
USA

Failure to obtain a proper RMA number prior to returning the product may result in the return not being accepted, or in a charge for the required repair.

DNF Controls, at its option, will repair or replace the defective unit. DNF Controls will return the unit prepaid to the customer. The method of shipment is at the discretion of DNF Controls, principally UPS Ground for shipments within the United States of America. Shipments to international customers will be sent via air. Should a customer require the product to be returned in a more expeditious manner, the return shipment will be billed to their freight account.

This warranty will be considered null and void if accident, misuse, abuse, improper line voltage, fire, water, lightning or other acts of God damaged the product. All repair parts are to be supplied by DNF Controls, either directly or through its authorized dealer network. Similarly, any repair work not performed by either DNF Controls or its authorized dealer may void the warranty.

After the warranty period has expired, DNF Controls offers repair services at prices listed in the DNF Controls Price List. DNF Controls reserves the right to refuse repair of any unit outside the warranty period that is deemed non-repairable.

DNF Controls shall not be liable for direct, indirect, incidental, consequential or other types of damage resulting from the use of the product.

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