



#### **Connecting the Power and Host PC**

• Make sure your PC has workable network settings.

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Disable or well configure your Windows firewall and Anti-Virus firewall first, else the "Search Servers" on Chapter 5 may not work. (Please contact with your system Administrator)

Connect both the PPDS-700-MTCP and your PC to the same sub network or the same Ethernet Switch.

Supply power (PoE or +12  $\sim$  +48 V<sub>DC</sub>) to the PPDS-700-MTCP.



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# **Connecting the Modbus Devices**

• Connect the Modbus device (Slave, e.g., M-7055D, optional) to your PPDS-700-MTCP on COM2 (RS-485 bus). *Note that wiring method depends on your Modbus device.* 



### **Configuring the Correct Network Settings**

• Double click the VxComm Utility shortcut on the desktop.

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- Olick the "Search Servers" button to search your PPDS-700-MTCP.
- Double click the name of PPDS-700-MTCP to open the "Configure Server (UDP)" dialog box.



Factory Default Settings for the PPDS-700-MTCP:

IP	192.168.255.1
Gateway	192.168.0.1
Mask	255.255.0.0

Contact your Network Administrator to obtain a correct network configuration (such as IP/Mask/Gateway). Enter the network settings and then click "OK".

The PPDS-700-MTCP will use the new setting 2 seconds later.

ſ	Configure Server (UI	OP)					×
	Server Name :	PPDS-755-MTCP			4		
	DHCP:	0: OFF 🔹	Sub-net Mask :	255.255.255.0	Ano		(7 Chars)
	IP Address :	10.0.8.100	Gateway :	10.0.8.254	MAC:	00:0d:e0:50	):07:b8
Warning!! Contact your Network Administrator to get correct configuration before any change. OK OK						Cancel	

• Wait 2 seconds and click the "Search Servers" button again to ensure the PPDS-700-MTCP is working well with new configuration, and then click the name of the PPDS-700-MTCP to select it.

Web Search Servers		~				
Configuration (UDP)	Name	Alias	IP Address	Sub-net Mask	Gateway	MAC Adc
	tDS-715 H	Tiny	10.0.8.31	255.255.255.0	10.0.8.254	00:0d:e0
Exit 🥣	PPDS-755-MTCP	N/A	10.0.8.100	255.255.255.0	10	00:0d:e0
	iDS-720	LP 52311	10.0.0.10	255.255.255.0	10.0.8.254	D0:FF:50
	٢		m			,
Status						

# **Configuring Virtual COM Ports**

Click the "Add Server[S]" button to open the "Adding Servers" dialog box.
Assign a COM Port number and click the "OK" button to save your stings.

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🥩 VxComm Utility [v2.13.01, May.:	12, 2015]
File Server Port Tools	
	Adding Servers
Add Server(s) Remove Server Web	Server Information Server Name : PPDS-755-MTCP IF Get name automatically IP Range Start : 10.0.8.100 IF Skip duplicated IP IP Range End : 10.0.8.100 Includes the following special IP :
Configuration (UDD)	□ 0 (Net)
Exit IDS	Image: Complexity     COM2     Image: Complexity       Solution     Fixed baudra     COM2     Complexity       72     Fixed baudra     COM2     Complexity       72     Maps virtual     COM4     ti/0" on servers.       COM5     COM5     Complexity
	COM6 COM7 COM8 COM9

**6** Click on PPDS-700-MTCP name and check the virtual COM port mappings on the PC.

	_			
	Configure Server		Configure Por	t
driver & utility	VxComm Servers	Port	Virtual COM	Baudrate
/xComm 🔍		Port I/O	Reserved	N/A
Where remote serial devices become part of your PC		Port 1	COM2	Dynamic
		Port 2	COM3	Dynamic
💐 🛛 Add Server(s) 👘		Port 3	COM4	Dynamic
		Port 4	COM5	Dynamic
Bemove Server		Port 5	COM6	Dynamic

**4** Click the **"Tools"**  $\rightarrow$  **"Restart Driver"**, and then click the **"Restart Driver"** button.

File Server Prat	Tools	)		
		Restart Driver	e Ser	VxCommUtility : Restarting Driver
	P	Terminal		Restart the driver to use new configuration.
VxCom Where remote series	<b>S</b>	Modbus RTU Master	.0.8.1	STOP Make sure you have closed all virtual COM ports first.
		Modbus TCP Master		Status' Driver is not running
Add Och		Driver Options		
				Restart Driver Cancel

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# 7 Testing Modbus Device through Virtual COM Ports

 In the VxComm Utility, select the "Modbus RTU Master" item from the "<u>T</u>ools" menu to open the Modbus RTU Master Utility.



- In the Modbus RTU Modbus Utility, select your virtual COM port and baud rate/data format (default: 9600/N, 8, 1) on PPDS-700-MTCP, and then click the "Open" button.
- Refer to "Protocol Description" and type the command in the command field then click the "Send command" button. If the response data is correct, it means the test is success.

COM Status	Protocol Description	IS (Dxxxx) for DO	
9600  Line control : N,8,1 Open Close	Byte 0: Net ID (Station Byte 1: FC=01 Byte 2-3: Reference nu Byte 4-5: Bit count	number) mber	Ē
Polling Mode (No Waiting) Time out 200 ms Start Stop Timer Mode (Fixed Period) Interval 50 ms Start Stop	Statistics Commands Current Packet Size (Bytes) Total Packet Size (Bytes) Packet Quantity Sent Polling or Timer Mode (Dat Start Time Time	8     Difference in Packet     Responses       0     Quantity     Total Packet       0     0     Packet Quar       e/Time)     Polling Mod       Start     00	Clear Statistics       tet Size (Bytes)     7       Size (Bytes)     0       ntity Received     0       e Timing (ms)     0       Average     0
Command			000
110001 3			Send Command
Commands 🔽	Include CRC	Responses	
01 01 00 00 00 01 FD CA	<ul> <li>01 01 01 01 9</li> </ul>	30 OC	
	*		
	Clear Lists		Exit Program

#### Modbus/TCP to Modbus/RTU Gateway

• Open web browser, type the URL address of the PPDS-700-MTCP and press **"Enter"** to connect to the PPDS-700-MTCP.

Olick the **"Modbus Gateway Setting"** in the web page to **configure the COM Ports**, as illustrated in the diagram below.

**6** Check the COM Port for Modbus gateway setting.





Back to VxComm Utility, select the "Modbus TCP
 Master" item from the "<u>T</u>ools" menu to open the
 Modbus TCP Master Utility.

**G** In the Modbus TCP Modbus Utility, **enter the IP address of PPDS-700-MTCP** and click the **"Connect"** button to connect the PPDS-700-MTCP.

Refer to "Protocol Description" and type the command in the command field then click the "Send command" button. If the response data is correct, it means the test is success.

MBICP Ver. 1.1.5	X				
ModbusTCP IP 10.0.8.100 5 Port 502 Connect Disconnect Data Log	Protocol Description FC1 Read multiple coils status (0xxxx) for D0 [Prefixed 6 bytes for Modbus/TCP protocol] Byte 0: Transaction identifier - copied by server - usually 0 Byte 1: Transaction identifier - copied by server - usually 0 Byte 2: Protocol identifier=0 Byte 3: Protocol identifier=0 Byte 4: Field Length (upper byte)=0				
Polling Mode (No Waiting)       Start     Stop       Timer Mode (Fixed Period)       Interval     100       Start     Stet	Statistic       Clear Statistic         Commands       Difference in Packet       Responses         Total Packet Size (Bytes)       12       0.00 %         Packet Quantity       0       Packet Quantity Received       1         Polling or Timer Mode (Date/Time)       Polling Mode Timing (ms)       Max       0         Start Time       Start Time       Stop Time       Min       1000				
[Byte0] [Byte1] [Byte2] [Byte3] [Byte4] [Byte5]         [1 2 0 0 0 6 1 2 0 0 0 4         [Byte0] [Byte1] [Byte2] [Byte3] [Byte4] [Byte5]         [Byte0] [Byte1] [Byte2] [Byte3] [Byte4] [Byte5]         [Byte0] 01 02 00 00 06 -> 01 02 00 00 00 04					
Clear	Lists EXIT Program				

#### Note:

The flash protection function is disabled for factory default settings. User can modify the program or update the firmware. If you want to enable flash protection function, refer to Section 2.10 Flash Protection Function of the PDS-700 user manual. http://ftp.icpdas.com/pub/cd/8000cd/napdos/pds/pds-700/document/



Documentation & Firmware:

CD: \Napdos\PDS\PDS-700

http://ftp.icpdas.com/pub/cd/8000cd/napdos/pds/pds-700/

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