VxServer User Manual

Warranty

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1. Introduction

The VxServer is a virtual com middleware software. The VxServer with VxComm Driver can create virtual COM ports in Windows and maps them to the serial ports of the GT-541/M2M-710D/M2M-711D devices through the Ethernet, GPRS, 3G and Wi-Fi network. The user's RS-232 client programs need only to change to the virtual COM port to access the serial devices connected to the device servers through the network.

Features:

- Virtual Com middleware software
- Up to 128 Virtual Com devices can be managed in VxServer and VxComm driver
- Easy and quick to build a Virtual Com system
- Windows-based software

2. Hardware

2.1 System Requirements

• Software Requirements:

Operator System	Support
Windows 2000	\checkmark
Windows XP	\checkmark
Windows 7	\checkmark

• Hardware Requirements:

Hardware Items	Requirement
CPU	1.0 GHz or Higher
Memory	512 MB or Higher
Hardware space	100 MB or Higher
Other	CD-ROM or DVD-ROM

Product support

Product	Descirption
GT-541	Intelligent Multiport Serial to GPRS Gateway
M2M-710D	Remote maintenance Ethernet Device Terminal Unit
M2M-711D	Remote maintenance Wi-Fi Device Terminal Unit

2.2 Software architecture

Software	Descirption
VxComm driver	Version 2.11.4 or Higher
<u>.NET Framework</u>	Version 2.0 or Higher

VxComm Driver	
VxServer software	
TCP/IP Socket	

Ethernet/GPRS/3G/Wi-Fi



2.3 Application architecture



3. Installing the VxServer Software

3.1 Installing .NET Framework

It needs the runtime environment with .NET Framework 2.0 or above to execute the VxServer in the PC. If there has .NET Framework 2.0 or above in the PC, the section 3.1 can be omitted.

Microsoft .Net Framework Version 2.0:

http://www.microsoft.com/downloads/details.aspx?FamilyID=0856eacb-4362-4b0d-8edd-aab15c5e04f5&DisplayLang=en

Microsoft .Net Framework Version 3.5:

http://www.microsoft.com/downloads/details.aspx?familyid=333325FD-AE52-4E35-B531-508D977D32A6&displaylang=en 1. Press "Next" to the next step.



2. Select the "I accept the terms of the License Agreement" and "Install" to the next step.

End-User Licer	se Agreement				~
MICROSOFT SOF MICROSOFT .NE	TWARE SUPPLEM	IENTAL LICENSE .0	TERMS		
Microsoft Corpor supplement to yo software (the "so not have a licens validly licensed c	ation (or based or ou. If you are lice oftware"), you ma e for the software opy of the softwa	n where you live, insed to use Micri iy use this supple e. You may use ire.	one of its arrii osoft Windows ment, You ma a copy of this s	ates) licenses operating sy: y not use it if upplement wi	s this stem you do th each
					Print

3. The installation process would be going



4. After finishing the installation, press "Finish" to exit the program.

🖟 Microsoft .NET Framework 2.0 Setup	
Setup Complete	
Microsoft .NET Framework 2.0 has been successfully installed.	
It is highly recommended that you download and install the latest service packs and security updates for this product.	I
For more information, visit the following Web site:	
Product Support Center	
	Finish

3.2 Installing VxServer software

Plug in the shipment CD into the PC,

Execute \VxServer\Software\VxServer_Setup_Vx.xxBx.exe The installation figure is as follows:

1. Press "Next" to start the installation procedure.



2. Select the installation path. The default path is "C:\ICPDAS\VxServer". Press "Next" to the next step.

Setup - VxServer	
Select Destination Location	
Where should VxServer be instal	lied?
Setup will install VxServ	ver into the following folder.
To continue, click Next. If you w	ould like to select a different folder, click Browse.
C:\ICPDAS\VxServer	Browse
At least 0.9 MB of free disk spac	e is required.

3. Select the "Start Menu Folder", Press "Next" to the next step.

1 [∰] Setup - ∀xServer	
Select Start Menu Folder Where should Setup place the program's shortcuts?	
Setup will create the program's shortcuts in the following Start Menu for	older.
I o continue, click Next. If you would like to select a different folder, click Brows	se. wse
<u> ≺ B</u> ack <u>N</u> ext >	Cancel

4. Select additional tasks. Press "Next" to the next step

j <mark>©</mark> Setup - ∀xServer	
Select Additional Tasks Which additional tasks should be performed?	
Select the additional tasks you would like Setup to perform wi then click Next.	hile installing VxServer,
Additional icons:	
Create a desktop icon	
< <u>B</u> ack	Next > Cancel

5. Click "Install" to start to install the GT-541 Utility

j <mark>©</mark> Setup - ∀xServer	
Ready to Install Setup is now ready to begin installing VxServer on your computer.	
Click Install to continue with the installation, or click Back if you want to review or change any settings.	
Destination location: C:\ICPDAS\VxServer Start Menu folder: ICPDAS\VxServer	×
K Back Install	Cancel

6. Click "Finish" to finish installing VxServer



4. The VxServer operation description

4.1 Main menu

The main menu of VxServer includes the following sections:

	72 Sections Help Exit							
	Virtual IP	Module	Alias	Com Number	Heartbeat	Remote Client IP	Remote Client Port	Signal Quality
Device								
Connection Information	Date / Time 2011/12/08 13:31:4	Message 6 Server St	e arted(Local IP: 1	92.168.0.105, Local	PORT: 11000)			
Status Bar	Server Started Local IP: 19	2.168.0.105 Local F	PORT: 11000 VxCor	nm Driver is running.				

- (1) Tool menu:
 - 1. Settings:

Adjust the parameters of system as "Modify local IP", "Modify local Port", "Options", "System Information" and "Restart VxComm Driver"

2. Help:

The version of the VxServer

3. Exit:

Exit the VxServer

(2) Device:

Display information about remote devices as "Virtual IP", "Module", "Alias", "Com Number", "Heartbeat", "Remote Client IP", "Remote Client Port", "Signal Quality"

(3) Connection Information:Record device connection information

(4) Status bar:

Display status of the VxServer:

- 1. VxServer Server status
- 2. Display Local IP
- 3. Display Local Port
- 4. Display VxComm Driver status

4.2 Modify Local IP

1. Tool Menu -> Settings -> Modify local IP

<u>Settings</u> <u>H</u> elp <u>E</u> xit		
Modify local <u>I</u> P Modify local <u>P</u> ort	Alias	Com Nu
Options		
System Information Restart VxComm Driver		

2. Type new IP address into "Modify IP Field", then click "OK"

Modify Local IP		×
VxServer detecte	d your PC's IP is 192.168.0.105	
Local IP:	192.168.0.105	
Modify IP:		
01	Cancel	

4.3 Modify Local Port

1. Tools Menu -> Settings -> Modify local Port

<u>Settings</u> <u>H</u> elp <u>E</u> xit		
Modify local <u>I</u> P Modify local <u>P</u> ort	Alias	Com Nu
Options		
System Information Restart VxComm Driver		

2. Type new port into "Modify Port Field" , Press "OK" to finish

Modify Local Port	×
Local Port:	11000
Modify Port:	(1 ~ 65535)
ок	Cancel
ок	Cancel

4.4 Modify VxServer parameters

1. Tools Menu -> Settings -> Options

	XxServer Ver1.00 B9 2011/12/08		
ſ	<u>Settings</u> <u>H</u> elp <u>E</u> xit		
	Modify local <u>I</u> P Modify local <u>P</u> ort	Alias	Com Nu
	Options		
	System Information Restart VxComm Driver		

- 2. VxServer provides user-friendly options, allowing users to more easily use.
 - (1) Run this program when Windows starts: Whether execute the VxServer when windows start.
 - (2) Automatically reduced to the system tray when run this program: Whether automatically reduced to the system tray when execute the VxServer.
 - (3) Network response time: You must set network response time When the VxServer applies for the PLC edited software like the STEP7 of Siemens. You can set the network response time as 0 if you don't use the PLC software.

Network response time			
Transmit mode	Recommend Value (ms)		
Ethernet	100		
Wi-Fi	500		
3G	1000		
GPRS	5000		

(4) Smart transmit mode: whether enable the smart transmit mode

R	In this progran	n when Wind	lows start	3	
Au	tomatically red	uced to the :	system tra	y when run th	nis program
III Ne	twork respons Smart transm	se time: U <u>.</u> nit mode	mil	liseconds (L	oefault: U ms)

4.5 System Information

1. Tools Menu -> Settings -> System Information

Γ	Settings Help Exit		
	Modify local IP Modify local Port	Alias	Com Nu
	System Information Restart VxComm Driver		

2. Get the system information of the Host

em Information				
System Inform	nation			
OS:	Microsoft Windows NT 5.1.2600 S	Service Pack 1		
System Dir:	C:\WINDOWS\System32			CPU(s): 1
CPU Type:	x86 Family 6 Model 15 Stepping	13, GenuineIntel		
- VxComm Driv	ver Information			
File Size:	61184 Byte(s).	File Time:	5/12/2011 9:24:50 AM	
File Ver:	Win2K v2.11.04 (5/12/2011)	Status:	VxComm Driver is running.	

4.6 Restart VxComm Driver

1. Tools -> Settings -> Restart VxComm Driver

Settings Help Exit		
Modify local IP Modify local Port	Alias	Com Nu
<u>Options</u>		
System Information Restart VxComm Driver		

2. Be sure restart VxComm driver when you modify the parameters of options

Restarting Driver	×
Restart VxComm driver to use new configuration. Make sure you have closed all virtual Com ports first.	
Status: VxComm Driver is running.	
Restart Driver Cancel	

5. How to quickly set up VxServer and VxComm Driver

of the software

5.1 The necessary software installed





Download Microsoft .Net Framework Version 2.0: <u>http://www.microsoft.com/downloads/details.aspx?FamilyID=0856eacb-4362-4b0d-8edd-aab15c5e04f5&DisplayLang=en</u>

• Download VxServer software:

http://m2m.icpdas.com/VxServer.html

Download VxComm Driver software:

http://ftp.icpdas.com/pub/cd/8000cd/napdos/driver/vxcomm_driver/2k/

5.2 Setting the VxServer and VxComm Driver

1. Verify that the device has been connected up

K YxServer Yer1.00 B9 2011/12/08									
Settings Help Evit									
Virtual IP	Module	Alias	Com Number	Heartbeat	Remote Client IP	Remote Client Port	Signal Quality		
127.7.11.1	M2M-711D	M2M-711D	1	60	192.168.0.129	1833	 60%		
Dato / Timo	Morcago								
2011/12/26 15:48:51	The Remote Vir	tua IP "127.7.11.1" e	stablishes a new co	nection. (IP: 192.168	3.0.129, PORT: 1833)				
2011/12/26 15:48:48	Server Started(l	ocal IP: 192.168.0.1	06, Local PORT: 110)00)	. ,				
Server Started Local IP: 192.168.0.106 Local PORT: 11000 VxComm Driver is running.									

2. Execute VxComm Utility, then click "Search Servers"

🥩 VxComm Utility [v2.11.0	15, Dec.20, 2011	1									_ 7 🛛
<u>File Server Port T</u> ools											
	Þ		Configu	ire Server					Co	nfigure Port	
VxComfiver & utility Where remote series become part of your PC	¥×Comm S	ervers					Port	Virtual COM	Baudrate		
Add Server(s)											
Remove Server											
Search Servers											
Configuration (UDP) Exit											
	Nama Alla		Cub ant	Cataviav		DHCD					
	Name Alla	S IF Address	Sub-ilet	Galeway	MAC AUURESS	DIICF					

3. Select your device, then click "Add Server(s)"

🛷 ¥xComm Utility [v2.11	.05, Dec.20, 201	1]						
<u>File Server Port T</u> ools								
	Þ		Configure	Server				Configure Port
Where remote series are to your PC	V×Comm S	Servers				Port Virtual	COM Baud	rate
Add Server(s) Remove Server								
Veb								
Search Servers								
Configuration (UDP)								
Exit								
	Name	Alias	IP Address	Sub-net Mask	Gateway	MAC Address	DHCP	
	M2M-711D	M2M-711D	127.7.11.1	255.255.255.255	127.7.11.1	ff:ff:7f:07:0b:01	OFF	

4. IP Range=> COM Port, Select virtual com

Å₫	ling Servers	×							
	P Range Advanced Options	_1							
Ī	Server Information Server Name : M2M-711D Get name automatically								
	IP Range Start : 127.7.11.1 🔽 Skip duplicated IP								
	IP Range End : 127.7.11.1								
	Includes the following special IP : 0 (Net) 254 (Gateway) 255 (Broadcast)								
Virtual COM and I/O Port Mappings COM Port : COM6									
Fixed bauurate, use current setungs of servers. Maps virtual COM ports to "Port I/O" on servers.									
	OK Cancel								

5. Advanced Options, please follow the below parameter settingsParametersFixed valueKeep Alive Time1

Reep Alive Time	
Connection Broken	3
Connect Timeout	1
Command Port	10000
Virtual I/O Port	9999

Adding Servers			\mathbf{X}
IP Range Advanced Options			1
The following items are all PC	l side settings, not devic	e settings.	
Keep Alive Time (Seconds) :	1		
Connection Broken (Seconds) :	3		
Connect Timeout (Seconds) :	1		
Command Port (TCP):	10000		
Virtual I/O Port (TCP):	9999		
		ОК	Cancel

6. Tools => Restart Driver

بالن الن الن الن الن الن الن الن الن الن								
File Server Port Tools								
Surface In	formation iver Cor	nfigure Server			Cor	nfigure Port		
driver & utility			Port	Virtual COM	Baudrate			
Where remote series devices become part of your PC	M2M-711D (127.7.11.1)		Port I/O Port 1	Reserved COM6	N/A Dynamic			
Add Server(s)								
X Remove Server								
📀 Web								
Search Servers								
Configuration (VDP)								
Exit								

7. Click "Restart Driver" to finish setting



Version Record

Version	Ву	Date	Description
1.00	Yide	2011/12/13	
1.01	Yide	2011/12/26	
1.02	Kane	2012/03/21	