## M2M-711D Quick Start User Guide

## The package includes the following items:

One M2M-711D hardware module

<sup>•</sup>One quick start guide

<sup>•</sup>One Software CD

<sup>•</sup>One Wi-Fi Antenna (ANT-124-05)

<sup>•</sup>One RS-232 cable (CA-0910)



## **1. Introduction**

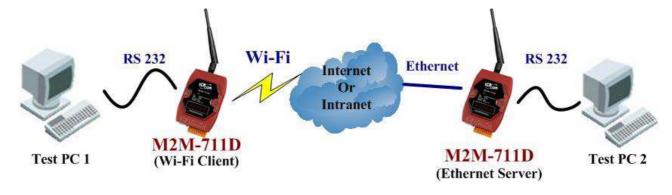
The major purpose of this Guide is to help users become familiar with M2M-711D module quickly. If you want to realize the detail items please refer to user manual. (CD:\napdos\multimedia\M2M-711D\manual\M2M-711Duser manual.pdf)

M2M-711D provides 2 major technologies on networking:

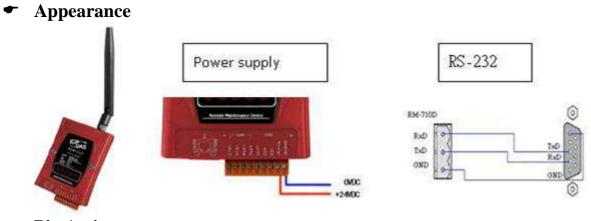
(1) **VxServer mode(Wi-Fi):** This connection method needs a Wi-Fi AP (Access Point) in the working field. M2M-711D connects to Internet via Wi-Fi AP, and then establishes connection with VxServer Software on PC. The architecture is shown below:



(2) Pair-Connection: This communication mode takes two M2M-711D modules, one works as an Ethernet Server; the other works as a Client, and use two computers to test and operate the M2M-711D modules. The architecture is shown below:



## 2. Device Assignment



Pin Assignment

Pin	Name	Description	
1	CTS1	Clear to Send	
2	RTS1	Request to Send	

Pin	Name	Description	
3	RxD1	Receive Data	
4	TxD1	Transmit Data	
5	INIT	InitPin	
6	DATA+	Data+ of RS-485	
7	DATA-	Data- of RS-485	
8	Vs	Vs of Power Supply	
9	GND	GND of Power Supply	

## 

### VxServer mode

State	Process	Description	
	Connection Mode	Ethernet mode  AP mode  Ad Hoc mode	
	11111	Shows the local IP or DHCP sequentially	
	22222	Shows the VxServer IP sequentially	
ON	33333	Shows the connecting port.	
	44444	Shows the current setting of Com port	
	IP	In AP mode or Ad Hoc mode, it shows the web setting IP.	
	connecting	It shows twinkled "Conn.".	
Connect	Show AP Signal	It shows the current signal strength of Wi-Fi AP Device in the AP mode.	
	Serial Pair-Connection	Interactive display Comport signals.	

## Pair-Connection Server Mode

State	Process	Description
	Connection Mode	Ethernet Server  Vi-Fi Server  Ad Hoc Server
	11111	Shows the local IP or DHCP sequentially
ON	22222	Shows the Monitor's port of server.
	33333	Shows the current setting of Com port.
	IP	In Wireless mode, it shows the web setting IP.

State	Process	Description	
	Monitor State	Shows -LIS-	
Connect	AP Signal Strength	It shows the current signal strength of Wi-Fi AP Device in the AP mode.	
	Serial Pair-Connection	Interactive display Comport signals.	

#### Pair-Connection Client Mode

Stat	Process	Description	
	Connection Mode	Ethernet Client 、 Wi-Fi Client 、 Ad Hoc Client	
	11111	Shows the local IP or DHCP sequentially	
ON	22222	Shows Server IP	
ON	33333	Shows the Monitor's port of server.	
	44444	Shows the current setting of Com port.	
	IP	In Wireless mode, it shows the web setting IP.	
	Connecting	It shows twinkled "Conn.".	
Connect	AP Signal	It shows the current signal strength of Wi-Fi AP Device in the AP mode.	
Connect	Login State	Shows "Conn."	
	Serial Pair-Connection	Interactive display Comport signals.	

## 3. System Setting

The M2M-711D module is built-in web server, the user can configure and operate the M2M-711D by web browser (ex: IE).

Note: Users must enter M2M-711D web server by Ethernet in the setting.

Connection Setting
 First, connect the M2M-711D with PC by RF-45 as shown below:



#### M2M-711D

Ethernet default value is 192.168.1.217. The PC and M2M-711D have to set setting in the same network segment. The example of connection setting will be described below and Microsoft Windows XP Professional SP2 is used.

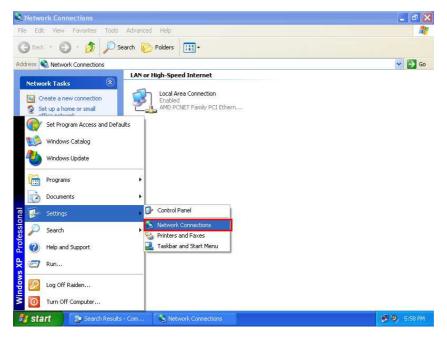
#### \* The setting of PC:

Open the dialogue window of IP to set the IP and subnet mask. The default Ethernet IP of M2M-711D is 192.168.1.217. Users must assign the same network segment setting but NOT the same IP (EX: 192.168.1.220).

Step1: Click "start→Settings→Network→Connections"

Step2: Click "contents" in the dialogue window.

Step3: Click Internet Protocol (TCP/IP) and then click the contents Step4: Set the IP and subnet mask.



neral Support	
Connection	
Status:	Connected
Duration:	00:23:43
Speed:	10.0 Mbps
Signal Strength:	
Activity Sent —	🔊 — Received
Packets: 10,709	8,894
Properties Disable	

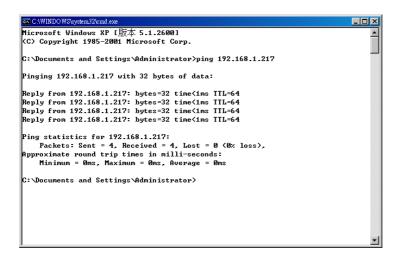
a series of	t using: MD PCNET Fan	nily PCI Ethernet Ac	lapter
This co	nnection uses th	e following items:	Configure
	QoS Packet So Internet Protoc	Sharing for Microso cheduler ol (TCP/IP)	
10	nstall	Uninstall	Properties
Tran wide	smission Control I area network pro	Protocol/Internet P otocol that provides innected networks.	
ER Cha	w icon in notifica	tion area when cor	nnected

	utomatically if your network supports to ask your network administrator for ically
Use the following IP address:	
IP address:	192.168.1.220
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	<u>x: :: ::</u>
) Obtain DNS server address at	utomatically
Use the following DNS server	addresses:
Preferred DNS server:	10 10 11
Alternate DNS server:	
	Advanced

★ Communication Test: Click"start→Run..."→ Key in "cmd" and then click "OK"→Key in "ping 192.168.1.217"

		Set Program Access and Defaults			
	1	Windows Catalog			
	4	Windows Update			
		Programs	•		
	3	Documents	•		
Inal	1	Settings	•	6	
<b>Professional</b>	P	Search	×	Run	2 🞽
Prof	?	Help and Support			Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
s XP		Run			
Windows	P	Log Off Raiden		Open:	<u>cmd</u>
W	0	Turn Off Computer			OK Cancel Browse
-	j sta	nt Network Connection	s		

If the network settings are correct, it will show:



After entering M2M-711D, the system divided into two applications:

#### **\*** VxServer mode:

The PC must install VxServer Software and VxComm Driver in VxServer mode:

#### **Step1: VxComm Driver Installation**

Download VxComm Driver:

http://ftp.icpdas.com/pub/cd/8000cd/napdos/driver/vxcomm\_driver/

Please select the most suitable for your Windows and download the latest version. And then, run the installer.

"VxComm2K\_v2.11.05\_setup.exe" for Windows NT4.0, 2000 /XP/2003 and Vista32 (32-bit)

"VxComm98.exe" for Windows 95/98/ME



#### Step2: VxServer Software Installation

VxServer Software download link:

http://ftp.icpdas.com/pub/cd/usbcd/napdos/vxserver/software/ VxServer user manual:

http://ftp.icpdas.com/pub/cd/usbcd/napdos/vxserver/manual/



### Step3: Set VxServer Mode

Open web browser (EX: IE) and key in <u>http://192.168.1.217</u> and then click Enter to enter Web Config.  $\rightarrow$ Key in User name (Default setting: root) and Password (Default setting: icpdas)  $\rightarrow$ click "Enter"

	P DAS	
Login UserAccount Standard Config Wi-Fi Config OperationMode Information	USER Set	
http://www.ic	pdas.com	icks-

#### USER Set

User	root		
Password	•••••		

enter

#### **Settings in the Standard Config:**

(1) Operation Mode: VxServer mode

(2) Server IP: The IP of PC

(3) Communcation Port: 11000

Others keep the default setting, and then click "Save Setting".

	IGP D	AS
Login User Account Standard Config Wireless Config DDNS Config ComPort Config Operation Mode Information	System Operation Mode NetWork Host Name Sation ID Connect to Server by Server Name Server IP Communication Port Boot Protocol Heart Bit Ethernet Static IP Conf Ethernet IP Netmask Gateway	VxServer • M2M-711D 1 P • www.icpdas.com.tw 192.168.0.171 11000 StaticIP • Enable • <b>iig (Only Web Page Config)</b> 192.168.1.217 255.255.0.0 192.168.0.254

#### **Settings in the Wireless Config:**

- (1) Wireless Mode: AP mode
- (2) SSID, Channel, Encryption and Passphrase are the same with the working field Wi-Fi AP.

Others keep the default setting, and then click "Save Setting".

Login	Wireless	
UserAccount	Wi-Fi Mode	AP Mode 🔻
Standard Config	SSID	ICPDAS
Wireless Config		ICFDAS
DDNS Config	Channel	AUTO 🔻
ComPort Config	Encryption	No security 💌
<b>OperationMode</b>	Passphrase	
Information	Boot Protocol	DHCP 🔻
reboot	Save Setting Det	fault Setting

Finally: Don't forget to click "Reboot".

Step4: Open VxServer and M2M-711D to establish connection → open Virtual Com.

	) <u>E</u> xit	1				
Virtual IP	Module	Alias	Com Number	Heartbeat (unit:sec)	Remote Client IP	Remote Client Port
ite / Time	Messa					
ite / Time 11/11/04 14:51			219.167.33, Local PORT:	11000)		
			219.167.33, Local PORT:	11000)		
			219.167.33, Local PORT:	11000)		
			219.167.33, Local PORT:	11000)		
			219.167.33, Local PORT:	11000)		
1/11/04 14:51	02 Server	Started(Local IP: 61.)				
1/11/04 14:51	02 Server	Started(Local IP: 61.)	219.167.33, Local PORT: %Comm Driver is running			
1/11/04 14:51	:02 Server	Started(Local IP: 61.)				

~	Virtual IP	Module	Alias	Com Number	Heartbeat	Remote Client IP	Remote Client Port	
)	127.7.11.1	M2M-711D	M2M-711D	1	10	192.168.0.129	1805	<b>4</b> 80%
	e / Time 1/12/21 10:28:56	Message The Remo	te Virtua IP "127	7 11 1" establishes	a new connectiu	on. (IP: 192.168.0.129	PORT: 1805)	
	1/12/21 10:28:54			2.168.0.171, Local		511. (il 1. 102.100.0.120		

## **Open VxComm and add into M2M-711D VxComm Server**

of VxComm Utility [ v2.11.0	13, Nov.18, 2010	00								
<u>File Server Port T</u> ools										
	Þ		Configure Server					Configure Po	ort	
Add Server(s) Remove Server	PDS-782	ervers 0-A (61.219 2 (192.168.1 h Server	111.111)		Port I/ Port I/ Port 1 Port 2	0 Res CON		Baudrate N/A Dynamic Dynamic		
Web	Name	2.Clicl	k the right butto	n to show m			MAC Ad		DHCP	
And Transition (UDD)	and the second se	1		a construction of the second s	Gateway	054	1.0000.000.000		I settled to settle I	
Configuration (UDP)	M2M-720-A / M2M-711D	N/A N/A	192.168.29.20 192.168.29.217	255.255.0.0 255.255.0.0	192.168.0			1:2a:1a:09 0:03:04:56	OFF OFF	
Exit	M2M-710D PDS-782 SAR-713	N/A N/A SAR-713	192.168.29.10 192.168.29.10 192.168.111.111 192.168.255.1	2 M Ping Server 2 Diagnostic 2 Configure Se 1 Add Server(s	rver (UDP)	254 254 15.254	00:0D:E 00:0d:e	0:50:04:95 0:50:02:af 0:20:29:4e	OFF OFF OFF	
Status										1

Double-Click "Port1" and open Port Configuration dialog window, and then select the suitable Com Port.

🥩 VxComm Utility [ v2.11.	03, Nov.18, 2010 ]	
<u>File Server Port T</u> ools		
	Configure Server	Configure Port
VxConfigure & utility Where remote Annual with the Second part of your PC	- VxComm Servers - M2M-711D (192.168.29.217)	Port         Virtual COM         Baudrate           Port         I/O         Reserved         N/A           Port         COM13         Dynamic
Add Server(s)	Port Configuration	1. Double click Port1
😺 Web	Server: M2M-711D (192.168.29.217), Port 1	
Search Servers	Port Mapping (PC)   Port Setting (Device)	
Configuration (UDP)	Select COM COM13 2.Select Com	AAC Address DHCP
Exit	<ul> <li>Re-assign COM number for all subsequent ports.</li> <li>Apply to all subsequent softs.</li> <li>Fixed baud rate, use server current settings.</li> <li>Skip baud rate and data format changes from client program. (Less conflicts when sharing port to multiple clients.)</li> </ul>	0:37:71:2a:1a:09 OFF 0:00:E0:03:04:56 OFF 0:00:E0:50:04:95 OFF 10:0d:e0:50:02:af OFF 0:0d:e0:20:29:4e OFF
	ОК	Cancel
Status: OK		

**Reset VxComm Driver to make settings take effect.** 

	Configure Server				Configure Port			
driver & utility	VxComm S	and a second second			Port Virtua	I COM Baudrate		
	M2M-71	11D (192.16)	8.29.217]		Port I/O Rese	22550555		
become part of your PC	X				Port 1 COM1	3 Dynamic		
Add Server(s)	Restar	t Driver						
Remove Server								
Web								
Web								
Search Servers			100000000000000000000000000000000000000			11 10 10 10 10 10 10 10 10 10 10 10 10 1		
	Name	Alias	IP Address	Sub-net M	Gateway	MAC Address	DHCP	
	Intanto			OFF OFF O O	192.168.0.254	00:37:71:2a:1a:09	OFF	
nfiguration (UDP)	M2M-720-A	N/A	192.168.29.20	255.255.0.0			- CONTRACTOR	
	M2M-720-A M2M-711D	N/A	192.168.29.217	255.255.0.0	192.168.29.1	00:0D:E0:03:04:56	OFF	
nfiguration (UDP) Exit	M2M-720-A M2M-711D M2M-710D	N/A N/A	192.168.29.217 192.168.29.10	255.255.0.0 255.255.0.0	192.168.29.1 192.168.0.254	00:0D:E0:03:04:56 00:0D:E0:50:04:95	OFF OFF	
	M2M-720-A M2M-711D M2M-710D PDS-782	N/A N/A N/A	192.168.29.217 192.168.29.10 192.168.111.111	255.255.0.0 255.255.0.0 255.255.0.0	192.168.29.1 192.168.0.254 192.168.0.254	00:0D:E0:03:04:56 00:0D:E0:50:04:95 00:0d:e0:50:02:af	OFF OFF OFF	
Exit	M2M-720-A M2M-711D M2M-710D	N/A N/A	192.168.29.217 192.168.29.10	255.255.0.0 255.255.0.0	192.168.29.1 192.168.0.254	00:0D:E0:03:04:56 00:0D:E0:50:04:95 00:0d:e0:50:02:af	OFF OFF	
	M2M-720-A M2M-711D M2M-710D PDS-782	N/A N/A N/A	192.168.29.217 192.168.29.10 192.168.111.111	255.255.0.0 255.255.0.0 255.255.0.0	192.168.29.1 192.168.0.254 192.168.0.254	00:0D:E0:03:04:56 00:0D:E0:50:04:95 00:0d:e0:50:02:af	OFF OFF OFF	

#### VxServer mode error checking:

- (1) If the 7 segment has error display please check power, network connecting and system settings.
- (2) Open web browser and key in <u>http://192.168.1.217</u> to login and repeat the above processes.

(3) Finally: Don't forget to click "Reboot" to reset system.

#### Pair-Connection mode:

In Pair-Connection mode, users set one works as Ethernet Server; the other works as Wi-Fi AP Client. You can change to a different transmission mode in accordance with practical application.

#### Wi-Fi AP Client Settings:

Open web browser to key in <u>http://192.168.1.217</u> and then click Enter.

	PD	S		
Login UserAccount	USER Set			
Standard Config Wi-Fi Config	User	root		
OperationMode	Password			
Information	enter			
reboot				
1				



Key in User name (Default setting: root) and Password (Default setting: icpdas) and click Enter.

User	root
Password	•••••

enter

### Settings in the Standard Config:

Operation Mode: Pair-Connection Client Host Name: M2M-711D Server IP: 192.168.1.217 Ethernet IP: 192.168.1.218 Others keep the default setting, and then click "Save Setting".

### Settings in the Wireless Config:

Wireless Mode: AP mode SSID, Channel, Encryption and Passphrase are the same with the working field Wi-Fi AP. Others keep the default setting, and then click "Save Setting".

### Finally: Don't forget to click "Reboot".

#### Ethernet Server Setting:

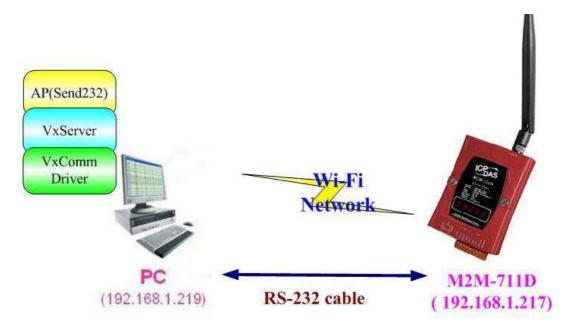
After setting Client, users can connect another M2M-711D to Internet without removing Client. And then set the Operation Mode to Pair-Connection Server in the Server's web.

#### VxServer mode error checking:

- (1) If the 7 segment has error display please check power, network connecting and system settings.
- (2) Open web browser and key in <u>http://192.168.1.217</u> to login and click "Default Setting" button in the Standard Config page. Set the Operation Mode to Pair-Connection Server and click "Save Setting".
- (3) The Client can key in <u>http://192.168.1.218</u> in the web address and click "Default Setting" in the Standard Config page, and then repeat above setting processes.
- (4) Finally: Don't forget to click "Reboot".

## **4.** Communication Test

# VxServer Mode Communication Test Step1: Connect M2M-711D with PC as shown below:



**Step2**: Assign the M2M-711D's Server Port1 to PC's virtual Com 13. Please refer to section 4.5.

**Step3**: Connect VxServer with M2M-711D: In the Standard Config setting web of M2M-711D, users have to set Server IP (For example, the IP in the above diagram is 192.168.1.219) and click "Save Setting" to finish connection.

**Step4**: Use Send232 Program to test communication. (Download link: <a href="http://ftp.icpdas.com/pub/cd/8000cd/napdos/7188e/tcp/pcdiag/source/send23">http://ftp.icpdas.com/pub/cd/8000cd/napdos/7188e/tcp/pcdiag/source/send23</a> <a href="http://ftp.icpdas.com/pub/cd/8000cd/napdos/7188e/tcp/pcdiag/source/send232">http://ftp.icpdas.com/pub/cd/8000cd/napdos/7188e/tcp/pcdiag/source/send232</a> <a href="http://ftp.icpdas.com/pub/cd/8000cd/napdos/7188e/tcp/pcdiag/source/send32">http://ftp.icpdas.com/pub/cd/8000cd/napdos/7188e/tcp/pcdiag/source/send32</a> <a href="http://ftp.icpdas.com/pub/cd/8000cd/napdos/7188e/tcp/pcdiag/source/send32">http://ftp.icpdas.com/pub/cd/8000cd/napdos/send32</a> <a href="http://ftp.icpdas.com/pub/cd/8000cd/napdos/80">

Send232 V. 2.0.1 COMI		Send232 V 2.0.1 COM2	
COM1 I 115200 I 11500 I 11500 I 11500 I 11500 I 115000 I	COM1 and Click Open	C0M2 · [115200 · ] Line control · [N.8.1	COM2 and Click Open None CLF_CR CR CR_LF CLF
Auto send Interval 500 Set	3. Type "Msg1" Msg1 Send	Auto send Interval 500 Set	4. Type "Msg2" Msg2 Send
Send	5. Click Send Receive	Send	6. Click Send Receive
Msg1	Mag2	Msg2	Msg1
		3	2
Clear	Clear Exit Program	Clear	Clear Exit Program

#### Pair-Connection Mode Communication Test

After finishing above setting processes, the Ethernet and Wi-Fi Client have completed connection. We can open web browser and key in <a href="http://192.168.1.217">http://192.168.1.217</a> to login and click the Information page, and then we can see the System Sate shows "Communication" or see "Client IP" in the Operation Mode page is correct.

	CP DAS	3		CP-DAS
Login UserAccount Standard Config Wireless Config DDNS Config ComPort Config OperationMode Information	Information OS Version : XS Version : Firmware Version : Wi-Fi Firmware Version System State: Ethernet Config IP : SubnetMask : Gateway : MacAddress : Wireless Config IP : SubnetMask : Gateway : Wi-Fi Mac Address :	2.2.23[Dec 24 2009]         0.9.3.14         V1         : [D807b06         Communication         192.168.1.217         255.255.0.0         192.168.0.254         000D:BD:BD:55.66         192.168.0.254         192.168.0.254         00.0D:BD:BD:55.66         192.168.0.254         00.00.10:DED:D55.66	Login User Account Standard Config Wireless Config DDNS Config ComPort Config Operation Mode Information	Remote IP       192.168.29.200         Port       RS232         Remote Port       RS232         Baud Rate       115200         Data Bits       8         Parity       None         Stop Bits       1         GetStatus       GetStatus
http://www.i	cpdas.com		http://www.i	codas.com

Finally, Users can send RS232 data from one PC to another.