

1.0 Connecting OpenGN to an FX-2000

Attention: Before you begin, follow the instructions in LT-1113 "OpenGN Administrator's Guide" (available on http://www.mircom.com) to install OpenGN and configure the computer running OpenGN and the OpenGN Gateway.

Note: These instructions should be completed by someone who is familiar with configuring the FX-2000. See LT-657, the FX-2000 Installation and Operation manual available on **http://www.mircom.com**.

You need:

- ARW-VESP211 Advantech Serial to Ethernet Converter
- Advantech software CD
- Ethernet cable (maximum 300')
- 9 pin male to female serial cable
- OpenGN version 3.4 or later
- OpenGN Gateway version 3.4 or later
- OpenGN license key
- Ethernet cable
- The FX-2000 Config Utility version 2.3.30 or later
- The FX-2000 Fire Alarm Control Panel with firmware version 2.14 or later

1.1 Connect the ARW-VESP211

- 1. Connect the 9 pin serial cable to the COM port on the ARW-VESP211.
- Connect the other end of the 9 pin serial cable to the RS-232 port on the FX-2000. See Figure 2.
- 3. Use an Ethernet cable to connect the LAN port on the ARW-VESP211 to the computer running the OpenGN Gateway.
- 4. Connect the ARW-VESP211 to the power.



Figure 1 Connect the ARW-VESP211 to the OpenGN Gateway Computer





Figure 2 RS-232 Port on the FX-2000

1.2 Configure the ARW-VESP211

1.2.1 Configure the OpenGN Gateway Computer to Connect to the ARW-VESP211

In order to initially connect to the ARW-VESP211, the OpenGN Gateway computer must have a specific IP address.

- 1. On the computer that the OpenGN Gateway is on, click **Start**, then click **Settings**.
- 2. Click Network and Internet.
- 3. Click Network and Sharing Center.
- 4. Click the Ethernet connection.



The Ethernet Status window appears.

Ethernet Status	×
General	
Connection	-
IPv4 Connectivity: Internet	
IPv6 Connectivity: No network access	
Media State: Enabled	
Duration: 5 days 02:13:52	
Speed: 1.0 Gbps	
Details	
Activity	-
Sent — 💭 — Received	
Bytes: 57,600,226,918 2,679,045,235	
Properties Diagnose Diagnose	
Qlose	

Figure 3 Ethernet Status

5. Click **Properties**.

The Ethernet Properties window appears.

Networking			
Connect using:			
Intel(R) 82578DM	M Gigabit Network Cor	nnection	
		<u>C</u> onf	igure
This connection uses th	ne following items:		
File and Printe Gos Packet S Action and Printe Gos Packet S Action and Printe Microsoft Netv Microsoft Netv Internet Protoc C	r Sharing for Microsoft icheduler col Version 4 (TCP/IP) vork Adapter Multiplex P Protocol Driver col Version 6 (TCP/IP)	v4) v6)	~
l <u>n</u> stall	<u>U</u> ninstall	Prop	erties
Description Allows your compute network.	r to access resources	on a Micros	oft

Figure 4 Ethernet Properties

6. Double-click Internet Protocol Version 4 (TCP/IPv4).



Internet Protocol Version 4 (TCP/IPv4) Prop	ertie	5			×
General						
You can get IP settings assigned auto this capability. Otherwise, you need to for the appropriate IP settings.	matical o ask y	lly if y our r	our n etwor	etwork s k admini	supports istrator	
O Obtain an IP address automatica	lly					
IP address:						
Subnet mask:						
Default gateway:						
Obtain DNS server address automatically						
• Us <u>e</u> the following DNS server add	dresse	s:				
Preferred DNS server:						
Alternate DNS server:		•				
Ualidate settings upon exit				Ad <u>v</u> a	anced	
			ОК		Cancel	

The Internet Protocol Version 4 (TCP/IPv4) Properties window appears.



- 7. Click Use the following IP address.
- 8. Type the following addresses:
 - IP address: 169.254.102.40
 - Subnet mask: 255.255.0.0
- 5. Click OK.

1.2.2 Install the Vlinx Serial Server Manager

1. Insert the Advantech CD into the OpenGN Gateway computer.

The Vlinx Serial Server Manager Installation Wizard starts automatically.



Figure 6 Welcome to the Vlinx Serial Server Manager Installation Wizard

2. Follow the instructions on the screen to install the Vlinx Serial Server Manager.



1.2.3 Configure the ARW-VESP211

1. On the OpenGN Gateway computer, open the Serial Server Manager: click **Start > B&B Electronics > Vlinx > Vlinx Serial Server Manager**.

The Vlinx Serial Server Manager appears.



Figure 7 Vlinx Serial Server Manager

- 2. Click I don't know the IP address of the device.
- 3. Click **Connect**.

The Vlinx Serial Server Manager looks for devices.



Figure 8 Advantech Device Details

The Login screen for the ARW-VESP211 device appears.

And and a second s	
imware Upgrade Add VCOM Remove VCOM Diagnostic	
Thoose the device by double-clicking on one of the devices in the list below.	
e Connection Port 1	
8E0C1169 169.254.102.39 TCP:S:4000	
X	VESP211-000
Server	
Login	
Password	
Login	
Model VESP211 Freetrees Vesice: 1 10 0 Hardware Vesice: 1 MAC Address: 00:00:BEOC:11:69 Link Status: 100BaseTX full diplex	
	Borner Stegensk Ask Cott Remove VCOL Deparent: Torent Bedrock VCOL Deparent: Torent Bedrock VCOL Deparent: Torent Stegensk Ask Cott Remove VCOL Deparent: Torent Stegensk Ask Remove VCOL Deparent: Torent Stegenskask Remove VCOL Deparent: Torent Stegensk Ask Remove VCOL Dep

Figure 9 Login screen



1

4. Enter the Login password, then click **Login**. By default, the password is blank.

The General screen appears.

Vlinx Serial Server Manager 1.7.0	And a second	
Open Cfg Save Cfg Server Search F	Immvare Upgrade Add VCOM Remove VCOM Diagnostic	
Which device do you want to configure? O	Choose the device by double-clicking on one of the devices in the list below.	
MAC Address Server Name	e Connection Port 1	
00:0E:BE:0C:11:65 VESP211-000E	BEULTI05 103/294.102.33 (101:5:4000)	
LA	X	VESP211-000
Ethernet Serial	Server	
Contents	General	
General Network	The name of this serial server is: VESP211-000EBE0C1169	
Port 1 Settings Port 1 Serial	☑ I want to change the password.	
Longuit	Type the new password	
Logram .	Type the new password again to confirm it:	
	Save Next	
		1

Figure 10 General screen

- 5. Enter a name that describes the panel that the device is connecting to, for instance **FX-2000**.
- 6. Select I want to change the password, then enter the new password.
- 7. Click Save.

Note: Keep a record of the password. You will need it in a later step.

8. Click Network on the left sidebar.

The Network screen appears.

VIInx Serial Server Manager 1.7.0	Marriel W. C. Constanting of Marriel and	
Open Cfg Save Cfg Server Search	19 A VCM Remove VCM Diagnostic	
Which device do you want to configure? O MAC Address Server Nam	Choose the device by double-clicking on one of the devices in the list below.	
00:0E:BE:0C:11:69 VESP211-000E	BE0C1169 169.254.102.39 TCP.5-4000	
	VESP2	11-000
Ethernet Serial	Server	
Contents	Network	
General Network	□ I want DHCP to setup the network.	
Port 1 Settings Port 1 Serial	IP Address: 192.168.1.11	
Save	Subnet Mask: 255 255 255 0	
Logout	Defauk Gateway. 192 168.1.1	
	Save Back Next	

Figure 11 Network screen

9. Enter the following information:

IP address Subnet Mask Default Gateway	Consult your network administrator for assistance. The IP address must be in the same range as the IP address of the computer running the OpenGN Gateway. The gateway and subnet mask must be the same as they are on the OpenGN Gateway computer.
	For example, if the OpenGN Gateway computer's IP address and subnet mask are 192.168.1.10 and 255.255.255.0, then you can enter 192.168.1.11 and 255.255.255.0 as the ARW-VESP211's IP address and subnet mask.



•

1

Note: Keep a record of the IP address. You will need it in a later step.

To ensure a constant connection to OpenGN, you must assign a static IP address to the ARW-VESP211.

10. Click Next.

The Port 1 Settings screen appears.

1 Ins foul Store Mange 230 - Av - 0 - all - > - and					
Open Clg Saved Clg Server Search Firmware Upgrade Add VCOM Remove VCOM Diagnostic					
Which device do you want to configure MAC Address Server N	re? Choose the device by double-clicking on one of the devices in the list below. Name Convestion P tot 1	_			
00:0E:BE:0C:11:69 VESP211-00	16925410239 TCP:54000				
Ethernet Seri	VESP211-	300			
Contents	Port 1 - Settings				
General Network Port 1 Settings Port 1 Serial	I want to use this network protocol. TCP O UDP O VCOM Mode O Paired Mode	_			
Save Logout	to inlister connections (derve) to inlister connections (dervf)				
	I want to wait for connections on TCP port mamber: [14000 and limit the number of connections to: [1 connection]				
	and allow everyone to connect and allow a specific IP address to connect and allow a specific IP addresses to connect				
	Save Back Net Advanced	-			

Figure 12 Port 1 - Settings

11. Enter the following information:

I want to use this network protocol	ТСР
to wait for connections (server)	Select this option
I want to wait for connections on TCP port number	14000
and limit the number of connections to	1 connection
and allow everyone to connect	Select this option



12. Click Next.

The Port 1 - Advanced window appears.

ontents	Port 1 - Advanced
eneral	□ I want to control when connections would be forced closed.
ort 1 Settings	I want to control when data packets are sent over the network.
ave	Character Count
Logout	□ I want to wait for a specific amount of data to be received by the serial port before sending it.
	0 characters
	Forced Transmit
	□ I want to wait no longer than a specific amount of time after data is received before sending it.
	0 milliseconds
	Intercharacter Timeout
	✓ I want to send data immediately when no more characters are received for:
	52 milliseconds
	Delimiter 1
	□ I want to begin bufferring data when a specific character is received by the serial port.
	0 ASCII value for character
	Delimiter 2
	□ I want to send data immediately when a specific character is received by the serial port.
	0 ASCII value for character
	Delimiter Removal

Figure 13 Port 1 - Advanced

13. Enter the following information:



14. Click Next.

The Port 1 - Serial window appears.

Vinx Serial Server Manager 1.7.0	Firmware Upgrade Add VC	N RemovitCM Disancelic
Which device do you want to configure? MAC Address Server Nar 00:0E:BE:0C:11:69 VESP211-0006	Choose the device by double- ne Connection BE0C1169 169.254.102.1	edicking or one of the decises in the list below. First 1 30 TCP-54000
Ethernet Seria	Server	VESP211-
Contents	Port 1 - Serial	
General Network	Description:	Serial Port1
Port 1 Settings Port 1 Serial	Mode:	RS 232 🔽
Save	Baud Rate:	9600 🔽
Logout	Data Bits:	8 Bits
	Stop Bits:	1-Bit V
	Parity:	No Party
	Flow Control:	No Flow Control
	Save Back M	Not

Figure 14 Port 1 - Serial



15. Enter the following information:

Mode	RS-232
Baud	9600
Data bits	8-Bits
Stop bits	1-Bit
Parity	No Parity
Flow Control	No Flow Control

- 16. Click Next.
- 17. Under **Save**, click the **Save** button and wait for the Login screen to appear.

1.2.4 Configure OpenGN Gateway Computer

• Change the IP settings for the OpenGN Gateway computer to their previous values. See section 1.2.1 on page 2 for instructions on how to change the IP settings.

If you need assistance, contact your network administrator.

If you are connecting the OpenGN Gateway computer to an FX-2000 panel directly over Ethernet, enter an IP address that is different than the IP address of the FX-2000 panel. Enter the same subnet mask as the subnet mask on the panel.



1.3 Export the Job File

You need:

- The FX-2000 Config Utility version 2.3.30 or later
- 1. Connect the FX-2000 to the computer that has the FX-2000 Config Utility installed on it.
- 2. In the FX-2000 Config Utility, open the job for the FX-2000 panel.
- 3. Select Main Display.
- 4. Select Enable Printer Heart Beat.
- 5. Under Locale, select English in the Language menu.
- 6. In the **Time Format** menu, select the date in the format **Month Day, Year hour:minute** as shown in Figure 15.

Base Panel (Compact Build) Coop 0 (Hardwired) Coop 1 (Hardwired) Coop 2 Do Aain Display Common System Status	Options Cupanie Dinter Enable Printer Heart Beat Heport Form Feed Manual Enable on Menu Low Power Lamptest	Passcodes Level 1: 1111 Level 2: 2222 Level 3: 3333
Timers Input Summary Output Summary	System Messages System Normal Message Line 1 Mircom FX-2000 Line 2 Fire Control System Line 3 - System Normal - After Hours Message Line 1 Mircom FX-2000 Line 2 Fire Control System Line 3 - After Hours Mode -	Access Levels Level 0: No Passcode Required <u>Reports</u> 0 ÷ Aux <u>Bypass</u> 0 ÷ <u>D</u> evice Bypass 1 ÷ Loop Bypass 1 ÷ Walk Test 1 ÷ Set After <u>H</u> ours 0 ÷ Set Time/Date 1 ÷
	Locale Language: English Time Format: Mar 02, 2017 11:48AM	Clear Event Log 2 ÷ Clear Verification Count 2 ÷ Auto Program 2 ÷ Manual Enable 0 ÷

Figure 15 FX-2000 Config Utility

- 7. Send the job to the panel.
- 8. Click Job > Extract Job.

The Specify Database File to Extract Into window appears.

Specify Datab	ase File to Extrac	t Into			×
Save in:	MdbFiles		•	+ 🗈 💣 💷 +	
Ca.	Name	*		Date modified	Туре
Recent Places		No items m	atch your s	earch.	
Desktop					
Libraries					
Computer					
Network					
	•	III			•
	File <u>n</u> ame:	Job-6-01		-	<u>S</u> ave
	Save as type:	XML files (*.xml)		-	Cancel



Figure 16 Specify Database File to Extract Into

- 9. In the Save as type menu, click XML Files (*.xml), and then click Save.
- 10. In the XML Export window, select **OpenGN Ph 11 Config.xml**, and then click **OK**.

XML Export	
Choose XML SChema	
C OpenGN Ph I Config.xml	
C OpenGN Ph II Config.xm	
OK Cancel	

Figure 17 XML Export

The job file is saved with the name **JobX-Y.xml**, where **X** is the job number and **Y** is the job version.

1.4 Import the XML Configuration File into OpenGN

- 1. Transfer the job file you just saved to the computer that OpenGN is running on.
- 2. Insert the OpenGN CodeMeter license key in the computer.
- 3. Start OpenGN.

The Login window appears.

Login:	admin
Password:	
DB Server:	localhost\SQLEXPRESS
DB Name:	OpenGN
	OK Cancel
Ent	ter your Login and Password.

Figure 18 Login Window



- 4. Select the user from the **Login** menu.
- 5. Type the password.
- 6. Click OK.

The OpenGN Main Display window appears.

03/02/2011 02:18:40 PM	Mircom	ES HQ				•8					D	emo
Please ensure that the panels are connected. Click Here for more Details						-						
Building Office					3							
<		1		1			\$					
Floor Floor 1					E							
< >												
OPEN GRAPHIC NAVIGATOR												
Event Simulator	ALL	0 Alarm 0	Superv 0	Trouble 0	Monitor 0	Building	Ack All	Clear	Node	^	tiittin N	lircom
			jocka spe	Contriges		- Concerng				1010	Loop	
Restore Restore Restore Restore Restore												



7. Click the **Config** button from the Main Display window. Click **Yes** to confirm that you want to enter the configuration section.

The Configuration window appears.

8. Click the **Settings** button in the lower right-hand corner of the Configuration window.

The Panel Settings window appears.

Parlet Settings	Select Panel:		~	
Campus Settings				
Display Settings				
Ison Sattings	Panel Details —			
icon settings	Panel Guid:			
Object Type Settings	Version Guid:			
Event Log Settings	Manufacturer:			
eren eog settings	Description:			
Email Notification Settings	Model:			
Database Settings	Panel URL:			
	Job Type:			
Connection Settings	Filename:			
Users Settings				
	Parlei Corniguradori —			
	Import XML:			Browse
	Auto-associate o	default icons		(Import

Figure 20 Panel Settings



- 9. Click Browse in the Panel Configuration section, and then navigate to the job file.
- 10. Select **Auto-associate default icons** if you want to associate the object icons with the existing system icon images.

i

Note: If you are importing a new version of a previously imported job file, uncheck **Auto-associate default icons**. Otherwise, any custom icon settings you have made will be erased.

- 11. Click Import XML.
- 12. If the job already exists, a window appears asking you if you want to update the stored version of the job with the one you are importing. Click **Yes**.



Figure 21 Update Job Confirmation

1.5 Get the JobUniqueID and JobVersion

- 1. Locate the job file that you saved in section 1.3.
- 2. Right-click the job file and select **Open with > Wordpad**.
- 3. Search for JobUniqueID.
- 4. Leave the file open; you will need to copy and paste this information in the next step.

```
<JobInfo JobUniqueID="1fbc3f3a861f4f8aba7b1496f929e203"
JobVersion="211fc778945540a895c7e092d2c0eac4"
ProductType="FX-2000" Tag="Sample Job 3">
```

Figure 22 Example JobUniqueID and JobVersion from the job file



1.6 Configure the OpenGN Gateway

1. Double-click the Open Graphic Navigator Gateway icon.

Select Interfac	OpenC OpenC : Local Area Conne	SN Gatew	ay v1.0.2	
Adapter List				
Source type	Jour Connection	Command #	Lommans Port	

Figure 23 OpenGN Gateway

2. Click the + button. 🕂

The Adapter Configuration window appears.

Source		
FX-2000 Series	192.168.0.1:14000:JobIDHere:Job_Vers	ion
Destination Destination IP Destination Port itore And F III III III	Forwarc Add/Edit Destination Destination IP: Destination Port: Store And Forward E	
Command Connection	Incoming Command IP:	Port:
Optional Configuration Auto Start Adapter When OpenGN Gateway starts Command Button Start Clear	 s.	Save Close

Figure 24 Adapter Configuration Window



3. Enter the following information.

Туре	FX-2000 Series
Connection String	The connection string consists of 4 pieces of information separated by colons:
	• The IP address of the ARW-VESP211: you assigned this in section 1.2 on page 2.
	• The port: 14000
	• Job Unique Id : copy and paste the JobUniqueID from the job file (section 1.5 on page 13).
	• Job Version : copy and paste the JobVersion from the job file (section 1.5 on page 13).
	For example, if the IP address is 10.10.8.37 , and the Job Unique Id and Job Version are the ones shown in section 1.5, then the connection string is:
	10.10.8.37:14000:1fbc3f3a861f4f8aba7b1496f929e203: 211fc778945540a895c7e092d2c0eac4

4. Click the green button 🖶 beside Destination, and then provide the following information:

Destination IP	The IP address of the OpenGN computer. If the OpenGN Gateway and OpenGN are on the same computer, use 127.0.0.1.
Destination Port	1209
Store and Forward Events	Reserved for future use.

Destination				Add/Edit Destinatio	n
Destination IP	Destination Port	itore And Forward	÷	Destination IP:	127.0 0 1
				Destination Port	1200
			X	Chara And France	1209_
			-	Store And Forward	i Events:
•	III	٠			OK Cancel

Figure 25 Destination



5. Under **Command Connection**, provide the following information:

Incoming Command IP	The IP address of the computer that the OpenGN Gateway is on. If the OpenGN Gateway and OpenGN are on the same computer, use 127.0.0.1.
Port	1309 . This must be a different port than the port listed above.

Command Connection	Incoming Command IP:	Port:	
	127.001_	1309_	

Figure 26 Command Connection

- 6. Click Auto Start Adapter When OpenGN Gateway Starts if you want the OpenGN Gateway to connect automatically with these settings when it starts.
- 7. Click Save.
- 8. Select the adapter you created, and then click the green arrow icon:



When OpenGN is connected, the adapter in the Adapter List is green.

OpenGN Gateway						
OPEN GR	APHIC ATOR Oper	n <mark>GN</mark> Ga	ateway	V1.0.2	///////. 🕅	UP OF COMPANIES
Select Interfa	ACE: Local Area Co	onnection		•		
Adapter List		C		Comment		
Source Type	ource Connection	Command IP	1210	Command Po	ort	
1 1742000 001100	10.10.0.155.140	10.10.0.201	1510			
						X
						ALL

Figure 27 OpenGN Gateway with One Connection



9. Double-click the adapter to view its details.

When OpenGN is connected, the icon beside **Connection String** turns from red to green, and the Destination turns green.

Source					
Type:	Connection String:	Connection String: 10.10.8.37:14000:1fbc3f3a861f4f8aba7b1496f929e203:211fc3			
FX-2000 Series	• 10.10.8.37:14000:				
Destination		Add/Edit Destinati	ion		
Destination IP Destination Port	itore And Forwa				
1 127.0.0.1 1209	No	Destination IP:	127.0.0.1		
		Destination Port:	1209 Green		
<	▲ , ×	Store And Forwar	d Events:		
Command Connection	Green				
command connection	Incoming Comman	d IP:	Port:		
	127.0.0.1		1309		
Optional Configuration	itarts.				
Command Button					
Stop Clear			Save Close		

Figure 28 The OpenGN Gateway Showing a Connection

10. Start OpenGN.



Canada 25 Interchange Way Vaughan, ON L4K 5W3 Tel: (888) 660-4655 Fax: (888) 660-4113 U.S.A. 4575 Witmer Industrial Estates Niagara Falls, NY 14305 Tel: (888) 660-4655 © MGC 2023 Printed in Canada Subject to change without prior notice

http://www.mircomgroup.com/opengn