

How to Connect the ioLogik E1200 to an Allen-Bradley PLC

The purpose of this note is to provide a step-by-step example of how to connect the ioLogik E1200 series device with an Allen-Bradley PLC by EtherNet/IP protocol. In this example, the Allen-Bradley PLC is the EtherNet/IP Scanner and the ioLogik E1200 is the adapter. The system architecture is displayed below. There are two sections in this document. The first section explains how to install the ioLogik E1200 series' EDS files in the RSLogix 5000, and the second section explains how to connect the ioLogik E1200 with the Allen-Bradley PLC.



EDS Installation for ioLogik E1200 series in Rockwell Software RSLogix 5000

 Start the RSLogix 5000 and open the EDS Hardware Installation Tool in Tools → EDS Hardware Installation Tool.







2. The wizard will start and the following window will pop out, click **Next** and then select Register an EDS file(s), followed by **Next**.



- 3. There are two ways to register the EDS files. The first is to register a single file, and the second is to register the EDS files by a folder.
 - A. If you want to register one EDS file, select Register a single file and then click Browse.







B. If you want to register several EDS files, put all the EDS files in one folder, select Register a directory of EDS files and then click Browse.

Rockwell Automation's EDS Wizard
Registration Electronic Data Sheet file(s) will be added to your system for use in Rockwell Automation applications.
C Register a single file
In folder:
Browse
If there is an icon file (ico) with the same name as the file(s) you are registering then this image will be associated with the device.
To perform an installation test on the file(s), click Next
< Back Next > Cancel

- 4. Select EDS files and click **Open**, then it will go back to the wizard. Please click **Next** to finish the EDS file selection.
 - A. Single EDS file

🔆 Favorites	Documents library Moxa_ioLogik_E1200_EtherNetIP_EDS_2016-07-28			Arrange by: F
📜 Libraries	Name	Date modified	Туре	Size
1 Computer	ioLogik_E1210_EtherNetIP_V1.0.eds	2016/7/28 下午 09:32	EDS File	42 KB
	ioLogik_E1211_EtherNetIP_V1.0.eds	2016/7/28 下午 09:34	EDS File	42 KB
📬 Network	ioLogik_E1212_EtherNetIP_V1.0.eds	2016/7/28 下午 09:38	EDS File	42 KB
	ioLogik_E1213_EtherNetIP_V1.0.eds	2016/7/28 下午 09:36	EDS File	42 KB
	ioLogik_E1214_EtherNetIP_V1.0.eds	2016/7/28 下午 09:37	EDS File	42 KB
	ioLogik_E1240_EtherNetIP_V1.0.eds	2016/7/28 下午 09:50	EDS File	42 KB
	ioLogik_E1241_EtherNetIP_V1.0.eds	2016/7/28 下午 09:50	EDS File	42 KB
	ioLogik_E1242_EtherNetIP_V1.0.eds	2016/7/28 下午 09:50	EDS File	42 KB
	ioLogik_E1260_EtherNetIP_V1.0.eds	2016/7/28 下午 09:50	EDS File	42 KB
	ioLogik_E1262_EtherNetIP_V1.0.eds	2016/7/28 下午 09:50	EDS File	42 KB

B. Select EDS file folder







- 5. The EDS Wizard will evaluate the EDS file you selected and display the result, then click **Next**. In the following window, you can change the device image. If you do not intend to change the image, please click **Next**.
 - A. Single EDS file

Rockwell Automation's EDS Wizard	Rockwell Automation's EDS Wizard
EDS File Installation Test Results This test evaluates each EDS file for errors in the EDS file. This test does not guarantee EDS file validity.	Change Graphic Image You can change the graphic image that is associated with a device.
Installation Test Results Vvboxsvr\dropbox\moxa_iologik_e1200_ethemetip_eds_2016-07-28\vologik_e1210_e View file	Change icon Change icon Communications Adapter E1210
< Back Next > Cancel	Cancel

B. EDS files folder

Rockwell Automation's EDS Wizard	Rockwell Automation's EDS Wizard
EDS File Installation Test Results This test evaluates each EDS file for errors in the EDS file. This test does not guarantee EDS file validity.	Change Graphic Image You can change the graphic image that is associated with a device.
Installation Test Results (\VBOXSVR\Dropbox\Moxa_joLogik_E1200_EtherNetIP_EDS_2016-07-28\voLogil (\VBOXSVR\Dropbox\Moxa_joLogik_E1200_EtherNetIP_EDS_2016-07-28\voLogik_E1200_EtherNetIP_EDS_2016-07-28\voLogik_E1200_EtherNetIP_EDS_2016-07-28\voLogik_E1200_EtherNetIP_EDS_2016-07-28\vo	Change icon Change icon Communications Adapter E1210 E1211 E1212 E1212 E1213
View file	
< Back Next > Cancel	< Back Next > Cancel





- 6. Complete the final step of the EDS Wizard by clicking Next and then Finish.
 - A. Single EDS file

Rockwell Automation's EDS Wizard	Rockwell Automation's EDS Wizard
Final Task Summary This is a review of the task you want to complete.	You have successfully completed the EDS Wizard.
You would like to register the following device.	
< Back Next > Cancel	[

B. EDS files folder

Rockwell Automation's EDS Wizard	Rockwell Automation's EDS Wizard
Rockwell Automation's EDS Wizard Final Task Summary This is a review of the task you want to complete. You would like to register the following 10 devices E1210 E1211 E1212 E1213 E1214 E1240 E1241 E1242 E1240 E1241 E1242 E1260 E1262	You have successfully completed the EDS Wizard.
< Back Next > Canc	





Establishing communication between the ioLogik E1200 device and the Allen-Bradley PLC

1. Open the RSLogix 5000 and then open a new project by pressing **File** \rightarrow **New**.



2. Select your PLC model under **Type** and key in the project name in the window. The CompactLogix5324ER-QBFC1B will be used as an example.

New Controller		 X
Vendor:	Allen-Bradley Select PLC Model	
<u>T</u> ype:	1769-L24ER-QBFC1B CompactLogix5324ER-QBFC1B Controller -	ОК
Re <u>v</u> ision:	20	Cancel Help
Na <u>m</u> e:	ioLogik_E1212	
Description:	۸ ۲	-
<u>C</u> hassis Type:	<none></none>	
Sl <u>o</u> t:	Safety Partner Slot: <none></none>	
Cr <u>e</u> ate In:	C:\RSLogix 5000\Projects	Browse
Security Authority:	No Protection	
	Use only the selected Security Authority for Authentication and Authorization	





3. After the project creation, you can see the project information in the left window. Right click **Ethernet** and then select **New Module** and the ioLogik E1200 module can be added into the project.

ى	Controller Organize	r		▼ ‡	×
🐼 Start Page	Controller Organize Controller of Controller Controller Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controlle Controller	r Logik_E1212 r Tags r Fault Handler p Handler Program uled Programs ups ed Axes ructions ined Defined ad Defined ad Defined do Defined do Defined do Defined ad Defined colded I/O Embedded Disc Set Cours Embedded Coursion I/O New Module Discover Modul Paste	LB ioLogik_E1212 rete_IO log_IO nters es Ctrl+V	• #	X
	Bus Size	Properties	Alt+Enter	_	-
		Print	+	_	

4. In the Select Module Type window, choose the ioLogik E1200 model you want to add. You can use a key word and select the module type to speed up the search. The ioLogik E1212 is used here as an example.

ioLogik		Clear	r Filters			Hide Filters	*
Module	Type Category Filters			Moe	lule Type Vendor Fil	ters	-
Communication Communications Adap Controller Digital	nter			Acromag, Inc. Allen-Bradley Cognex Corpo Endress+Haus	ration er		
•		•	•		III	•	
S	elect the Mod	ule Type H	lere				_
Catalog Number	Description				Vendor	Category	1
ioLogik E1200 Series	E1210				Moxa Networkin	Communications	
ioLogik E1200 Series	E1211				Moxa Networkin	Communications	. =
ioLogik E1200 Series	E1212				Moxa Networkin	Communications	
ioLogik E1200 Series	E1213				Moxa Networkin	Communications	
ioLogik E1200 Series	E1214				Moxa Networkin	Communications	
ioLogik E1200 Series	E1240				Moxa Networkin	Communications	
ioLogik E1200 Series	E1241				Moxa Networkin	Communications	





5. In the New Module window, key in the module name and module IP. The default module definition is Exclusive Owner. If you want to change it, click change and then choose another type.

New Module		×			
General* Connection Module Info Internet Protocol					
Type: ioLogik E1200 Series E1212					
Vendor: Moxa Networking Co., Ltd.					
Parent: Local Module name					
Name: ioLogik_E1212	Ethernet Address				
Description:	Private Network:	192.168.1.			
IP	IP <u>A</u> ddress:	192 . 168 . 108 . 52			
	○ <u>H</u> ost Name:				
-		Module Definition*			×
Modula Definition		in module bennition			
Bevision: 2.5		Revision: 2	•	5 🖨	
Electronic Keving: Compatible Module		Electronic Keuing Compa	tible Mod	ule	
Connections: Exclusive Owner		Electionic Keying.	abic mod	uio	
		Name		Size	
Change		Exclusive Owner	Input:	67	SINT
			Output:	1	
		Input Only			
Status: Creating	OK				
		ОК	Cano	el	Help

6. Key in the Requested Packet Interval settings on the connection panel. To avoid an I/O connection timeout, we recommend setting the requested packet interval (RPI) value for the ioLogik E1200 Series to a number greater than or equal to 100 ms.

G	eneral Connection Module Info Internet Protocol			
	Name	Requested Packet Interval (RPI) (ms)	Input Type	Input Trigger
	Exclusive Owner	100.0 🜩 100.0 - 3000.	Unicast 🗸	Cyclic

NOTE: The ioLogik E1200 Series is mainly used for data acquisition and remote monitoring, such as recording the ambient temperature and monitoring machine status. The optimal request packet interval (RPI) setting for the ioLogik E1200 Series is 100 ms, which is suitable for the above data acquisition and monitoring requirements.





7. RSLogix 5000 will recognize and create the ioLogik E1212 tags automatically. You can check the tag structure in the window.

Name	 Value 🔶	Force Mask 👘 🍨	Style	Data Type	Description	Constant	1.
±-icLogik_E12121	()	{}		_03DF:ioLogikE1			1
± ioLogik_E1212:0	{}	{}		_03DF:ioLogikE1			
E Local:1:C	{}	{}		AB:Embedded_Di			
⊞-Local1:I	{}	{}		AB:Embedded_Di			1
E Locat1:0	()	{}		AB:Embedded_Di			
± Local 2:C	{}	{}		AB:Embedded_A			
± Local:2:1	{}	{}		AB:Embedded_A			1
± Local 2:0	{}	{}		AB:Embedded_A			
± Local 3:C	{}	{}		AB:Embedded_H			
I Local:3:1	{}	{}		AB:Embedded_H			
± Local3:0	{}	{}		AB:Embedded_H			1

8. To download the tag structure to the Allen-Bradley PLC, please go to **Communications** → **Who Active** to select the active PLC.



9. Select the PLC in Who Active and then click the **Go Online**, followed by **Download**. The RSLogix 5000 will display a pop up message to inform you the download is complete.

1 Who Active	
Who Active Autobrows: Refresh Select Autobrows: Refresh Select Selet Select Select Select Select	the PLC Go Online connected To Go Online Valod Connected Controller. Connected Controller. Connected Controller. Controller Type: 1769-124ERQBFC1B/A CompactLogic5324ERQBFC1B Commeth: AB_ETHIP-11192.168.108.200 Security: No Protection Offline Project: Controller Type: 1769-124ERQBFC1B CompactLogic5324ERQBFC1B Controller Type: 1769-124ERQBFC1B CompactLogic5324ERQBFC1B File: C:Ntroller Type: 1769-124ERQBFC1B CompactLogic5324ERQBFC1B File: C:Ntroller Stype: 1769-124ERQBFC1B CompactLogic5324ERQBFC1B Security: No Protection Security: No Protection
	Download Select File Cancel Help





10. Change the **ioLogik_E1212.O.Data[0].4** status from 0 to 1 in RSLogix 5000 and the DO-04 status will change from OFF to ON. The ioLogik E1200 will now be successfully connected to the Allen-Bradley PLC.

s	cope:	()ioLogik	_E1212 - Show: All Tags						▼ T. Ente	
	Name			-== A	Value	+	Force Mask 🗧	Style	Data Type	
	±-ioLogik_E1212:I			{}		{}		_03DF:ioLogikE1		
	- ioLogik_E1212:0			{}		{}		_03DF:ioLogikE1		
	⊟ ioLogik_E1212:0.Data			{}		{}	Decimal	SINT[1]		
	ioLogik_E1212:0.Data[0]			0			Decimal	SINT		
				0			Decimal	BOOL		
		-ioLogik_E1212:0.Data[0].1		0			Decimal	BOOL		
				0			Decimal	BOOL		
		iol_ogik_E1212:0_Data[0] 3			0		-	Decimal	BOOL	
×		— ioLogi			[1		Decimal	BOOL	
		ioLogik_E1212:U.Data[U].5			0		Decimal	BOOL		
		ioLogi	k_E1212:0.Data[0].6			0		Decimal	BOOL	
	ioLogik_E1212:0.Data[0].7			0		Decimal	BOOL			
	+ Loca	Local:1:C				{}	{}		AB:Embedded_Di.	
	+ Loca	al:1:1	I/O Statuc							
	+ Loca	al:1:0	170 Status							
	+ Loca	+ Local:2:C DI Channel			Mode			Status		
	+ Loca	al:2:1 DI-00			DI			OFF		
	+ Local:2:0 DI-01			DI			OFF			
	+-Local 3:C DI-02			DI			OFF			
	±-Local:3:1 DI-04			DI			OFF			
	+ Local:3:0 DI-05			DI			OFF			
	DI-06 DI-07 DO Channel		DI			OFF				
			DI			OFF				
				Mode			Status			
	DO-00		DO			OFF				
DO-01		DO-01		DO			OFF			
	DO-02		DO			OFF				
	D0-03		00			OFF				
			DO-04 DO-05		DO			ON		
			DO-06			DO			OFF	
			DO-07			DO			OFF	

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