

Mitsubishi iQ-R Series - Binary Mode (Symbolic Addressing) (Ethernet)

Supported Series: Mitsubishi

R00/R01/R02/R04/R08/R16/R32/R120/R04EN/R08EN/R16EN/R32EN/R120EN/R08P/R16P/R32P/R120P/R08SF/R16SF/R32SF/R120SF/R08PSF/R16PSF/R32PSF/R120PSF

CPU Ethernet Module, M80 CNC Controller

Website: <http://www.mitsubishi-automation.com>

HMI Settings:

Parameters	Recommended	Options	Notes
PLC type	Mitsubishi iQ-R Series - Binary Mode (Symbolic Addressing) (Ethernet)		
PLC I/F	Ethernet		
Port no.	4999		
Station No.	255		
Network number	0	0 ~ 999	

PLC Settings:

Communication Data Code	Binary
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The screenshot displays the Mitsubishi GX Developer interface. On the left, the 'Navigation' pane shows the project structure, with 'Module Parameter' selected under 'Parameter'. The main window is divided into several sections:

- Setting Item List:** A search bar and a tree view showing 'Basic Settings', 'Own Node Settings', 'CC-Link IEF Basic Settings', and 'External Device Configuration'.
- Setting Item:** A table of configuration items. 'Communication Data Code' is highlighted with a red box and labeled '2', showing a value of 'Binary'. 'External Device Configuration' is also highlighted with a red box and labeled '3', showing '<Detailed Setting>'. Other items include 'Default Gateway' (192.168.1.254), 'Communications by Network No./Station No.' (Disable), 'Setting Method' (Use IP Address), 'Network No.' (-----), 'Station No.' (-----), 'Enable/Disable Online Change' (Enable All (SLMP)), 'Opening Method' (Do Not Open by Program), 'CC-Link IEF Basic Settings' (To Use or Not to Use CC-Link IEF Basic Setting: Not to Use), and 'Refresh Settings' (<Detailed Setting>).
- Explanation:** Buttons for 'Check' and 'Restore the Default Settings'.
- Watch 1[Watching]:** A table of monitored variables:

Name	Current Value	Display Format	Data Type	English	Force
bool_tag	TRUE	BIN	Bit		--
U32U32	7533967	Decimal	Double Word [Unsigned]/Bit String [32-bit]		--
S32S32	-30000	Decimal	Double Word [Signed]		--
Timer/Timer		--	Timer		
Counter/Counter		--	Counter		
LongCounter/Long...		--	Long Counter		
LongRetentiveTimer...		--	Long Retentive Timer		

External Device Configuration -> Added SLMP Connection Module, and set different port numbers to use when multiple HMIs communicate at the same time.

The screenshot displays the 'Ethernet Configuration (Built-in Ethernet Port)' window. It features a table of configured modules and a network diagram below it.

No.	Model Name	Communication Method	Protocol	Fixed Buffer Send/Receive Setting	PLC		r/D MAC Idre
					IP Address	Port No.	
	Host Station				192.168.3.39		
1	SLMP Connection Module	SLMP	TCP		192.168.3.39	4999	
2	SLMP Connection Module	SLMP	TCP		192.168.3.39	4998	
3	SLMP Connection Module	SLMP	TCP		192.168.3.39	4997	
4	SLMP Connection Module	SLMP	TCP		192.168.3.39	1025	

Below the table, a network diagram shows a 'Host Station' connected to four 'SLMP Connection Module' units, labeled 'Connection No.1' through 'Connection No.4'. A green box highlights the 'Host Station Connected Count: 4' indicator.

On the right side, a 'Module List' panel is visible, showing various device categories like 'Ethernet Device (General)', 'Ethernet Device (Mitsubishi Electric)', 'GOT2000Series', 'Servo Amplifier(MELSERVO-J4 Series)', 'Ethernet Device (COGNEX)', 'COGNEX Vision System', 'Ethernet Device (Panasonic Industrial)', and 'Laser Displacement Sensor'.

Remote Password Setting:

Set a remote password and a target connection in the engineering tool, and write the data to the CPU module.

Navigation Window => **[System Parameter]** => **[Device]** => **[Driver Settings]** => **[Remote Password Setting]**

The screenshot shows the 'Device Settings' dialog box with the following sections:

- IP Address Settings:** IP address: 192 . 168 . 1 . 111, Port no.: 4999
- Parameter Settings:**
 - Remote Password Setting:** Enable, Password: 123456
 - Network number(0~999): 0
- Communication Settings:** Timeout (sec): 1.0, Turn around delay (ms): 0, Resending commands: 0

GX Work3 setting screen:

The screenshot shows the GX Work3 interface with the 'Remote Password Setting' dialog box open. The 'Remote Password Setting' dialog has the following elements:

- Password...:** A text field highlighted with a red box.
- Table:** A table with 4 columns: No., Product Name, Start I/O No., and Module Conditions. The first row is highlighted with a red box.

No.	Product Name	Start I/O No.	Module Conditions
1	CPU Module (Built-in Ethernet Function)	▼	Detail Setting ...
2		▼	
3		▼	
4		▼	
5		▼	
6		▼	
7		▼	
8		▼	
- Remote Password Setting:** Set the password which authenticated the access (connection) from external devices.
- Required Settings:** (Not Set / Already Set)
- Buttons:** Clear, OK, Cancel

Import Tags:

1. Create data in **Global Label** and **Structured Data Types**.

Label Name	Data Type
1 bool_tag	Bit
2 bool_tag_array	Bit(0..127)
3 U16_tag	Word [Unsigned]/Bit String [16-bit]
4 S16_tag	Word [Signed]
5 U32_ARRAY	Double Word [Unsigned]/Bit String [32-bit](0..2.0..2.0..2)
6 u16_ARRAY	Word [Signed](0..9)
7 String32_bit	String(32)
8 String64_bit	String [Unicode](32)
9 float32	FLOAT [Single Precision]
10 float64	FLOAT [Double Precision]
11 Weintek	weintek

Extended Display: Do Not Show Always

System label is reserved to be registered.
 System label is reserved to be released.
 The system label is already registered to the system label database.

To execute the Reservation to Register/Release for the system label, reflection to the system label database is required. Please execute 'Reflect to System Label Database'. It is unnecessary to change reference side project when assigned device is changed in system label Ver.2.
 * Only iQ-R series/GOT 2000 series is available for system label Ver.2.
 * To execute Online Program Change, execute Online Program Change and save.

Watch 1[Watching]

ON
 OFF
 ON/OFF toggle
 Update

Name	Current Value	Display Format	Data Type	English
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2. **Global Label** -> **Access from External Device** setting must be checked to be able to communicate with PLC.

Class	Assign	Initial	Constant	English/Display	Remark	System Label Relation	System Label Name	Attribute	Access from External Device
1 VAR_GLOBAL									<input checked="" type="checkbox"/>
2 VAR_GLOBAL									<input checked="" type="checkbox"/>
3 VAR_GLOBAL	DO								<input checked="" type="checkbox"/>
4 VAR_GLOBAL									<input checked="" type="checkbox"/>
5 VAR_GLOBAL									<input checked="" type="checkbox"/>
6 VAR_GLOBAL									<input checked="" type="checkbox"/>
7 VAR_GLOBAL									<input checked="" type="checkbox"/>
8 VAR_GLOBAL									<input checked="" type="checkbox"/>
9 VAR_GLOBAL									<input checked="" type="checkbox"/>
10 VAR_GLOBAL									<input checked="" type="checkbox"/>
11 VAR_GLOBAL	Unlabeled Setting								<input checked="" type="checkbox"/>

Extended Display: Do Not Show Always

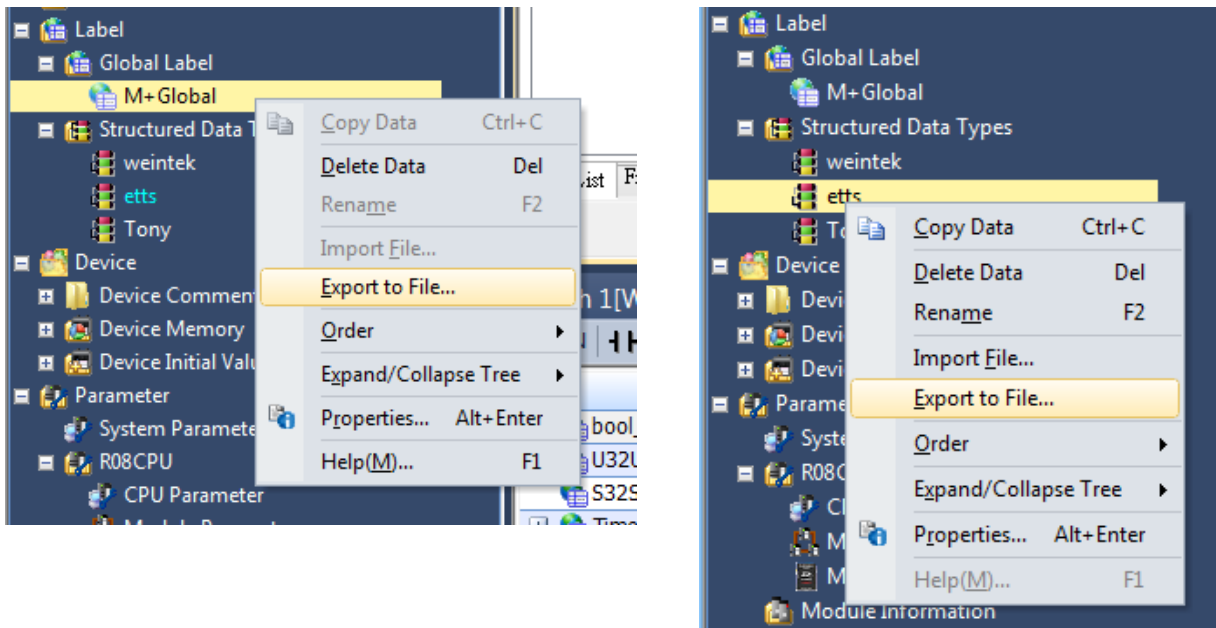
System label is reserved to be registered.
 System label is reserved to be released.
 The system label is already registered to the system label database.

To execute the Reservation to Register/Release for the system label, reflection to the system label database is required. Please execute 'Reflect to System Label Database'. It is unnecessary to change reference side project when assigned device is changed in system label Ver.2.
 * Only iQ-R series/GOT 2000 series is available for system label Ver.2.
 * To execute Online Program Change, execute Online Program Change and save.

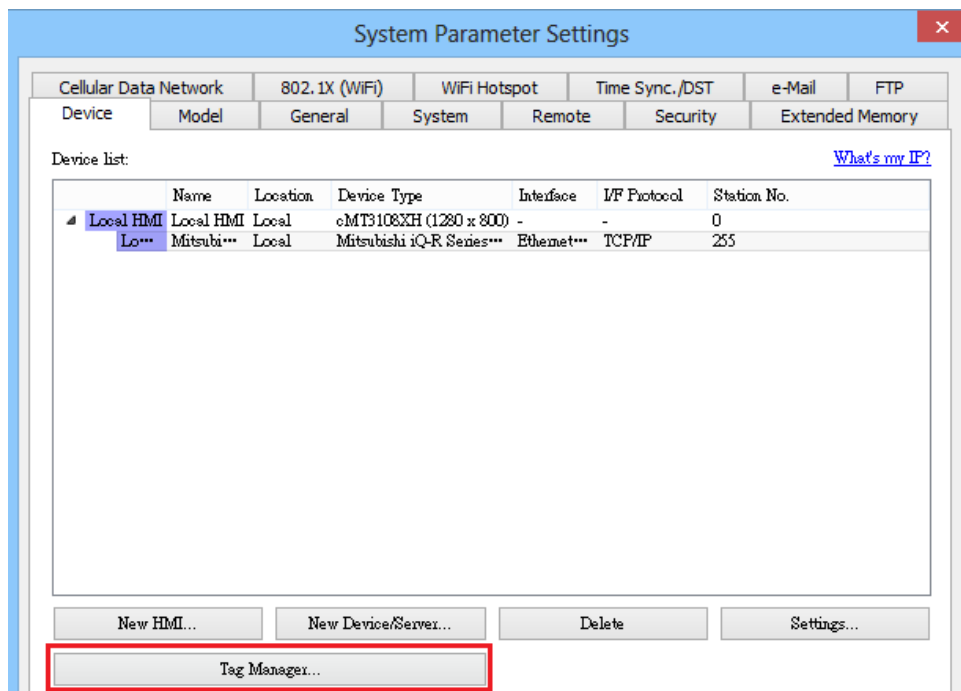
Not Reflected: 0
Total: 0

Watch 1[Watching]

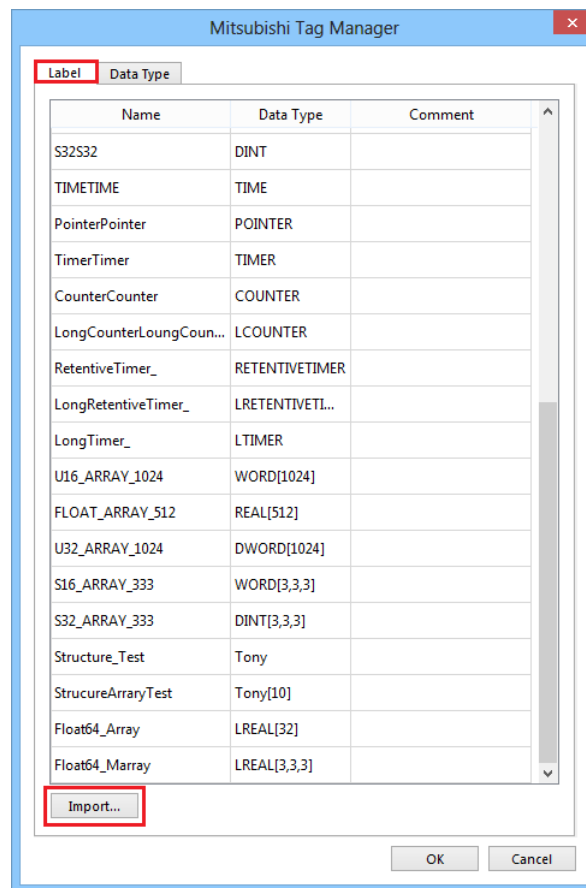
3. Global Label and Structured Data Types export label files separately.



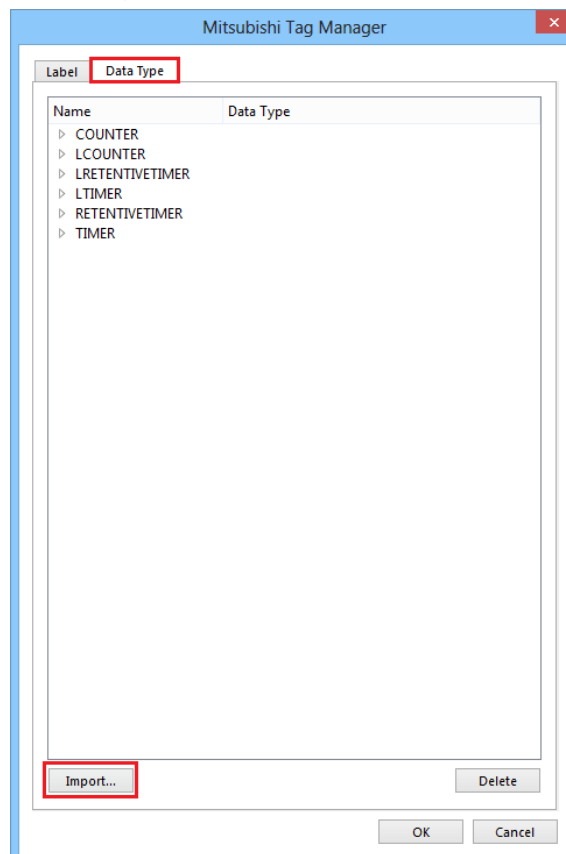
4. After adding a driver in EasyBuilder Pro, click **[Tag Manager]**.



5. Import Global Label. (single file)



6. Import Structure Data Type tags (import multiple files at the same time)



Support Device Type:

Data type	EasyBuilder data format	Memo
Bit	bit	
Word [Unsigned]	16-bit BCD, Hex, Binary, Unsigned	16-bit
Word [Signed]	16-bit BCD, Hex, Binary, Signed	16-bit
Double Word [Unsigned]	32-bit BCD, Hex, Binary, Unsigned	32-bit
Double Word [Signed]	32-bit BCD, Hex, Binary, Signed	32-bit
Float [Single Precision]	32-bit Float	32-bit
Float [Double Precision]	64-bit Double	64-bit
String (32)		*Note1
Timer		
Counter		
Long Counter		
Retintive Timer		
Long Retentive Timer		
Long Timer		

*Note1: String (32) arrays are not supported.

*Note2: Tag name length cannot exceed 30 characters.

*Note3: String[Unicode](32), Time and Pointer are not supported

Wiring Diagram:

Ethernet cable:

