



for a greener tomorrow



# FR-A800-E SERIES WITH BUILT-IN ETHERNET COMMUNICATION

## Product Overview



The FR-A800-E adds an integrated web server and 100Mbit Ethernet TCP/IP connectivity as standard to the existing network options of the FR-A800 flagship multi-use inverter. The FR-A800-E provides machine builders and systems integrators an increased ability for remote system monitoring and parameter adjustment, as well as easy integration into existing network environments.

### KEY BENEFITS:

- **Ethernet Communications as Standard** – Communicate with Modbus TCP/IP or CC-Link IE Field Basic communications networks at a speed of 100Mbps without the need for an extra option card.
- **Automatic IP Address Detection** – Automatically detect the IP address of all connected drives, quickly enabling connection and programming using FR-Configurator2 software.
- **Remote Operation** – Communicate with a drive remotely for commissioning, monitoring or troubleshooting anytime from anywhere.
- **CC-Link IE Field Network Basic** – Fast and dependable connection to Mitsubishi Electric PLCs, servos, and robots through the CC-Link IE Field basic system for a complete factory solution.
- **Multiple Protocol Capability** – Network option cards offer connection to other drive based networks and a higher level information system.
- **Drive to Drive Communications** – Utilize the internal PLC to communicate without a master PLC controller allowing the drives to work together as a team.
- **Reduced Cost** – Standard Ethernet connectivity without add-on modules.



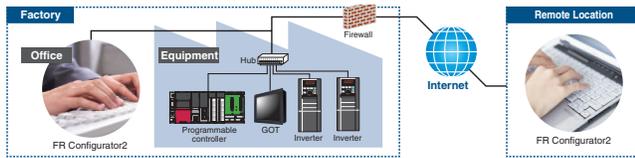
# FR-A800-E Series with Built-in Ethernet Communication – Product Overview

## SEAMLESS NETWORK COMMUNICATION

SLMP is a common communication protocol for Mitsubishi Electric factory automation products such as PLCs and GOTs. Adding the FR-A800 Series VFD with built-in Ethernet communication means users will not need to worry about network layering or communication boundaries. The ability to standardize the communication networks via Ethernet will allow the same system infrastructures to be used with different Ethernet based protocols. This is a highly cost-efficient network solution simplifying wiring and network data handling.

- Monitor inverter status or set parameters via Internet
- Inverters connected on the network are automatically detected and displayed with FR-Configurator2 software
- Enter the IP address, subnet mask, or other data required for Ethernet communication in each parameter.
- Reduce the time required for starting the network connection
- Modbus/TCP is supported (No plug-in option is required)

## NETWORK CONNECTION EXAMPLE



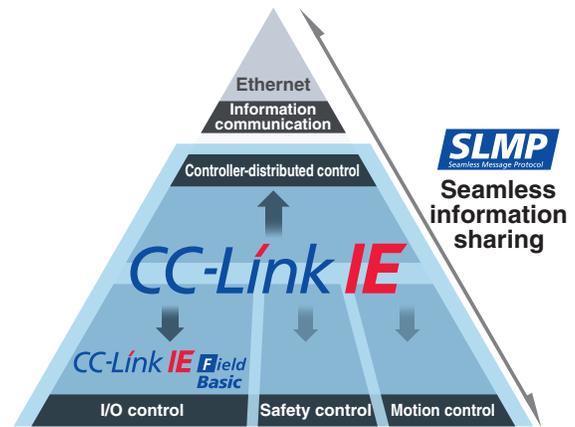
## MODBUS/TCP

Item	Description
Communication Protocol	Modbus/TCP protocol
Conforming Standard	OPEN Modbus/TCP Specification
Waiting Time Setting	Not available
Maximum Number of Connections	3
Slave Function (Server)	Number of Simultaneously Acceptable Request Messages
	1

## CC-LINK IE FIELD NETWORK BASIC

Item	CC-Link IE Field Basic	CC-Link IE	CC-Link	
Communication Speed	100Mbps	1Gbps	10Mbps	
Cable	Ethernet category 5 or higher		Dedicated cable	
Number of Connected Inverters	64 (open specification)(*1)	64	42 (maximum)	
Cyclic Communication	Supported			
Number of Links (*2)	RX	64		
	RY	64		
	RWr	32 (64 bytes)	128 (256 bytes)	32 (64byte)
	RWw	32 (64 bytes)	128 (256 bytes)	32 (64byte)
Combination with TCP/IP	Supported	Not available	Not available	
Plug-in Option	Not required	Required (FR-A8NCE)	Required (FR-A8NC)	
Topology	Star	Line, star, ring, line-star	Bus	

1. The actual number of connectable inverters differs according to the setting of the master.  
 2.\*The numbers of inverter's remote I/O devices and the addresses of inverter's remote registers are common between CC-Link and CC-Link IE Field Network Basic.



## STANDARD FR-A800-E SERIES LINEUP

FR-A820- THREE PHASE 200V CLASS	.75HP	1HP	2HP	3HP	5HP	7.5HP	10HP	15HP	20HP
	00046-E1N6	00077-E1N6	00105-E1N6	00167-E1N6	00250-E1N6	00340-E1N6	00490-E1N6	00630-E1N6	00770-E1N6
	25HP	30HP	40HP	50HP	60HP	75HP	100HP	125HP	
	00930-E1N6	01250-E1N6	01540-E160	01870-E160	02330-E160	03160-E160	03800-E1U6	04750-E1U6	
FR-A840- THREE PHASE 400V CLASS	.5HP	1HP	2HP	3HP	5HP	7.5HP	10HP	15HP	20HP
	00023-E1N6	00038-E1N6	00052-E1N6	00083-E1N6	00126-E1N6	00170-E1N6	00250-E1N6	00310-E1N6	00380-E1N6
	25HP	30HP	40HP	50HP	60HP	75HP	100HP	150HP	200HP
	00470-E1N6	00620-E1N6	00770-E160	00930-E160	01160-E160	01800-E160	02160-E1U6	02600-E1U6	03250-E1U6
	200HP	250HP	300HP	350HP	400HP	450HP			
	03610-E1U6	04320-E1U6	04810-E1U6	05470-E1U6	06100-E1U6	06830-E1U6			
FR-A860- THREE PHASE 600V CLASS	1HP	3HP	5HP	10HP	15HP	30HP	50HP		
	00027-E1N6	00061-E1N6	00090-E1N6	00170-E1N6	00320-E1N6	00450-E1N6	00680-E160		
	75HP	100HP	125HP	150HP	200HP	250HP	300HP		
	01080-E160	01440-E160	01670-E160	02430-E160	02890-E160	03360-E160	04420-E160		

## Separated Converter-Type Lineup:

FR-A842- THREE PHASE 400V CLASS *1	500HP	550HP	650HP
	07700-E1U6	08660-E1U6	09620-E1U6
	700HP	800HP	
	10940-E1U6	12120-E1U6	
FR-A862- THREE PHASE 600V CLASS *2	400HP	500HP	600HP
	05450-E160	06470-E160	08500-E160

\* Always install the converter unit. (Not required when a high power factor converter FR-HC2 is used)  
 \*1 FR-CG2-H  
 \*2 FR-CG2-C

## MITSUBISHI ELECTRIC AUTOMATION, INC.

500 Corporate Woods Parkway, Vernon Hills, IL 60061  
 Ph 847.478.2100 • Fx 847.478.2253

[us.MitsubishiElectric.com/fa/en](http://us.MitsubishiElectric.com/fa/en)

June, 2017 • ©2017, Mitsubishi Electric Automation, Inc. •  
 Specifications subject to change without notice. • All rights reserved