

PRODUCT PROFILE

20-COMM-E ETHERNET/IP™ ADAPTER

The PowerFlex® 20-COMM-E EtherNet/IP adapter provides an internal network connection for PowerFlex 70, 700, 700H and 700S AC drives, and other DPI-based host devices. The adapter provides a means to control, configure and collect data over an EtherNet/IP network.

PRODUCT HIGHLIGHTS

Internal Mount – The adapter mounts internal to the drive to save panel space, and is field installable.

Multiple Configuration Tool Options – A number of configuration tools can be used to configure the adapter and the connected drive. These tools include the PowerFlex DPI HIM, or drive-configuration software such as DriveExplorer™ or DriveExecutive™.

DPI Routing – Allows DriveExplorer to connect to a PowerFlex drive using a 1203-SSS or 1203-USB converter and then route over EtherNet/IP to access other Allen-Bradley drives. This eliminates the need for a separate network connection and interface.

I/O Messaging – I/O messaging is used to transfer time-critical data, such as data that controls the drive. The following data can be sent and received by the adapter:

- Logic Command/Reference
- Logic Status/Feedback
- Datalinks – read and write up to 8 parameters

Explicit Messaging – Explicit messaging involves non time-critical information that is typically triggered by the application (ladder program in a controller, etc.). The adapter supports the reading/writing of parameters, etc. in the drive and to any connected DPI peripheral(s).

Web Interface – Use a web browser such as Microsoft® Internet Explorer™ to access the drive over the Intranet or Internet.

- TCP/IP Configuration - View TCP/IP configuration data and Ethernet diagnostic information.
- Email Notification - Configure email notification if a specific fault or alarm occurs, if any fault or alarm occurs, or if the drive is reset.
- DPI Backplane Browse - View every DPI device, including the drive and connected peripherals. Provides general device information, diagnostics, events and alarm information.
- Online User Manuals – Link to view the user manual online over the Internet.
- Software Tools Web Site – Link to the DriveExplorer and DriveExecutive Internet web sites.
- Launch Drive Software Tools – Directly launch DriveExplorer or DriveExecutive software already on your PC, and have the tool automatically connect to the drive.

PowerFlex®
Communications



Peer-to-Peer Capability - Allows a PowerFlex drive to operate as a "master" and communicate with other PowerFlex 70, 700, 700H and 700S AC drives operating as "followers". The "master" can send control and speed reference data along with up to two parameter values.

User Configurable Fault Responses – Selects the action that the adapter and drive will take for the following two conditions:

- Idle Fault Action – the scanner is idle (controller in program mode)
- Comm Fault Action – network communications have become disrupted

Available actions include:

- Fault – the drive is faulted and stopped
- Stop – the drive is stopped using the current deceleration rate and is not faulted
- Zero Data – the adapter zeros the I/O data transmitted to the drive
- Hold Last – the adapter continues sending the I/O data prior to the fault and the drive continues in its present state
- Send Fault Configuration – the user specifies the Logic Command, Reference, and Datalink data that is sent to the drive, allowing complete flexibility in configuring a fault action

Diagnostics – Built-in diagnostics allow drive-side troubleshooting of the network connection using a PowerFlex DPI HIM, DriveExplorer or DriveExecutive. View actual Logic Command/Reference, Logic Status/Feedback and Datalink data being transmitted to and from the controller.

Flash Upgradeable – The adapter can be flash updated in the field using DriveExplorer, DriveExecutive or ControlFLASH to take advantage of new firmware features as they become available.

EtherNet/IP
conformance tested

ALLEN-BRADLEY • ROCKWELL SOFTWARE **Rockwell Automation**

PARAMETERS

No.	Name	Description
01	DPI Port	Displays the port to which the adapter is connected.
02	DPI Data Rate	Displays the data rate (kilobits per second) used by the drive.
03	BOOTP	Enables or disables using a BOOTP server to set the IP address, subnet mask, and gateway address.
04	IP Addr Cfg 1	Sets the respective bytes in the IP address, where the represented address is: Cfg1.Cfg2.Cfg3.Cfg4
05	IP Addr Cfg 2	
06	IP Addr Cfg 3	
07	IP Addr Cfg 4	
08	Subnet Cfg 1	Sets the bytes of the subnet mask, where the represented mask is: Cfg1.Cfg2.Cfg3.Cfg4
09	Subnet Cfg 2	
10	Subnet Cfg 3	
11	Subnet Cfg 4	
12	Gateway Cfg 1	Sets the bytes of the gateway address, where the represented address is: Cfg1.Cfg2.Cfg3.Cfg4
13	Gateway Cfg 2	
14	Gateway Cfg 3	
15	Gateway Cfg 4	
16	EN Rate Cfg	Configures the network data rate at which the adapter communicates.
17	EN Rate Act	Displays the data rate actually used by the adapter.
18	Ref/Fdbk Size	Displays the size of the Reference/Feedback words.
19	Datalink Size	Displays the size of each Datalink word.
20	Reset Module	Used to reset the adapter or set defaults.
21	Comm Flt Action	Sets the action that the adapter will take if it detects a network failure.
22	Idle Flt Action	Sets the action that the adapter and drive take if the adapter detects that the scanner is idle.
23	DPI I/O Cfg	Selects the I/O that is transferred through the adapter.
24	DPI I/O Act	Displays the I/O that the adapter is actively transmitting.
25	Flt Cfg Logic	<p>Sets the Logic Command data that is sent to the drive if any of the following is true:</p> <ul style="list-style-type: none"> Parameter 21 - [Comm Flt Action] is set to "Send Flt Cfg" and communications are disrupted. Parameter 22 - [Idle Flt Action] is set to "Send Flt Cfg" and the scanner is idle. Parameter 41 - [Peer Flt Action] is set to "Send Flt Cfg" and communications are disrupted.
26	Flt Cfg Ref	
27	Flt Cfg A1 In	
28	Flt Cfg A2 In	
29	Flt Cfg B1 In	
30	Flt Cfg B2 In	
31	Flt Cfg C1 In	
32	Flt Cfg C2 In	
33	Flt Cfg D1 In	
34	Flt Cfg D2 In	
35	M-S Input	Selects the data produced by the scanner and consumed by the adapter.
36	M-S Output	Selects the data produced by the adapter and consumed by the scanner.
37	Ref Adjust	Sets the percent scale factor for the Reference from the network.
38	Peer A Input	Configures the destination in the drive of the Peer I/O input.
39	Peer B Input	
40	Peer Cmd Mask	Configures the mask for the Logic Command word when it is received through peer input.

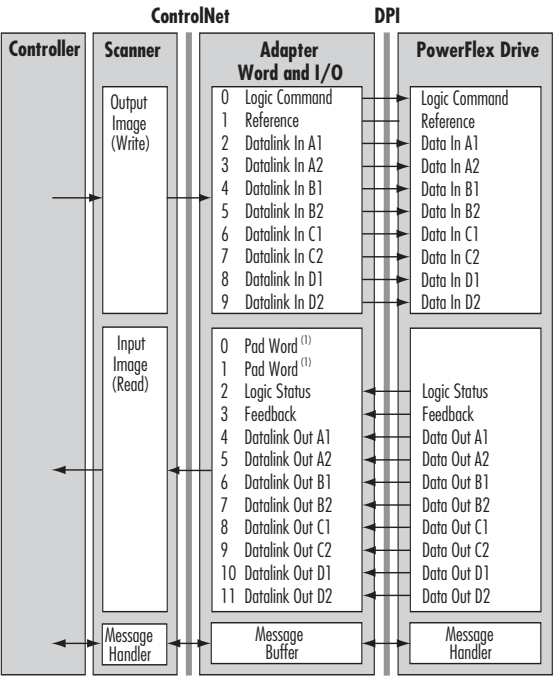
PARAMETERS

No.	Name	Description
41	Peer Flt Action	Sets the action that the adapter and drive take if the adapter detects that the EtherNet/IP communications with a peer have been disrupted.
42	Peer Inp Addr 1	Sets the bytes in the IP address (Addr1.Addr2.Addr3.Addr4) that specifies the device from which the adapter receives (consumes) Peer I/O data.
43	Peer Inp Addr 2	
44	Peer Inp Addr 3	
45	Peer Inp Addr 4	
46	Peer Inp Timeout	Configures the time-out for a peer connection.
47	Peer Inp Enable	Determines if Peer I/O input is on or off.
48	Peer Inp Status	Displays the status of the consumed peer input connection.
49	Peer A Output	Selects the source of the Peer I/O output data. The adapter transmits this data to the network.
50	Peer B Output	
51	Peer Out Enable	Determines if Peer I/O output is on or off.
52	Peer Out Time	Determines the minimum time that an adapter will wait when transmitting data to a peer.
53	Peer Out Skip	Determines the maximum time that an adapter will wait when transmitting data to a peer.
54	Access Control	Determines the access to the Web interface and Web-configurable features such as e-mail notification.
55	Web Enable	Only available for Series B (v3.xxx or higher) adapters. Displays the setting of the Web Pages Switch (SW2) on the adapter when the adapter was last reset.
56	Web Features	Only available for Series B (v3.xxx or higher) adapters. Sets access to the Web interface and Web-configurable features.

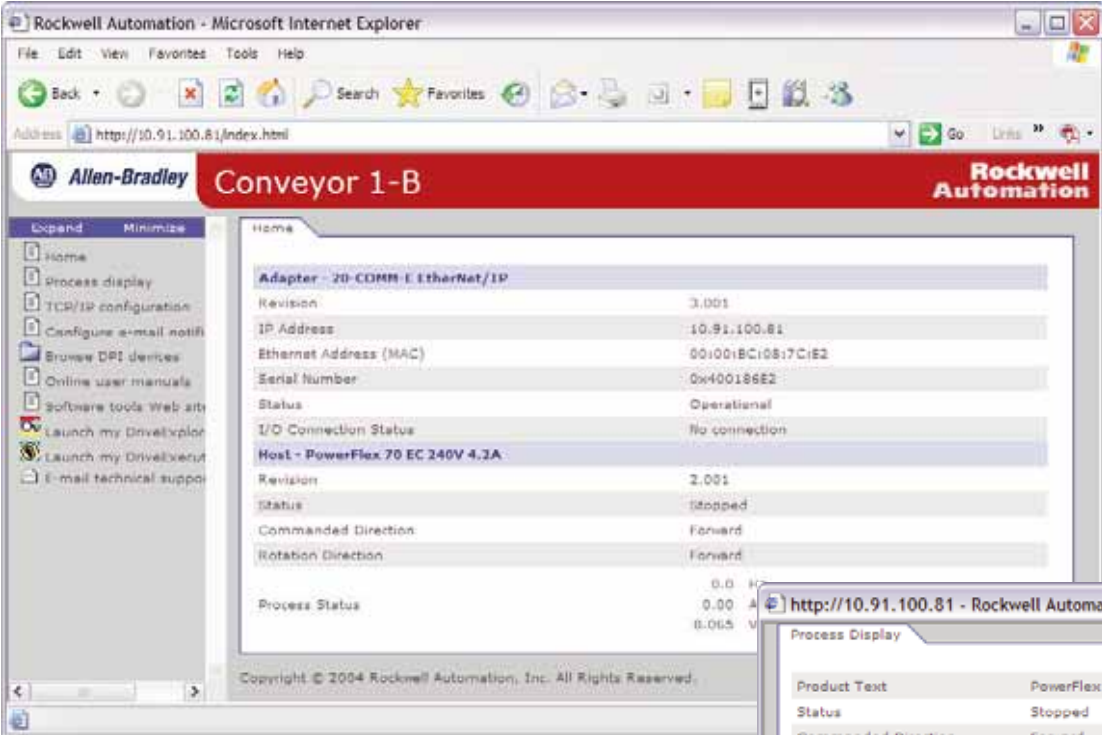
SPECIFICATIONS

Communications	Network	Protocol	EtherNet/IP
		Data Rates	10/100 Mbps, Half/Full Duplex
	Drive	Protocol	DPI
		Data Rates	125 or 500 Kbps
Electrical	Consumption	Drive	370 mA at 5 VDC
		Network	N/A
Regulatory Compliance		UL	UL508C
		cUL	CAN/CSA C22.2 No. 14-1791
		CE	EN50178 and EN61800-3
		CTick	EN61800-3

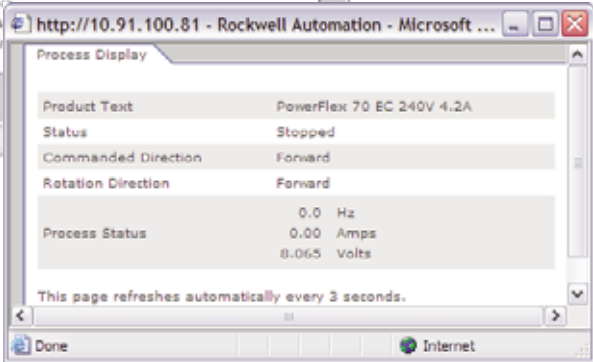
EXAMPLE I/O IMAGE



MAIN WEB PAGE



AUTO-REFRESH
PROCESS DISPLAY



EXAMPLE FAULT
NOTIFICATION EMAIL

