

FS-8705-50 – Emmerson ROC Opcode Ethernet Driver

DATASHEET - Rev 1

DESCRIPTION

This Ethernet driver implements many of the ROC Opcode services. Using this driver, a customer can connect ROC equipment to another automation system for remote monitoring and control. Like other drivers, this driver can be couple with any of the other 120+ protocols in our library. Thus ROC data may be monitored and controlled using Rockwell Family, Modbus Family, GE Family of protocols as well as BACNet family, Lonworks, SNMP, and many more building and automation protocols



ROC opcodes are used to transfer 'chunks of related data in one message'. This driver is capable of being configured so that

Driver supports various ROC devices.

Well Optimization ... And all other devices.

Non-Plus – ROC300 Series with ROCPAC / FLASHPAC Floboss 102 / 104 / 107 / 407 / 503 /504 RegFlow ROC800 Devices , ROC800L ROCplus Production Manager

CONNECTION FACTS

This table summarizes the number of connections this driver supports for each of its modes.

FIELDSERVER MODE	NODES	COMMENTS
Active Client	20-100	A max of ?? ROC devices per gateway Upper limit is determined by gateway memory and speed. This has been tested with up to 20 devices. The same code used in another project supported hundreds of devices. Our sales department can provide more current information.

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FORMAL DRIVER TYPE

Active Client

This driver can also be used to emulate one or more ROC devices. Said another way. If you want a BACnet / Modbus / Rockwell etc device to respond to ROC messages – Chipkin has that covered.

COMPATIBILITY

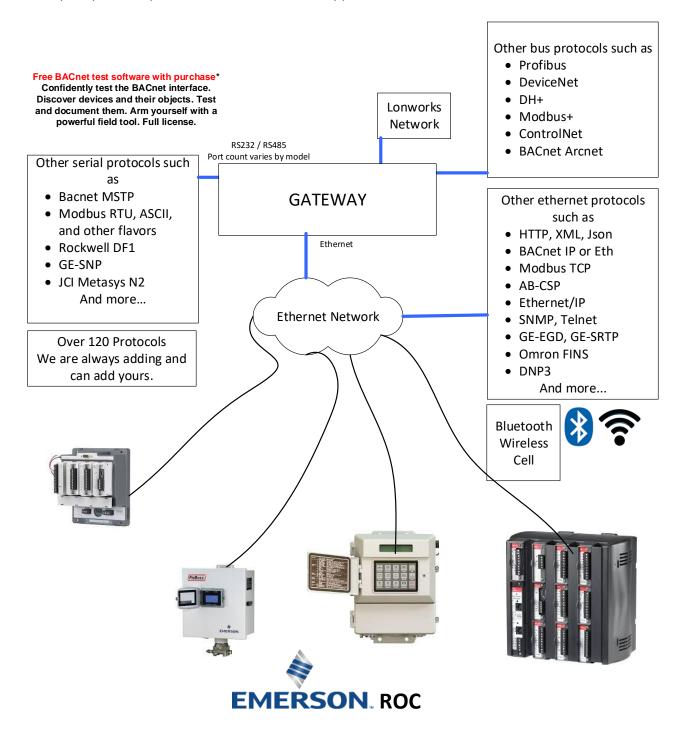
FIELDSERVER MODEL	COMPATIBLE
All legacy products (FS2010/4010/3510)	Yes
All current products as at July 2020	Yes
EZ Gateways, QuickServer, Quickserver classic,	Yes
Multiport Gateways	

DEVICES TESTED

DEVICE	TESTED (FACTORY, SITE)
Various	2020 Feb - Office Lab with purchased devices
	and software
	2020Jul - Customer site in US. Multiple types of
	devices. A large ROC network.

BLOCK DIAGRAM

Multiple upstream protocols and connection supported. See list of FieldServer Drivers.



DRIVER IS FUTURE PROOF

This driver has been written in such a way that should new devices or Point Types, the driver will be capable of supporting them without new firmware, simply by means of configuration.

Version	Description
1.00	Introduced
1.20	Updated: added offset 103, point type 138
2.00	Updated: defined offset 10, Logical Compatibility Mode
2.02	Updated: added point types, offsets 104-220; defined offset 11, Opcode 6 revision
3.00	Updated: defined offset 12, ROC Sub-type

Most versions of most opcodes are / can be supported without new firmware.

OPCODES SUPPORTED

The following table is updated from time to time on our web site. It is not updated in this document Google "ROC by Chipkin OPCODE SUMMARY xlsx" to get the latest.

https://store.chipkin.com/articles/roc-by-chipkin-opcode-summary-xlsx

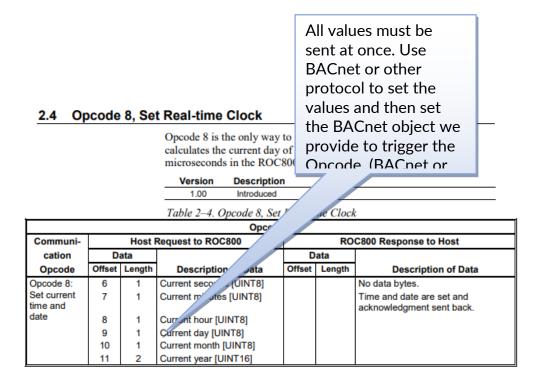


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SOME DETAILS

Table 2-2: Opcode 6, System Configuration

Communi- Host Request to ROC800			ROC800 Response to Host				
cation		Data			Data		
Opcode	Opcode Offset Length Description of Data		Offset	Length	Description of Data		
Opcode 6: System Configura- tion		6		No data bytes	6	1	The system mode the unit is currently operating in. 0 = Firmware Update Mode – Extremely limited functionality is available. 1 = Run Mode
A complex set of data is returned. Each value is extracted and		ach value	7	2	Comm Port or Port Number that this request arrived on. This is not defined if the above value (offset 6) is 0.		
	stored and may be		ay be	9	1	Security Access Mode for the port the request was received on.	
	ex	pose	d usin	g another BACnet	10	1	Logical Compatibility Status – Version 2.00 See [Point Type 91,Logical 0,Parameter 50]: 0 = 16 points per slot (160 bytes total) – Compatibility Mode is 0 & 9 module slots max 1 = 16 points per slot (240 bytes total) – Compatibility Mode is 0 & 14 module slots max. NOTE: The 15th module slot cannot be used. 2 = 8 points per slot (224 bytes total) – Compatibility Mode is 1 & 27 module slots max. See Opcode 50, Request I/O Point Position and Table 11, Compability Mode, for more information.
					11	1	Opcode 6 Revision (Version 2.02) 0 = Original 1 = Extended for Additional Point Types (offset 104 -220) ROC Subtype 1 - Series 1 0 = Series 2



ROC TLPs

The Chipkin ROC TLP driver is available. It can be coupled with this driver. Part number = 8705-49

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CUSTOMER SUPPORT

ROC Opcode Driver for FieldServer was developed by Chipkin, and we are proud to provide support for our products. For technical support, sales and customer service, please call us at 1 (866) 383-1657.

Thanks for choosing Chipkin's products and integration services to meet your building and industrial automation requirements!

Chipkin[™] is a building and industrial automation protocol expert. We develop, configure, install and support gateways (protocol converters), data loggers and remote monitor and controlling applications. Founded in October 2000, Chipkin provides expert solutions for converting BACnet®, Modbus®, and LonWorks®—to name just a few—and enabling interfaces for HVAC, fire, siren, intercom, lighting, transportation and fuel systems. The high-quality products we offer (including those from other vendors) interface with Simplex[™], Notifier[™], McQuay[™], GE[™] and many others—so you can rest assured that we will select the most appropriate solution for your application.

With Chipkin you are buying a solution. Our configuration expertise in this field combined with free BACnet and other tools ensure your success; and our customer support via phone, email and remote desktop tools means that we are there when you need us. Chipkin is a small responsive company, and we live or die by the quality of our service—and with offices in two time zones—we can provide support when you need it. Give us a call now!

Sales and Customer Service

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REVISION HISTORY

This table summarizes the update history for this protocol data sheet. Please contact Chipkin by phone or email for an updated version of this document.

DATE	RESP.	DRIVER VERSION	DOCUMENT REVISION	COMMENTS
Jul 2020	PCM	0.00	0	Created
27 May 2021	YC	0.00	1	Updated to new template