

FS-8705-49 – Emerson ROC TLP Ethernet Driver

Also known as ROC 180/181 Driver

DATASHEET - Rev 2

DESCRIPTION

This Ethernet driver implements ROC Opcode services 180 and 181. It supports all (non-text) parameters of all possible Point Types (TLP's). The driver supports ROC legacy and ROC800. Using this driver the gateway can read and write data using TLP's. The driver also supports the reading of data indirectly. Ie TLP's can point to other TLP's.

Driver supports various ROC devices.

- Non-Plus – ROC300 Series with ROCPAC / FLASHPAC
- Floboss 102 / 104 / 107 / 407 / 503 / 504
- RegFlow
- ROC800 Devices
- ROC800L
- ROCplus
- Production Manager
- Well Optimization ... And all other devices that have TLP tables.



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.

CONNECTION FACTS

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

FIELDSEVER MODE	NODES	COMMENTS
Active Client	20	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.

FORMAL DRIVER TYPE

Ethernet using TCP/IP

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

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

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.

Free BACnet test software with purchase*
 Confidently test the BACnet interface.
 Discover devices and their objects. Test
 and document them. Arm yourself with a
 powerful field tool. Full license.

Other serial protocols such
 as

- Bacnet MSTP
- Modbus RTU, ASCII,
 and other flavors
- Rockwell DF1
- GE-SNP
- JCI Metasys N2

And more...

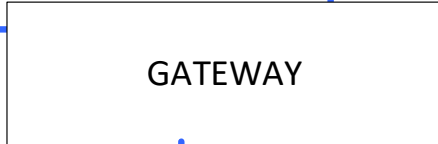
Over 120 Protocols
 We are always adding and
 can add yours.

RS232 / RS485
 Port count varies by model

Lonworks
 Network

Other bus protocols such as

- Profibus
- DeviceNet
- DH+
- Modbus+
- ControlNet
- BACnet Arcnet



GATEWAY

Ethernet

Ethernet Network

Other ethernet protocols
 such as

- HTTP, XML, Json
 - BACnet IP or Eth
 - Modbus TCP
 - AB-CSP
 - Ethernet/IP
 - SNMP, Telnet
 - GE-EGD, GE-SRTP
 - Omron FINS
 - DNP3
- And more...

Bluetooth
 Wireless
 Cell



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.

SERVICES SUPPORTED

All options of Command, Query and Responses of each service supported

OPCODE
180 – TLP Read
181 – TLP Write
10,11,99 for read and write of indirect variables.
We have another driver which supports the other Opcodes. Ask our sales dept.

DATA TYPE SUPPORTED

Supports all known Data Types for ROC Plus, ROC800, ROC Legacy

The following table is updated from time to time on our web site. It is not updated in this document Google “ROC by Chipkin DATA TYPES SUMMARY xls” to get the latest. There is support for proprietary vendor types too.

File maybe found here: <https://store.chipkin.com/articles/roc-by-chipkin-data-types-summary-xlsx>

43 User Limit Parameters	1	1	1	1	1	43	N/A	43	N/A	43	N/A
44 Radio Power Control Parameters	1	1	1	1	1	44	N/A	44	N/A	44	N/A
45 Motor Calibration and Sampler Parameters	1	1	1	1	1	45	N/A	45	N/A	45	N/A
46 Motor Configuration Parameters	1	1	1	1	1	46	N/A	46	N/A	46	N/A
47 Motor Flux Parameters	1	1	1	1	1	47	N/A	47	N/A	47	N/A
48 PID Control Parameters	1	1	1	1	1	48	N/A	48	N/A	48	N/A
49 Upload to Disk	1	1	1	1	1	49	N/A	49	N/A	49	N/A
50 Download to ROC	1	1	1	1	1	50	N/A	50	N/A	50	N/A
51 N/A						51	N/A	51	N/A	51	N/A
52 Rollers Parameters						52	N/A	52	N/A	52	N/A
53 Madbox Configuration Parameters						53	N/A	53	N/A	53	N/A
54 Madbox Fanatics Tables						54	N/A	54	N/A	54	N/A
55 Madbox Special Position Tables						55	N/A	55	N/A	55	N/A
56 Madbox Local Calibration Parameters						56	N/A	56	N/A	56	N/A
57 Madbox Local Calibration Parameters (See RegF1a)						57	N/A	57	N/A	57	N/A
58 Madbox Local Sensorless Parameters											

# ROC Protocol	Non-Plus Non-Plus Non-Plus Non-Plus Non-Plus Non-Plus Non-Plus							
	ROC300-Series	F10-Series	F80ss	103/10Boss	1010Boss	400ss	500-Si	RegF10
0 Configurable Opcode Parameters	1	1	1	1	1	1	1	1
1 Discrete Input Parameters	1	1	1	1	1	1	1	1
2 Discrete Output Parameters	1	1	1	1	1	1	1	1
3 Analog Input Parameters	1	1	1	1	1	1	1	1
4 Analog Output Parameters	1	1	1	1	1	1	1	1
5 Pulse Input Parameters	1	1	1	1	1	1	1	1
6 Proportional Integral & Derivative (PID) Parameters	1	1	1	1	1	1	1	1
7 AGA Flow Parameters	1	1	1	1	1	1	1	1
8 Standard History Parameters	1	1	1	1	1	1	1	1
9 Local Display Panel Parameters	1	1						
10 AGA Flow Calculation Values	1	1	1	1			1	
11 Tank Parameters								
12 ROC Clock Parameters	1	1	1	1	1	1	1	1

ROC OPCODES

The Chipkin ROC Opcode driver is available. It can be coupled with this driver. Part number = 8705-50

CUSTOMER SUPPORT

ROC TLP 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!

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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	PMC	0.00	1	Created document
18 Jun 2021	YC	0.00	2	Updated to new template