

OpenEnterprise™ ROC Remote Device Interface





The OpenEnterprise ROC Remote Device Interface (ROC RDI) is a communications driver which allows an OpenEnterprise Server to collect data from Emerson Remote Operations Controllers (ROC) and FloBoss™ field devices.

The ROC RDI has been developed to provide an easy-to-configure interface between OpenEnterprise and field devices supporting the ROC or ROC Plus communications protocol, with OpenEnterprise acting as the ROC master device.

The driver is fully configurable and supports a wide range of functionality, including:

- Read / write current values
- Collect historical data
- Collect alarms and events
- Synchronize time
- Write individual and grouped parameter values

As well as supporting the writing of individual parameters, the driver supports the group write of parameter values. This optimizes communications, and should always be used when writing a set of values which must be written concurrently (such as gas composition data for AGA calculations).

Communications over TCP / IP and serial (direct, radio, or dialup) links are supported. The driver also provides optional support for fallback communications links. Each individual communications link can be given a cost rating, in which case the least expensive available link is used. In addition, modem pooling and remote terminal servers are supported.

Alarms collected from ROC devices are incorporated in the OpenEnterprise alarm system and, as such, are logged within the alarm and event history. These may be paged to remote users accessing OpenEnterprise messaging.

All historical data collected from ROC devices is incorporated into the OpenEnterprise historical system and may be backfilled following interruptions to field communications.

Configuration

Adding an ROC device to the OpenEnterprise system could not be easier. Once a device has been configured with ROCLINK™ 800 configuration software and added to the physical network, OpenEnterprise automatically queries the device to determine exactly what data is available for collection.

The structure of the controller is displayed in a user-friendly graphical configuration tool, very similar to the ROCLINK tool used to configure the device originally.

Within the same configuration tool, the user selects individual parameters, logical points or groups of points. These are then scheduled for collection. Once this is completed, the data is available for use in displays, trends and reports.

If the system contains multiple controllers with the same configuration, then the configuration becomes even easier. You simply copy and paste an existing RTU within the configuration tool. Then, change the address and the configuration is complete.

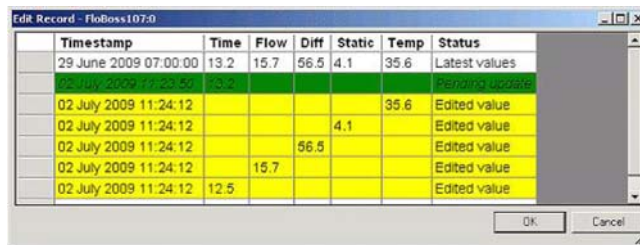
It is also possible to create template configurations. These allow a configuration change like a new tag to be applied across multiple RTUs concurrently, thus saving hours of configuration and testing. If the physical RTU is not available, it is also possible to quickly build a system using the ROC800 file.

ROC controllers can always be added, deleted and reconfigured without interrupting communications to other devices on the network or communications line.

Diagnostics

Included within the ROC RDI is a Data Line Monitor, which can be used to monitor the real-time communications on any ROC communications link. Multiple lines can be viewed concurrently in real-time, and the captured data (optionally) logged to disk for later analysis. It's not necessary to interrupt communications to start or stop monitoring.

Also included are tools for logging communications statistics to the OpenEnterprise Server, where they may be stored historically for trending and reports. This data can be invaluable when tracing the cause of network problems.



Timestamp	Time	Flow	Diff	Static	Temp	Status
29 June 2009 07:00:00	13.2	15.7	56.5	4.1	35.6	Latest values
02 July 2009 11:24:12						Pending update
02 July 2009 11:24:12					35.6	Edited value
02 July 2009 11:24:12				4.1		Edited value
02 July 2009 11:24:12			56.5			Edited value
02 July 2009 11:24:12	15.7					Edited value
02 July 2009 11:24:12	12.5					Edited value

Supported Devices

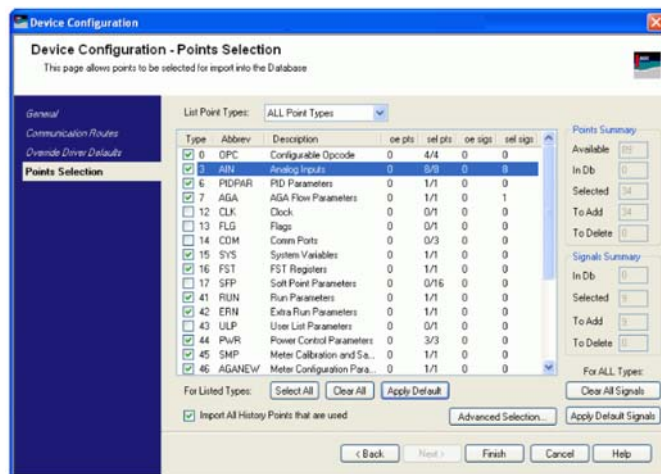
All Emerson ROC and FloBoss devices that support the ROC or ROC Plus protocols.

ROC History Editor

The ROC History Editor allows you to insert, delete and update ROC history data. These are override actions and apply only to the OpenEnterprise historian. The integrity of the raw history data contained in the ROC is maintained and the data in the ROC is never overwritten.

For a detailed explanation of the application, see the "User Interface" section of the OpenEnterprise ROC History Editor User Interface Reference Guide.

This document is intended to provide a high level overview of the features available in the OpenEnterprise ROC Remote Device Interface (ROC RDI). If you need more information, please refer to the product documentation located on our website (www.EmersonProcess.com/Remote), view the OpenEnterprise CD, or contact us at OpenEnterprise@EmersonProcess.com.



Type	Abbrev	Description	oe pts	rel pts	oe sigs	rel sigs	
☒	0	OPC	Configurable Opcode	0	4/4	0	0
☒	3	AIN	Analog Inputs	0	5/5	0	0
☒	6	PIDPAR	PID Parameters	0	1/1	0	0
☒	7	AGA	AGA Flow Parameters	0	1/1	0	1
☐	12	CLK	Clock	0	0/1	0	0
☐	13	FLG	Flags	0	0/1	0	0
☐	14	COM	Comm Ports	0	0/3	0	0
☒	15	SYS	System Variables	0	1/1	0	0
☒	16	PST	PST Registers	0	1/1	0	0
☐	17	SFP	Soft Point Parameters	0	0/16	0	0
☒	41	RUN	Run Parameters	0	1/1	0	0
☒	42	ERIN	Extra Run Parameters	0	1/1	0	0
☐	43	ULP	User List Parameters	0	0/1	0	0
☒	44	PWR	Power Control Parameters	0	3/3	0	0
☒	45	SMP	Meter Calibration and Sa...	0	1/1	0	0
☒	46	AGANEW	Meter Configuration Para...	0	1/1	0	0

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