FloBoss™ 107 Distributed RTU[™] Network Bundle

The FloBoss[™] 107 Distributed RTU[™] Network Bundle (DRTU) is a microprocessor-based controller that wirelessly monitors and controls equipment in a remote environment. It also transmits and/or acquires over-the-air information from other wireless devices within the Distributed RTU Network (DRN).

The DRTU provides unique and cost-effective connectivity and process control solutions to production pads with multiple wells (typically used in shale gas or oil production).

Distributed RTU Network

The Distributed RTU Network (DRN) is a network solution for RTUs and flow computers in wide-area production pad or multiple well installations to communicate wirelessly. The DRN is an answer to challenges of wells spread over a wide geographical area wherein setting up wiring and connectivity is difficult.

The DRN is designed for RTUs to import, export, or process overthe-air messages and information. An optional AES 256-bit encryption technology guarantees security of the data during peer-to-peer transfers. It supports one central network access point (NAP) and up to 12 or 24 nodes.

Node

The Distributed RTU Network Bundle (DRTU) acts as a node on the DRN. The node is responsible for over-the-air exporting and importing of data which the NAP or other nodes in the Distributed RTU Network receive and process.

As a node, the DRTU can manage the input and output traffic from up to 32 peripheral devices, including analog I/O, discrete I/O, wired and WirelessHART devices, and more. You can acquire these signals by installing the required module in either of the two open module slots.

DRTU Components

The DRTU is a four-slot FB107 with a Distributed RTU Network CPU installed in slot 0 and a Network Radio Module (NRM) installed in either slot 1 or 2.

- 4-slot FB107 chassis
- Distributed RTU Network CPU
- Network Radio Module

The DRTU can act either as a standard network node or as a Network Access Point (NAP).

4-Slot FB107 Chassis

The DRN Bundle is assembled in a four-slot FB107 chassis. The Distributed RTU Network CPU is installed in slot 0. You can install any FB107 communications or I/O module in slots 1 and 2. The NRM is a communications module and is installed in one of these slots. You can install any FB107 I/O module in slot 3. For more information on the 4-slot FB107 chassis and available modules, refer to *Product Data Sheet FB107*.



Distributed RTU Network Bundle (antenna not included)





Distributed RTU Network

Distributed RTU Network CPU

The Distributed RTU Network Bundle has an installed nonisolated CPU with I/O. The functionality is similar to the FB107 and includes:

- User program support
- Support for one Function Sequencing Table (FST)
- Expanded history
- Support for one PID Loop
- Alarm and event logging
- Local display option
- User lists

However, the following functionalities are not available:

- Meter Runs
- Standard History

- Multiple PID loop
- DS800 Support
- Expanded blackplane support

Network Radio Module

The DRTU communicates with the NAP and other nodes in the network through the Network Radio Module (NRM). The NRM provides a wireless solution of transferring or acquiring data from DRTU to other nodes within the Distributed RTU Network (DRN). The data can be any type of information that the RTU has in its database such as I/O or soft points, and other parameters.

The NRM is a radio-based module. It has the ability to broadcast and detect information from other RTUs for easier and faster interconnection and communication setup. For more information on the NRM, refer to *Product Data Sheet FB107:NRM*.

FloBoss 107 Distributed RTU Network Bundle

4-Slot FB107 Chassis		
Dimensions & Weight	Same as the FB107 Base (4-slot chassis).	
Slot Assignments	Slot 0	Distributed RTU Network CPU
	Slot 1	Any FB107 communications, I/O, MVS, or application module.
	Slot 2	Any FB107 communications, I/O, MVS, or application module.
	Slot 3	Any FB107 I/O, MVS, or application module.
Note: For more information, refer to Product Data Sheet FB107.		
Distributed RTU Network CPU		
Configuration	Non-isolated CPU wi	th I/O
Functions Note: For more information, ref	The following functions are supported: User program support Support for one Function Sequencing Table (FST) Expanded history Supports one PID Loop Alarm and event logging Local display option User lists 	
Network Radio Module		
Use	Allows sending and r	eceiving of data over a wireless network.
Communications	2.4 GHz radio	
Range	Up to 20 km (12.4 m	iles) line of sight
Note: For more information, refer to <i>Product Data Sheet FB107:NRM</i> .		
Environmental		
Same as the FloBoss 107 Flow Computer.		
Approvals		
Same as the FloBoss 107 Flow Computer.		

For customer service and technical support, visit: <u>www.emersonprocess.com/remote/support</u>

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