Distributed RTU™ Network
Wireless Distributed Architecture for RTUs and Flow Computers
Leverage Distributed Control Architecture for Improved Performance on New and Existing Wellpads
Distributed RTU Network

The Distributed RTU Network is a distributed control solution that allows seamless wireless integration of multiple field controllers. It integrates Emerson’s FloBoss™ 107 and ROC800-Series with radio technology that provides transparent data connectivity to enable secure shared, distributed control across a wide geographical area.

The Distributed RTU Network allows users to:

- Reach first production faster
- Optimize facility development cost
- Improve operations efficiency
- Maximize lifetime production and yield

Distributed RTU Network Bundle for FloBoss 107 and ROC800-Series (antenna not included)
Optimize Facility Development Costs

The Distributed RTU Network can help achieve the lowest total installed costs while delivering industry leading performance, based on several key benefits:

- Standardized wireless architecture that can be used on a single wellpad or across multiple sites, reducing wiring, trenching, and installation costs
- Reduced engineering costs through simple, efficient tools and a templating process to enhance repeatability
- Simplified deployment to reduce the time in the field for installation, configuration, and commissioning

Reach First Production Faster

The Distributed RTU Network provides a new level of simplicity and ease to reduce project complexity. This allows users to get wellpad automation up and running faster than ever before, and to reduce the likelihood of project changes having an impact on project schedule. Less time is spent setting up the RTUs and more time can be devoted to getting the rest of the wellpad online.

The Distributed RTU Network helps users to:

- Eliminate wiring and trenching requirements across the wellpad, reducing the time and people required to get up and running
- Accommodates last-minute project changes by adding additional field controllers as needed
- Use simple configuration tools because all RTUs in the network are “browsable,” eliminating the need for Modbus mapping across controllers

Enhance Security

The Distributed RTU Network provides Security to wireless transmission by:

- Operating on a Frequency Hopping Spread Spectrum 2.4 GHz Network
- Communicating through ROC Protocol
- Offering an optional 256 bit AES Encryption
The Distributed RTU Network’s new innovative architecture allows operational efficiency improvements by enhancing process visibility, simplifying site scale up, increasing responsiveness to process changes, and reducing unnecessary trips to the field.

The Distributed RTU Network allows users to:

- Increase reliability via local intelligence with the ability to make local logic decisions at the point of use
- Have easy, cost-effective integration of additional measurement points for increased site visibility, including remote integration of Wired and WirelessHART devices for advanced instrument diagnostics
- Add wells, equipment, or functionality to a site simply through the scalable nature of the Distributed RTU Network; add a new node and it automatically integrates into the existing site
- Embed control close to process operations while enabling rapid response to process changes in the most robust architecture for responding to process upset conditions

**Improve Operations Efficiency**

The Distributed RTU Network provides the means of increasing production and yield from an existing asset. The Distributed RTU Network provides:

- An easy, cost-effective integration of additional measurement points for increased site visibility and ultimately, better control
- Local control to ensure the fastest response time for process optimization
- Reduction of disruptions to production by expanding without downtime to existing controllers

**Maximize Lifetime Production and Yield**

The Network Radio Module is an integral part of the Distributed RTU Network that allows the FloBoss107 and the ROC800 Series to communicate wirelessly. The Network Radio Module broadcasts and receives information from other RTUs and flow computers in a peer-to-peer network. The information that can be transferred includes any data in the database, including I/O, soft points, or other parameters.
Sample Distributed RTU Network for Scalable Wellpad Architectures

- Separator Monitoring Node
- Tank Monitoring Node
- Wellhead Monitoring Node

Distributed RTU Network
Wireless HART Network
Back Haul
Distributed RTU Network Specs

- 2.4 GHz frequency hopping spread spectrum technology
- Line-of-sight range up to 10 miles (16 km)
- 1-second network update
- Network access point can be used with either a 12-node network or a 24-node network
- Up to 30 data variables can be sent from each node every second; 128 variables can be received by each node every second
- Easily configurable with ROCLINK™ 800
- Parallel, but integrated, with the WirelessHART™ Network