

iNodes™ Wireless Data Switch (WDS)



**FERGUSON
BEAUREGARD™**
New Intelligence In Problem Solving™

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The iNodes Wireless Data Switch (WDS) is a data collection and control device that monitors pulse data from turbine flow meters and provides an economical method for accurate liquid flow volume calculations, remote measurement and alarming. The WDS is a self-contained battery powered, solar-charged system for Class I, Division 1 hazardous locations which utilizes a permit-free radio system for data communications. The WDS provides both remote data reporting and internal logging for convenient trending. Alarm cry-outs are provided for user-settable flow conditions as alerts to problems or lost production. The WDS is field-configurable and easy to calibrate.



Features:

- Very low power consumption, solar powered with rechargeable battery storage
- Small, integrated package includes power supply, data storage, processing and communications
- Field configuration, software upgrade and local data retrieval by any iMonitoring-enabled PC, including laptop PCs and PDAs
- Rugged enclosure (IP65)
- Intrinsically safe (UL Class 1, Div. 1, Groups C and D) Temperature Code T4
- User configurable flow and process alarms
 - Alarms can be forwarded to the customer via telephone or email (requires optional alarm service)
 - Alarm holdoff prevents multiple alarm notification, minimizing notification cost
- Data can be secured with cypher encryption

Technical Specifications

Environmental	
Operating Temperature	-40°C to +60°C (-40°F to 140°F)
Storage Temperature	-40°C to +70°C (-40°F to +158°F)
Humidity	5 to 95% RH, non-condensing
Measurement	
Totalizer	<ul style="list-style-type: none">• Sensitivity on pulse input: 30mV pk-pk – 20Vpk-pk• Pulse rate: 10 pps – 5 Kpps
Mounting	(1) 4-20 mA current loop input (future availability)
Alarms	
Flow Rate	User-settable low / high setpoint
Alarm Holdoff	User-settable, 0 to 1,440 minutes (1 day)
Logging	
Log Interval	Every one minute or every five minutes (configurable)
Maximum Log Depth	<ul style="list-style-type: none">• 20 days in one minute mode• 100 days in five minute mode
Data Reported and Logged	<ul style="list-style-type: none">• Entry date/time• Flow total and instantaneous flow rate• Previous hour's flow total and flow time• Previous day's flow total and flow time• Energy level• Device (alarm) status

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The iNodes™ Suite of Products Include:

- Tank Level Monitor
- Wireless Data Switch
- Electronic Flow Monitor
- Wireless Pressure/Temperature Monitor
- Concentration & Communications Unit
- Concentration & Communications Unit – Remote Terminal Unit
- Compact Flash Radio
- Universal Serial Bus Radio

Communications

Protocol	iMonitoring proprietary Frequency Hopping Spread Spectrum (FHSS)
Certifications	FCC Part 15.247, CFR 47 Part 15
Service	Half-Duplex
Frequency	902 - 928 MHz
Antenna	Standard 1/2 wave omni or optional 6 dBd Yagi
Range	<ul style="list-style-type: none">• To CCU:<ul style="list-style-type: none">• 1,500 feet typical line of sight• Up to 5,000 feet (with optional high gain antennas)• To iMonitoring-enabled PC or PDA: 500 feet

Power

Source	Solar panel, 0.25W standard. Optional 1W remote solar panel (remote power supply)
Storage	<i>Battery:</i> <ul style="list-style-type: none">• <i>Type:</i> Rechargeable 3.6VDC lithium-ion• <i>Life:</i> > 5 years (typical)

Mechanical

Enclosure	<ul style="list-style-type: none">• <i>Ingress protection:</i> Meets IEC IP65 (dust and blowing rain)• <i>Enclosure venting:</i> GORE™ protected vent
Mounting	Bracket with 2-inch U-Bolts

Regulatory Approvals

Safety	UL and c-UL, Class I, Division 1, Groups C and D, temperature code T4 (when used with an approved, intrinsically safe turbine inductive pickup)
Communications	Meets FCC Part 15.247 and Code of Federal Regulations (CFR) 47, Part 15



Contact us today to learn how iNodes Technology can help improve your production performance. Visit our web site—or email us at: Automation@FergusonBeauregard.com

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