

Concentration and Communications Unit – Remote Terminal Unit (CCU-RTU)



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CCU-RTU

iNodes from Ferguson Beaugard offers affordable local and remote monitoring of your production assets. Our Concentration & Communications Unit – Remote Terminal Unit (CCU-RTU) offers a simple, flexible solution for interfacing iNode data to existing RTU-based automation systems. The CCU-RTU extends existing SCADA by periodically collecting from the iNode devices and providing the data to the SCADA interface. The data is presented in analog and digital formats compatible with standard RTU interfaces, including Modbus. The CCU uses a permit-free radio system for data communications.



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)
Operating Humidity	5 to 95% R.H., non-condensing
Enclosure	<i>Ingress protection:</i> <ul style="list-style-type: none"> Meets IEC IP65 (dust and blowing rain) Meets NEMA 4X <i>Enclosure venting:</i> Standard
Communications - CCU to iNode	
Protocol	Frequency Hopping Spread Spectrum (FHSS) with proprietary iMonitoring communications protocol (iMECH)
Service	Half duplex
Frequency	902 - 928MHz
Rate	4800 baud
Antenna	<i>User selectable:</i> External fixed or external connector to remote mounted antenna
Range	<i>CCU to iNode Sensor:</i> <ul style="list-style-type: none"> 1,500 feet typical line of sight Up to 5,000 feet (with optional high gain antennas) <i>iMonitoring-enabled PC or PDA to CCU:</i> 500 feet
Power	
Source	RTU supplies power. 11.5 - 15VDC at 0.03A average, < 0.3A peak

Communications - Data Outputs	
Analog Outputs	<i>Function:</i> Outputs analog signals proportional to temperature, pressure, level, etc. from up to 8 remote iNode devices. <i>Number:</i> (8) <i>Output Level:</i> 0 to 5VDC - adjustable <i>Protection:</i> Zener clamp, 6.8V
Digital Alarm Outputs	<i>Function:</i> Outputs alarm state signals from up to 4 remote iNode devices. <i>Number:</i> (4) <i>Output rating:</i> Open drain FET switch rated 30V @ 1A max. <i>Protection:</i> Zener clamp, 18V.
Digital Data Output	<i>Protocol:</i> MODBUS RTU <i>Communications:</i> RS-232 or RS-485 (half duplex).
4-20 mA Output	<i>Function:</i> Outputs analog signals proportional to temperature, pressure, level, etc. from one iNode device. <i>Number:</i> (1) <i>Output:</i> 4 to 20 mA. <i>Protection:</i> Zener clamp, 36V.
Regulatory Approvals	
Communications	FCC Code of Federal Regulations (CFR) 47, Part 15
Certifications	CSA Class 1, Div 2



Features/Benefits

- Low installation cost; no trenching
- Fast configuration; simplified Modbus mapping
- Schedule, validate and check fluid haulers
- Avoidance of spills
- Emissions compliance and data logging
- Universal connection to most RTU or controller units
- Instantaneous alarms via iNode devices
 - Low/High pressure, temperature, oil level, water level, flow

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