

## Wireless Monitoring Module for 4-20mA & 0-5V Industrial Automation Sensors

GSense™ is a wireless remote-telemetry product line providing an interface with sensors of all types delivering an analogue electrical signal within a specific voltage [0-5V] or current [4-20mA] range. It belongs to the GTelemetry RFID Sensor product family.



These products are based on GT&T Ultra-Low-Power technology developed by GT&T offering a battery life of up to several years.

### BENEFITS

The highly optimized & rugged design of GSense™ makes it ideal for markets with mass deployment and severe environmental constraints. Designed for industrial applications, it is plug-&-play compatible to any 4-20mA or 0-5V sensor interface for rapid, easy deployment.

### TECHNICAL CHARACTERISTICS

- Max wireless module input voltage: 5V or maximum input current: 20mA
- Precision: 0.5% full scale
- Permanent input impedance: 10Kohms
- Analogue/Digital conversion: 12bits (resolution 1.25mV)
- Radio range up to 1km LOS
- Operates in the ISM 433/868/915MHz bands with fixed frequency or FHSS
- Transmission rate: up to 32Kbits/s
- Digital frequency modulation (GFSK)
- Receiver sensitivity: -110dBm (at 1% BER, 9.6Kbps)
- Transmission power: +14dBm
- CE approval (EN300-683)
- ART certification (EN-220-1)
- Full compatibility with the high reliability GT&T ULP RF network

### RADIO FUNCTIONS

GSense™ is able to establish a 2-way transmission link with a base station.

Its ULP technology provides extensive operating autonomy (working life >7 years) and offers extremely advantageous remote-transmission costs.

It may be dynamically programmed over the air and offers the following services:

- Periodical transmission of information to a central network node
- Automatically send event-triggered alerts
- Point-to-point (transmission of data on request), broadcast and polling mode
- Can be used to relay frames intended for other modules outside the sender's transmission range
- Capability to update configuration parameters through the air

### FUNCTIONAL FEATURES

- Operating autonomy of 7 to 10 years depending on operating conditions
- Read current value & operating status with a radio request, log the last 48 values read
- Programmable logging period
- Programmable data transmission interval
- Operation programmable in time windows or day/night mode
- Memory zone accessible in read and write mode with radio command (32 bytes per channel)
- Wake-up system management
- Threshold excess management in real time or timer
- Radio transmission for time synchronization
- Immediate transmission of fault alarm (sensors, end of battery life) and threshold signals

### REMOTE ACCESS

GSense™ products are compatible with following equipments:

- GPort™: wireless modem with USB/RS232 interface to Windows 2000 or Windows CE drivers
- GCard™: OEM wireless communication card using GT&T ULP technology. This RF card is designed for incorporation in all types of equipment (portable PC, Palm Pilot, hand-held terminals, gateway service providers)
- By incorporating GT&T ULP protocol, all GT&T's remote measurement modules become inter-operable and compatible in a network or peer to peer mode.

### ENVIRONMENTAL AND MECHANICAL CHARACTERISTICS

- Operating temperature (module): [-20°C; +70°C]
- IP 65 or IP68 casing
- Interface: ground, sensor output signal
- 2 wires: 1 sensor
- external sensor supply
- Dimensions (H x L x W): 12x4x3cm
- Weight: from 110g to 160