The Bacsoft platform is an end-to-end solution for building and managing advanced IoT and M2M applications. Using Bacsoft, companies can rapidly connect their legacy infrastructure to the Industrial Internet and build applications to remotely monitor and control their operations.

Bacsoft reduces the complexity of IoT projects with a combination of robust and reliable remote connectivity, simple and rapid application development, and scalable cloud services. The platform features:

**BACSOFT IOT PLATFORM**

**M2M COMMUNICATIONS:**
Bacsoft 2G Smart Communications Controller offers built-in support for a wide variety of devices, interfaces and protocols. Designed to operate reliably under all kinds of conditions, the 2G Smart Communications Controller is cost-effective and easy to deploy.

**IOT CLOUD:**
The Bacsoft IoT Cloud handles all aspects of communications, application execution, data storage, security and auditing. It easily scales to support thousands of connected devices.

**APPLICATION BUILDER:**
Rapid development tools enable integrators and IT organizations to easily build tailored IoT applications without coding and deploy them for mobile, web and control rooms.
BACSOFT B-CONNECT 2G SMART COMMUNICATIONS CONTROLLER: GPRS 2.5 G CONNECTIVITY FOR LEGACY NETWORKS

The Bacsoft B-Connect 2G Smart Communications Controller provides bi-directional cellular communications over 2.5G networks. Through extensive experience with networks around the world, Bacsoft has developed technology to ensure reliable M2M communications under all conditions. Each device manages the connectivity to the server and can adapt to field conditions by initiating communications, performing self-recovery and more.

A hardware-based external watchdog ensures that the communications software is running properly at all times, and, in case of an error, reboots the controller.

Bacsoft secures M2M communications with optional SSL 3.0 encryption, along with the option to install private, self-signed certificates. To further increase security and eliminate the need for a fixed IP address, the controller identifies and verifies the server during each connection.

The B-Connect 2G Smart Communications Controller can be used to manage virtually any device. It includes built-in support for Modbus and Melsec and is easily adapted to work with any proprietary protocol, binary or ASCII. Where appropriate, one controller can manage a series of devices through a serial RS485 interface, simplifying deployment and eliminating multiple SIM cards.

FEATUERS

- Plug & Play Connectivity (easy setup, all wireless)
- Always On - refresh rate of data read and data write is around 2 seconds both ways
- Includes external hardware watchdog for fail-safe operation
- Very Low Data Usage (a few megabytes per whole month 24/7 connectivity)
- Various Analog and Digital Interfaces:
  - 2 Analog Input 0-10V/4-20mA
  - 1 Analog Output 0-10V/4-20mA
  - 2 Relay Outputs
  - 8 Digital Inputs
  - 1 Hardware Counter
- 2 * RS232 + 1 RS485
- Offline Logging Capabilities
- Debug and setup using standard SMS messages
- OTAP (Over the Air Provisioning) support for software updates
- Optional SSL Version 3 with embedded server certificate for secure applications
- Option to open a raw tunnel directly to remote equipment

APPLICATIONS

INDUSTRY APPLICATIONS
- Multi PLC Control
- All Types of Sensors Readings (Analog/Digital/ASCII/Binary)

ENVIRONMENTAL APPLICATIONS
- Temperature, Humidity, CO2 (etc) Monitoring
- Forest Fire Detection
- Meteorology Station and Monitoring
- Early Earthquake Detection
- Snow Level Monitoring
- Air Pollution
- More

SMART CITY APPLICATIONS
- Parking Control
- Smart Lighting
- Traffic Control
- Waste Control
- More

METERING APPLICATIONS
- Tank Level (Oil/Gas/Fuel)
- Silos Material Measurement
- Electric/Water Meter Reading

WATER APPLICATIONS
- Remote Control of Valves
- Leak Detection
- Valve Control
- Water Meters (Pulses, Binary, ASCII)
- Water Leakage
- River Height and Flood Alerting
- Swimming Pool Monitoring

AGRICULTURE APPLICATIONS
- Green Houses
- All Type of Irrigations Controllers
- Low-Energy Sensors (Tensitometers etc)
- Hen House / Cowshed Control

SECURITY APPLICATIONS
- Transformer Theft Alarm
- All Types of Security Sensors (Entry, Step-on etc)
- Access Control
**SYSTEM SPECIFICATIONS**

**POWER REQUIREMENTS**
- Supply Voltage Range: 8-30 VDC
- Protected Over Voltage: 2-60 VDC

**CURRENT CONSUMPTION**
- GSM/GPRS Mode: 170 mA (Avg) at 12 VDC
- Maximum momentarily: 250 mA (Avg) at 12 VDC

**MEMORY CHARACTERISTICS**
- Type: Read Write
- Max Storage Capacity: Up to 30000 Measurements (in offline mode)

**ENVIROMENTS**
- Operating Temperature: -20°C to 70°C
- Automatic Turn Off: 80°C
- Storage Temperature: -35°C to 75°C
- Operating Humidity: 5% to 95%

**DIMENSIONS/WEIGHT**
- Dimensions: 105x86x58.5
- Weight: 200 g

**STANDARDS**
- Standards: TUV, CE

**WIRELESS MODULE**
- Cinterion TC65i

**GSM SPECIFICATIONS**
- Bands: GSM 850/900/1800/1900 MHz
- Data Class: GPRS multi-slot class 12

**INTERFACES**
- 2 Analog Inputs: 0-10V/4-20mA - 12 bit
- 1 Analog Output: 0-10V/4-20mA - 12 bit
- 2 Digital Output: Relay output
- 8 Digital Input: (1 Hardware Counter) Dry contact
  - 1 Serial RS-232/485 port: Full Duplex DB9 Female/
    (Can be configured as RS-485) 2 Wire 485
  - 1 RS-232 port: RX/TX/GND
- Reset Button
- SIM card socket: Push type
- Antenna connector: Regular/full size SMA Male
- Plug in Power Supply: Terminal Block
- Plug in Backup Battery/Auxiliary Input: Terminal Block
- LED Indications: Signal Strength (3 bars) / Serial Ports / Network

**ADVANCED TECHNICAL INFORMATION**

**DIGITAL INPUT CHANNEL SPECIFICATION**
- Input Range - On: 3 - 30V ("1")
- Input Range - Off: 0 - 1V ("0")
- Input Resistance: 280Kohm
- Over Voltage Protection: 70V
- Digital Input #8 can be configured to act as digital counter for use with sensors that generate pulses

**DIGITAL OUTPUT CHANNEL SPECIFICATION**
- Type: Relay - Dry Contact
- Switching Power: 60W (DC) 62.5VA (AC), 2A / 30Vdc, 0.5A / 125V ac

**ANALOG INPUT CHANNEL SPECIFICATION**
- Current Mode-Input Range: 4.20mA
- Current Mode-Load: 56.2Ω
- Current Mode-Resolution: 12bit
- Voltage Mode 0-10V-Input Range: 0-10V
- Voltage Mode 0-10V-Resistance: 110KΩ
- Voltage Mode 0-10V-Resolution: 12bit

**ANALOG OUTPUT CHANNEL SPECIFICATION**
- Current Mode-Input Range: 4.20mA
- Current Mode-Resolution: 12bit
- Voltage Mode 0-10V-Input Range: 0-10V
- Voltage Mode 0-10V-Resolution: 12bit