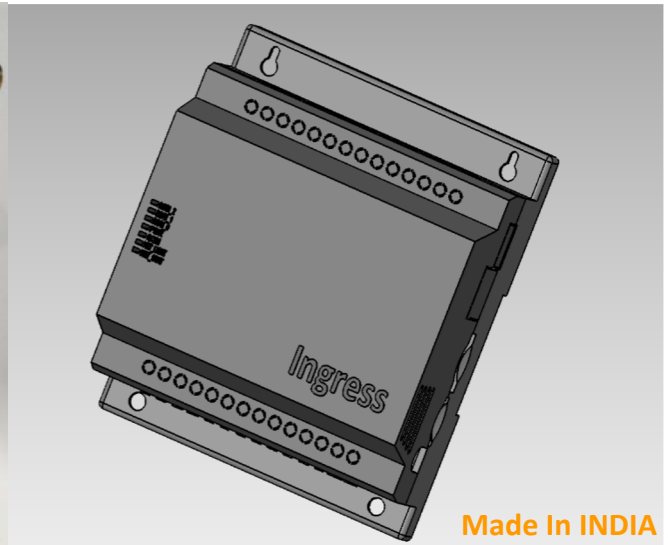
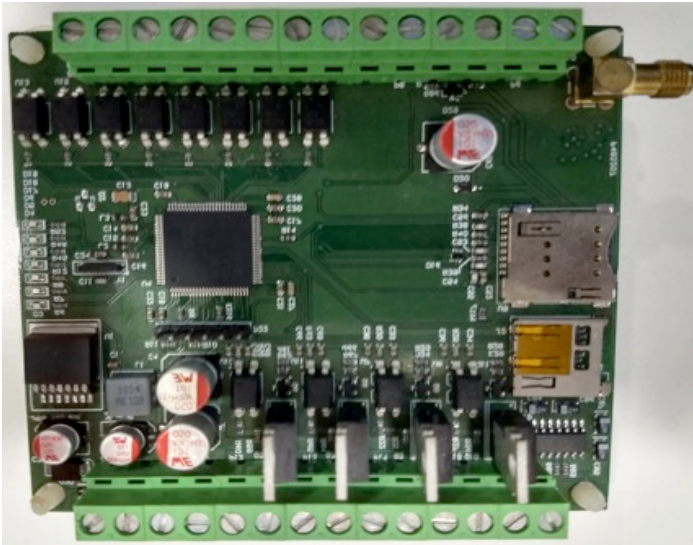


# Smart 4G Industrial Modem



## Overview

**Ingress A8620** is a wireless cellular connection for 2-way data communication with a wide variety of remote equipment and Utility applications. "Plug n Play" architecture allows reading various analog sensors data and interfacing with digital IOs from PLC. Its fail safe mechanism eliminates possibility of data loss even in adverse network connections. In case of network failure, the SD card utility can store up to 30GB of data and modem resumes data transfer to cloud server upon connection restoration. Specially designed input power capability works even with solar powered remote stations operating at sub-10 V DC. To facilitate wired communication standard ethernet is used as fall back for communication besides supporting RS485/MODBUS-RTU for industrial application.

The modem and ports are remotely configurable via our proprietary IOT web platform offering custom automation, alarms and analytic features.

### Versatile Data Logging

8 Analog In 6 Digital In 2 Digital Out

### No Data Loss Ever

Designed to withstand adverse network connections

### Data Security

End to end Data Encryption

## Application Areas

- Energy Management System
- Water & Air Quality Monitoring
- Sub station Monitoring & Control
- Solar Energy Monitoring
- DG Parameters Monitor & Control
- Pumping stations & Control
- Remote monitoring & Control for Machines

Automated meter reading (AMR)

Telemetry

Wireless data transfer from data loggers, sensors, Recorders, RTU and PLC devices

Energy, Gas and Fluid Meter manufactures.



# Features

## Data Logging

8 Analog Input ports  
 (4-20mA, 0-10V) - configurable  
 for single / differential sensors

6 Digital Input ports

2 Digital Output ports

RS485/Modbus RTU

## Communication

GSM/ GPRS /LTE

Ethernet – Fallback communication

I2C Port for LCD Display / Panel

Secure End to end Data Encryption

## Communication

Remote INGRESS Device configuration

Data Visualization and logging

Data time stamping

Analytics on our INGRESS IOT Platform

Connects with Brownfield plant with the digital future.

# Specifications

Core	Arm® 32-bit Cortex®-M4 CPU
Power Supply	Wide Operating Range: 8-40 VDC Isolated 24VDC Supply Terminal for Digital Inputs / outputs
Analog Inputs	Up to 8 Analog Input Ports Sampling rate - 100Ksps Software-Programmable Input (Sensor Type) · 8/6/4/2/0 Single Ended + 0/1/2/3/4 Differential Software-Programmable Input Ranges · 0V to 5V, 0V to 10V (4-20mA) , ±5V or ±10V for Differential Fault protection to ±25V. Temperature Range: 0°C to 70°C (H/W Customizable to -40°C to 85°C) A/D resolution at the analog input: 12 bit (H/W Customizable: 14/16 bits) Accuracy +-1.5INL (12 bit) to +-3INL (16 bit) Pluggable Screw type Terminal Block
Digital Inputs	Up to 6 Digital Inputs ports Input version: Suitable for open-drain transistor or switch, 2-wire-technique Break Down Voltage 26.5V with Current Peak 3A Pluggable Screw type Terminal Block
Digital Outputs	Up to 2 Digital Output Ports Output version: bi-stable relay, 2-wire-technique Output current at digital output: up to 5A continuous 24 V Output Voltage Pluggable Screw type Terminal Block
Modbus	Pre Configurable Mode: Master or Slave Software Programmable Baud Rate
Additional Slots	Micro SIM with card adopter Micro SD CARD: Max Capacity up to 32 GB RJ45 Port: Standard Single Channel MODBUS (RS485): pluggable screw terminal block
Data Transfer Rates	Wireless: 5.76 Mbps/ 21 Mbps (Uplink/Downlink) LAN: (10...100Mbps)
Wireless Technology	850MHz - 1800 Mhz, GSM, GPRS, UMTS, LTE, VoLTE SMS ( configurable up to 5 Number ) FTP / HTTP / HTTPS / MQTT External Antenna - SMA (GSM/GPRS) 50 Ohms
Operating Temp	Operating Temperature: 0°C to 70°C
Time Sync	RTC / Time Sync with International Time (Cellular Network)
Security	Security: Hardware Assist Encryption (AES)