

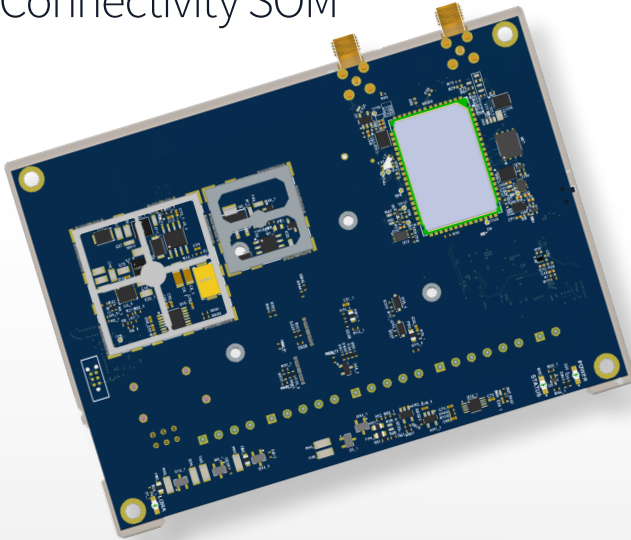
DATASHEET

Taoglas EDGE™ IG25 System on Module

Compact Multi Sensor with Wi-Fi
Connectivity SOM



TAOGLAS®



**Fully integrated, pre-certified,
technology stack of hardware,
firmware and cloud platform.
Cut time-to-market by up to 80%.**

The **Taoglas EDGE™ IG25** is a compact multi-sensor SoM with cellular, Wi-Fi 802.11b/g/n, Bluetooth with ultralow power consumption in a small form factor. It features a dual-core processor, optimized firmware/OS RTOS, validated applications libraries (Real Time Performance) and comes with an advanced on-board analytics engine. The Taoglas EDGE IG25 offers the ultimate degree of flexibility and scalability while saving costs and time-to-market for OEMs and enterprises. Developed by industry experts and with proven commercial solutions across healthcare, industrial, transportation, agriculture and smart city applications, you can be up and running with the Taoglas EDGE IG25 pre-certified SoM in minutes.

The IoT design process can literally become as simple as activating a SIM card. The solution is supported by **Taoglas Insights™** - a cloud management platform - which provides a scalable end-to-end solution for easy control and management of connected devices.

Key features

- Small Form Factor
- Ultra low power consumption
- Highly secure architecture
- Cost-effective end-to-end System-on-Module with cellular 4G, GNSS, Wi-Fi, Bluetooth and on-board environment and movement sensors
- Plug-and-play with fast-time-to value for a variety of IoT applications
- Device, data, SIM and sensor management via **Taoglas Insights™** platform
- Secure provisioning and certificate management
- Over The Air (OTA) firmware updates and device diagnostics
- Deployment lifecycle control
- Easy 3rd party machine vision AI/sensor interfacing
- Pre-certified

4G Cat 1
3G
2G
NB-IoT
LTE CatM
Wi-Fi



GPS
GLONASS
Galileo
BeiDou



BLE5
BLE4.2



Key Benefits

- Can help you build your IoT prototype in minutes
- OEM boards can be customized and purchased separately for new product introductions
- Reduce the cost and complexity of introducing IoT strategies into enterprises avoiding lengthy design, development, integration, testing, data services and customization spend with fast time-to-value
- Provides real-time sensor and positioning data and can enable real-time intelligence from the EDGE instantly



Energy
Monitoring
Control



Industrial
Chillers



Predictive
Maintenance



Industrial
Boilers



Intelligent
Renewables
Monitoring



Building
Management
Systems



Network Hub
for Smart
Cities



Industrial
Generators

Hardware Specifications		
System	Processor	ESP32 - Xtensa® dual-core 32-bit LX6 microprocessor, up to 240 MHz
	RAM	520 KB
	Flash	16MB
	Firmware/OS	FreeRTOS + Applications Libraries (Real Time Performance) Cloud Mutual authentication
	Security	-Hardware root of trust -Secure key storage
Radios	Cellular Modems	Optional SKU's (2G, 3G, 4G, NB-IoT, CAT-M) Integrated PCB Antenna Options
	Cellular Antenna	External Antenna Options via SMA
	GNSS	GPS/GLONASS/Galileo/BeiDou (use external antenna)
	Wi-Fi	802.11b/g/n
	Bluetooth	Standard BLE4.2 and Optional BLE 5.1
	Expansion Options	LoRa / SubGHz
Sensors	Accelerometer	Range: up to ± 16g Accuracy: up to 16384 LSB/g with 16 bit resolution
	Gyroscope	Range: up to 2000°/s Accuracy: up to 262.4 LSB/°/s with 16 bit resolution
	Magnetometer	Range: ±1300µT (x, y-axis), ±2500µT (z-axis) Accuracy: ~0.3µT
Expansion	External Connector	21 Pin Screw On Connector
	USB	Micro USB B connector (Charging Only)
Physical	Dimensions	145 x 90 x 42mm
Power	Voltage	5.5V - 55V (External Power supply)
	Current	2A - 3A
	Power Consumption - Sleep	≈ 60 uA
	Power Consumption - Idle / Stand by	≈ 30 mA
	Power Consumption - Running	up to 3A
	Battery	Various Battery Options/Capacities Available - Rechargeable and Non-Rechargeable, Lithium Polymer or Lithium Ion
Communications Interfaces		RS485 MODBUS, CAN, UART, I2C, SPI, GPIO
Signal Aquisition / Generation	Analog Inputs	2x (0 to 3.3V)
	Digital Inputs	2x Isolated (3.3V - 12V DC)
	Digital Outputs	2x Isolated
Environment	Operating Temperature	-10C to 60C
	Operating Humidity	85% non-condensing
	Storage Temperature	-10C to 60C
	Storage Humidity	85% non-condensing
Warranty		1 Year
SKU	IG25B	Industrial Gateway Standard Model SOM (US)
SKU	IG25L	Industrial Gateway Standard Model SOM (EMEA)
SKU	IGB5N	Industrial Gateway Standard Model SOM (NB-IoT)

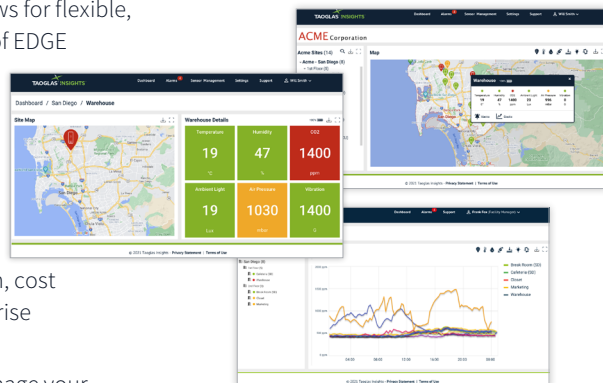
Taoglas Insights™ Real-time analytics

Taoglas Insights™ is your cloud-based software platform that allows for flexible, reliable and efficient gathering of data and life cycle management of EDGE devices from one dashboard.

- Device management
- Sensor management
- Security management
- Connectivity management
- Application platform

It enables real-time insights and intelligence that drive optimization, cost savings, compliance and new revenue opportunities for our enterprise customers.

Taoglas Insights™ provides everything to securely connect and manage your sensors, machines and devices remotely, removing complexity and allowing your organization to focus on today's business applications.



For further details visit:

taoglas.com/product/ig25-industrial-system-on-module/