



REMOTE MONITORING

ALBERT periodically interrogates connected devices according to customizable rules and timelines. The purpose of the query is to obtain the parameters to be monitored for specific machines or plants and, more generally, to interact with them.



M2M-IoT CLOUD

ALBERT takes care of monitoring values and sending them to any MQTT-compliant Cloud, reducing communication costs.



DEFCONS

ALBERT manages the communication by activating different modes of operation. These modes are defined as Defcons. In particular, it is equipped with a rules execution engine that allows it to change the sampling frequency and the remote controlled parameters.



ALBERT • Smart IOT Interface

ALBERT is a GPRS remote monitoring and remote control module for process machinery that uses the MQTT standard. This is a Machine-to-Machine / Internet-of-Things (M2M / IOT) connectivity protocol designed for an extremely light and low-traffic publish / subscribe messaging transport.

The full implementation of this standard for communication and data interchange guarantees full interoperability and opens horizons to the world of the Internet of Things.

ALBERT is a stand-alone module created to effectively support the Internet-of-Things paradigm and reachable from any device connected to the Internet and enabled to use the MQTT protocol.

ALBERT allows sending the data obtained from the devices connected to any storage or data processing support such as databases, business management software, reporting processors, communication systems in general and / or other ALBERT nodes connected to the same network.

Likewise, it is possible to send command messages for updates, parameter changes, implementations, forced queries, etc. both to ALBERT itself and to the devices connected to it, with the ease and immediacy allowed by the IOT world.

In addition to the communication over the Internet, implemented through the GSM module, additional interfaces are available that implement access to local devices connected to ALBERT through the field buses with which it is equipped.

The particularity of ALBERT is given by the fact that it does not implement any communication protocol natively, but can be easily customized in order to convey almost any communication protocol through the use of simple descriptors that can be transferred to the mass memory of ALBERT also once installed in the field.

Moreover, even machines with different protocols can coexist in the same local network as ALBERT since this is able to switch the protocol as well as the communication parameters to be used depending on the particular device to be queried.

In addition, ALBERT can be configured as a Slave and controlled by a local device via a Modbus connection through which all the ALBERT functionalities to the IOT world are made available.

IOT - CONNECTIVITY

- Internet connection allowed by a complete set of modules from GPRS to LTE;
- Local connection based on RS485 TTL or LVTTTL autosense;
- GSM / GNSS on request for data geolocation..



MicroSD

In addition to the telemetry sending, ALBERT can store the data, at different times, on microSD on appropriate ".csv" files.



RS485 – MODBUS RTU

When switched on, ALBERT configures its local ports as a slave for a limited period, allowing an easy and immediate configuration. This functionality can be maintained indefinitely so that there may be other masters on the controlled system that write values that they consider useful in a buffer within the device.



MQTT

ALBERT is equipped with a complete set of access functions through MQTT.

This allows you to perform any kind of action on ALBERT and on the monitored network of devices.

MQTT

- Message Queue Telemetry Transport: implementation of the innovative protocol created for the Internet of Things;
- Interaction with databases, business intelligence software, reporting processors, communication systems in general.

DEFCON

- In the presence of particular and well defined conditions of the system to be controlled, it is possible to define the query times and the variables to be subjected to monitoring, in a totally automatic way.

MEMORY

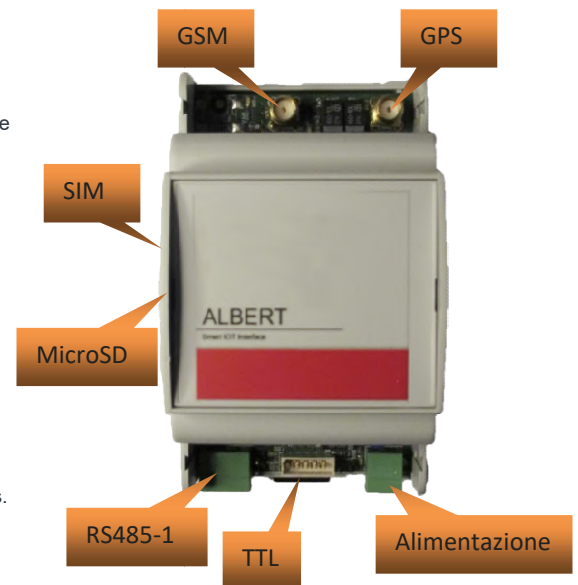
- NON-VOLATILE memory for modem settings;
- MicroSd up to 32 G, .csv files data store;

MODBUS

- When ALBERT is started, the ALBERT configuration can be accessed via the ModBus 3, 6, 16 commands.

UPDATES

- ALBERT can be updated locally through the MicroSD, or remotely;
- Firmware, network to be monitored (Network), parameter map (Settings) are upgradable.



ALBERT • Smart IOT Interface

Technical Details

Dimensions	53 x 91 x 63 mm (3DIN)
Mounting	Open board or DIN RAIL EN50022
IP Class	IP20
Enclosure Material	Plastic
Speed	GSM UP TO 100Mbps - Local 300 - 115200 baud
Internal memory	Up to 32GB MicroSD
Protocols	MQTT, ModBus, internal grammar computer
Certifications	
CE	EN61000-6-4 - EN61000-6-4 - EN55022 - RED 2014/53/EU ETSI 301489-1
Electrical Characteristics	
Power	12-24Vdc - 12Vac (3W max) Inverse polarity protection
Environment	
Operating Temp	-20°C - 55°C