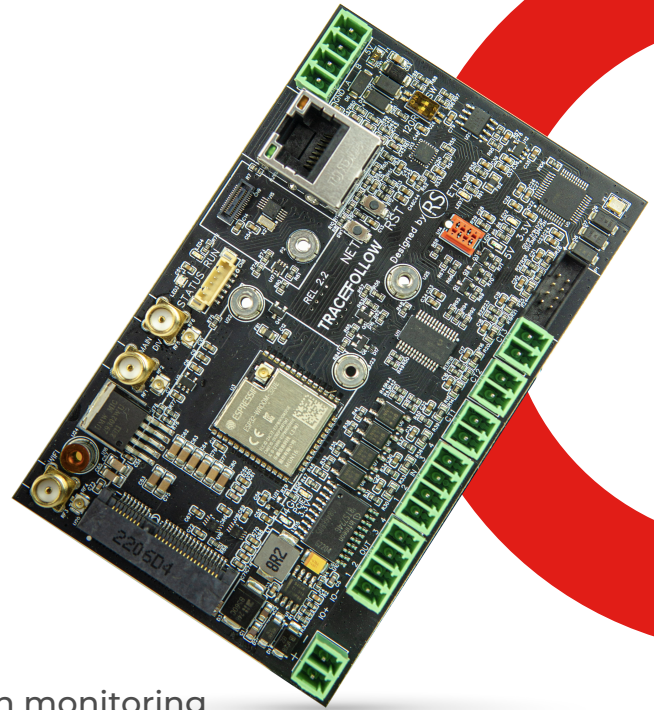


TRACEFOLLOW

Energy monitoring and machine control platform

- Cloud platform
- Open source APIs
- Machine data integration
- Different connectivity options
- Energy and raw material consumption monitoring



For more information

Description

Trace&Follow is a platform completely designed and developed by the RedSmart, BU of IDT, to monitor energetic consumption, raw material consumption and production efficiency for every machine of an industrial plant.

The solution's peculiarity is that it allows to **trace production efficiency** and associate collected data to a specific batch or single product.

This association/production monitoring can be done by receiving external data from an external system (e.g. ERP), through APIs interface.

Furthermore, our platform is able to **control the machines remotely** (remote machine turn-off system for energy saving), **to monitor the alarms** (maintenance alarms, current threshold alarms...) **of the machines and to store their data, to geolocalise the machine in the plant** (through an external infrastructure integration).

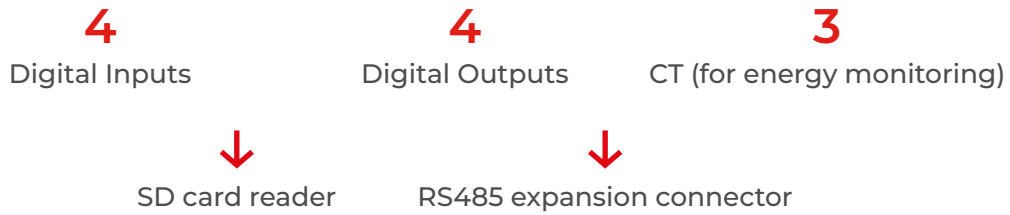
The Trace&Follow board is able to send acquired data to the Cloud platform using **different connectivity options**: WiFi, Ethernet, LTE, LoRaWAN (for long range with a single gateway).

It includes **four digital inputs, four digital outputs**, and a **Modbus TCP server**, enabling the sending of commands and direct acquisition of data to and from a machine PLC. The design follows a modular approach, allowing the installation of only necessary modules and expansion of functionalities.

From the board data can be retrieved using dedicated APIs. Alternatively, it is possible to choose to send them to a platform managed by the end customer.

The Trace&Follow platform has an **App** and **Web App** for data collection and visualization, which communicate with the electronic boards through a Cloud Infrastructure.

Technical specifications



PLATFORM	
Power supply	12-24V
Consumption	< 2 Watt
Dimensions (w/out case)	115x72
Electrical interfaces	RS485, digital I/O
Connectivity	BLE, WiFi, Ethernet (LoRa and 4G optional)

Example of application

The installation of more than 20 Trace&Follow boards has been completed for energy monitoring purposes on manual and robotic welders, as well as machine tools, at the Italian facility. This initiative also encompasses the development of iOS and Android apps, along with a web application, enabling direct interfacing with end-users.



Manitowoc Crane Group – Italy (Niella Tanaro)

App & WebApp

The smartphone shows a list of maintenance alarms with columns for date, time, and status (e.g., 'Allarme manutenzione', 'DISATTIVO', '12.36 - 19/06/2023').

The laptop shows a dashboard for 'TRUCK 3' with a donut chart for 'Selezionare il periodo:' showing 25.0% utilization, 50.0% stand-by, and 25.0% inactivity. It also displays 'Totale energia consumata: 0.000 kWh' and 'Totale filo consumato: 0.000 m'. A QR code is visible in the bottom right corner of the laptop screen.