

# Tributech OEM Module

Backbone for Smart and Connected Products | Powered by technology for trusted data, digital twins and the data economy



The **Tributech OEM Module** provides a hard- and software backbone for embedded IoT applications with LPWAN connectivity. It is packaged to a system-on-module (SoM) solution with a very small footprint and optimized for medium to large scale applications with low manufacturing costs. All core functionalities are provided within a single interface, handling telemetry data, configurations, updates, provisioning and security.

The OEM Module includes Tributech's IoT and dataspace stack, reducing time-to-market by more than 90%. Unique features such as Digital Twin based configuration and data management, block-chain-based data verification & audits, built-in data-sharing or high-end hardware security provide a competitive for IoT applications.

## Digital Twins

Digital representation of IoT devices and all their properties

## Over-the-air Updates

Automate device and config updates via API

## LTE-M and NB-IoT

Secure connectivity between device and cloud

## 2-Way Communication

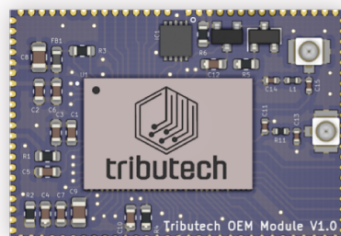
Configurations and commands between device and cloud

## Location via GPS

Track IoT device location via built-in GPS sensor

## Data-as-a-service

Telemetry data and digital twins as-a-service via APIs



## Ultra-low power mode

Enables battery powered devices with years of capacity

## Plug & Play Sharing

Easily share collected data with other stakeholders

## Verifiable Data

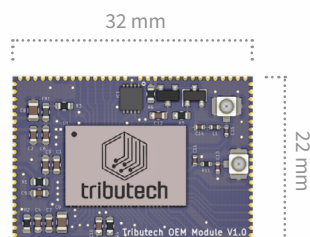
Provide trusted data from source to consumer

## Hardware Security

Root-of-trust based on Infineon OPTIGA™ Trust M

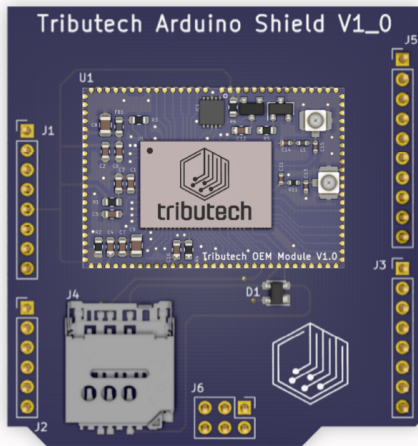
# OEM Module Technical Specifications

Dimensions (H x W x D)	32 x 22 x 3 mm
Operation temperature range	-25°C to + 85°C
Power supply	+3.3V to +5.5V
Humidity (at 40°C)	93% (non-condensing)
Processor	64 MHz ARM® Cortex®-M33
	1MB flash + 256kB RAM
Security & Root-of Trust	Infineon OPTIGA™ TRUST M
	ARM TrustZone
	ARM CryptoCell-300
Connectivity	Multimode LTE-M / NB-IoT modem with GPS
	700 – 2200 MHz LTE band support
	Certified for global operation
	eSIM or external SIM-card socket
Antenna connector type	U.FL-R-SMT-1(10)
Module Interface	Provides the device interface protocol for telemetry data, configurations and updates via UART
Backend Interfaces	Open API (OAS3) REST Interfaces for data, configuration and update management
IoT & Dataspace Stack	The OEM Module is fully integrated with the Tributech DataSpace Kit, providing a IoT and dataspace platform
DLT / Blockchain Integration	The OEM Module is fully integrated with Tributech's blockchain layer to create data quality seals for verifying integrity, origin and other data quality parameters between the module and data consumers

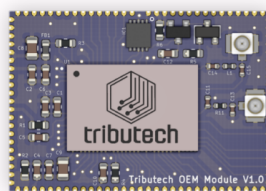


# Tributech OEM Module Hardware Options

For the development of smart and connected products we offer two variants. The OEM Module itself, which can be directly integrated into the hardware design and an Arduino Shield for prototyping. The shield can be used with all popular hardware development platforms like Arduino Uno, STM32 Nucleo, Infineon XMC Relax Kit and more.



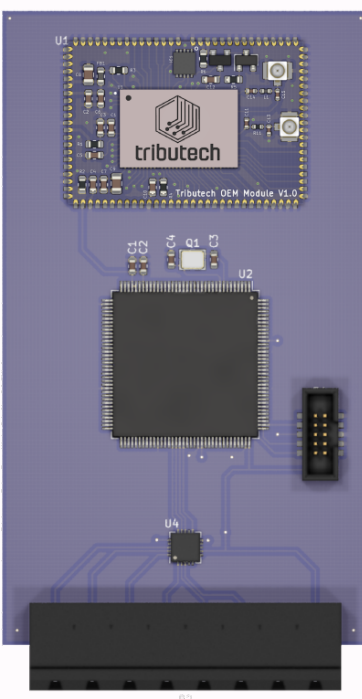
Tributech Arduino Shield



Tributech OEM Module

## Tributech OEM Module Hardware Design Example

An IoT device based on the OEM Module typically consists of three parts. Part 1: The Tributech OEM Module which takes care of connectivity, data management, configurations, updates and security. Part 2: The application-specific microcontroller which takes care of data pre-processing and business logic. Part 3: The sensors and interfaces needed for the application.



### Tributech OEM Module

Provides connectivity, GPS and management for telemetry data, configurations and updates

### Your Application Processor

MCU for business logic, data pre-processing and the integration of sensors / Interfaces

### Sensors and Interfaces

Sensors or Interfaces of your application like e.g. an environmental sensor or a CAN Bus interface