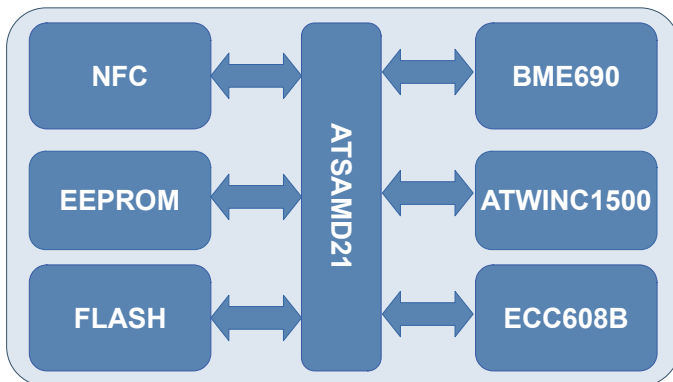
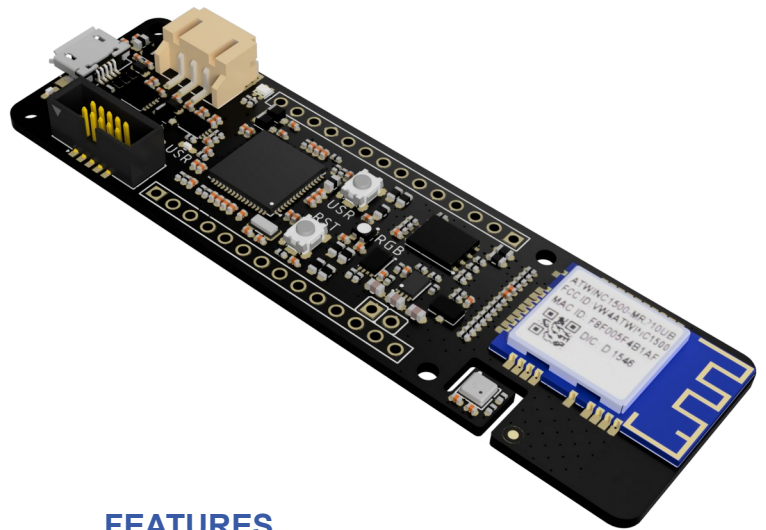


GENERAL DESCRIPTION

The **Martinica** Ultra Low Power transmission board consists of ATSAM21 microcontroller unit with ATWINC1500 Wi-Fi (802.11 b/g/n) module.

The board is in Arduino MKR form factor can be programmed with Arduino IDE or with Atmel Studio 7 IDE from Microchip enabling fast application development.

Onboard BME690 Environmental Sensor with A.I. from Bosch Sensortec allows real world testing.



Target Applications:

- 24/7 always-on sensor processing at ultra-low power consumption.
- Secure IoT devices
- Secure Sensors Gateway
- Secure Industrial automation, Condition-based monitoring, Security panel, Energy management, Inspection camera, Data logger Building automation
- Secure Smart Home, Thermostat, Air purifier, Air conditioner.

BlackIoT Sagl

Via Stefano Franscini 2A
6833 Vacallo - Switzerland
CHE-192.005.916

info@blackiot.ch
www.blackiot.ch



FEATURES

The **Martinica** Arduino MKR form factor board provides an ideal solution for evaluating ATWINC1500 module and Bosch Sensortec BME688 Environmental Sensor.

Hardware Features

MCU Core:

- ARM® Cortex®-M0+ at 48 MHz
- 256 kBytes Flash
- 32 kBytes RAM
- -40 to 85°C operating temperature
- Low power modes
 - Idle and standby sleep modes
 - SleepWalking peripheral

WiFi & BLE Module:

- Wi-Fi: 802.11 b/g/n (2.4 GHz)
- Extreme Low Power
- Host Interface: SPI & SDIO
- WiFi Direct Support
- Support Enterprise security WPA/WPA2 (802.1X)
 - EAP-TLS
 - EAP-PEAPv0/1 with TLS
 - EAP-TTLSv0 with MSCHAPv2
 - EAP-PEAPv0/1 with MSCHAPv2

ATECC608B CryptoAuthentication™

Sensor Bosch BME 690 with A.I. :

- Temperature
- Pressure
- Humidity
- Indoor Air Quality / Digital Nose

8 KB EEPROM with NFC

8 MB external FLASH

Order Code	Description
BLK-MRT-0001	Martinica MKR Board