

# BRICK-ML BOX



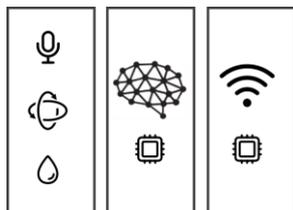
## Machine Learning at the Edge



**Brick-ML Box is a low-power high-performance embedded board designed to run machine learning operations at the edge.**

Brick-ML Box is a complete device that can be mounted directly on various kind of equipments to collect data (vibrations, temperature and humidity, noise, voltage) to be used for training a specific AI model for your application.

Ready-to-use trained Edge ML models can be loaded on the device and detect specific events or states, sending them through wired or wireless connectivity. Brick-ML features on-board elaboration, sensing and communication capabilities, all packed in a reduced form factor. It is fully integrate into Edge Impulse's industry-leading Edge ML platform.



### MAIN APPLICATIONS

- Embedded Machine Learning
- Inference at the Edge
- Gesture Recognition
- Voice and Sounds Classification
- Environmental Conditions Automatic Analysis
- Connected Intelligent Sensors

### KEY FEATURES

- 32-bit ARM® Cortex®-M33 core with FPU
- 200 MHz clock speed
- Up-to 2-MB code flash memory, 8-KB data flash and 512-KB RAM
- 128-Mbit on-board serial flash
- Bluetooth 5.1 core specification compliant BLE transceiver and link layer
- Sensors
  - Knowles SPH0641LU4H-1 microphone
  - Bosch BNO055 9-DOF IMU
  - Renesas HS3001 high-performance T/H sensor

### VARIANTS

- **RD-BML-1U**: USB 2.0 High-Speed
- **RD-BML-1C**: USB 2.0 High-Speed, CAN-FD
- **RD-BML-1E**: USB 2.0 High-Speed, CAN-FD, Ethernet

### SPECIFICATIONS

|                       |   |
|-----------------------|---|
| Power Supply          | USB 5.0V<br>12V÷24V (-1C / 1E)                      |
| Operating Temperature | -40°C to +85°C                                      |
| Standby Current       | 1µA   |
| Wireless connectivity | BLE 5.1 - output 2.2 dBm                            |
| Wired connectivity    | USB High-Speed<br>CAN (-1C / -1E)<br>Ethernet (-1E) |
| Expansion             | Analog input (-1C / -1E)                            |
| Size (RD-BML-1x)      | 89.0 x 79.0 x 33.0 mm                               |