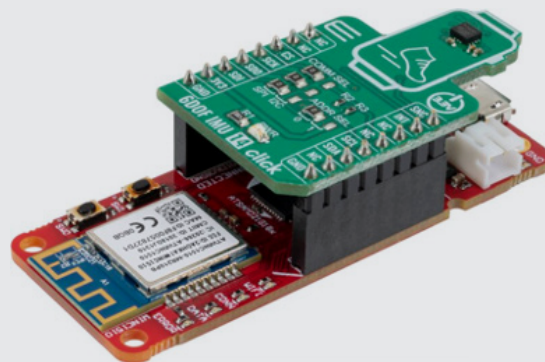


# SAMD21 Machine Learning Evaluation Kit With TDK IMU

## Summary

The SAMD21 Machine Learning Evaluation Kit makes it easy to explore embedded machine learning solutions for vibration and motion data. With Microchip's ML partners, solutions for anomaly detection and event classification can be realized. The Machine Learning Plugin in MPLAB® X Integrated Development Environment (IDE) simplifies the data collection process, so that live sensor data can be quickly collected for use in Cartesiam's NanoEdge AI Studio and/or the Edge Impulse Studio.



## Step-by-Step Guides

- [Machine learning plug-in](#)
- [Fan anomaly detection with cartesiam](#)
- [Smart dumbbell with edge impulse](#)

## Kit Contents:

- 1x SAM IoT WG Development Board (EV75S95A)
- 1x MikroE 6DOF IMU 14 Click Board (TDK ICM-42688)

## SAM IoT WG Development Board

The SAM-LoT WG Development Board features the SAM-D21G18 Arm® Cortex®-M0+ based 32-bit microcontroller (MCU), an ATECC608A CryptoAuthentication™ secure element IC and the fully certified ATWINC1510 Wi-Fi® network controller, so you can quickly and easily connect your embedded application to Google's Cloud IoT core platform. The on-board debugger allows you to program and debug the MCU without any additional hardware. Use the mikroBUS™ socket to expand your design with your choice of MikroElektronika click Boards™. The SAM-LoT WG development board is a small and easily expandable demonstration and development platform for IoT solutions.

## MikroE 6DOF IMU 14 Click Board

6DOF IMU 14 Click is a compact add-on board that contains a 6-axis MEMS motion tracking device combining a 3-axis gyroscope and a 3-axis accelerometer. This board features the ICM-42688-P, high precision 6-axis MEMS motion tracking device, from TDK InvenSense. It has a configurable host interface that supports both I²C and SPI serial communication, features a 2 kB FIFO and 2 programmable interrupts with ultra low-power Wake-on-Motion support to minimize system power consumption. This Click board™ is an excellent choice for applications like gesture recognition, activity classification, and pedometer, along with programmable digital filters, and an embedded temperature sensor.

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