



Part Number: DM990101 - IoT Ethernet Monitoring Kit powered by Medium One



The IoT Ethernet Monitoring Kit powered by Medium One uses an Ethernet LAN8740A port driven by a PIC32MZ EF 32 bit controller. This kit natively support temperature, pressure, humidity, air quality and motion sensors and can be activated and deployed in minutes with zero programming required. The kit is preloaded with a fully functioning sensing application featuring cloud-defined edge processing, real-time monitoring, smart notification, reporting, analytics and dashboards.

It includes free cloud service, mobile app with an open reference design to easily customize and integrate into existing or new product designs and applications. The IoT Ethernet Monitoring kit powered by Medium One offers IoT solutions to enable real-time data rich applications in the cloud or on-prem.

From Sensor to Cloud. The DM990101 IoT Ethernet Monitoring kit powered by Medium One (Software-as-a-Service) offers an all-in-one IoT package. To address Industrial Internet of Things (IoT) projects, the Ethernet technology becomes the most reliable and stable connectivity. This IoT kit uses an [Ethernet LAN8740A](#) and comes pre-loaded with Medium One cloud service, mobile application (from Saritasa) as well as corresponding Microchip firmware. The firmware in the kit makes use of MPLAB®Harmony, FreeRTOS™, and WolfMQTT allowing you to quick-start your IoT design. The Ethernet port is controlled by a 32-bit micro-controller that benefits from a 2MB Flash of the [PIC32MZ EF](#) providing plenty of memory space for your application code.

The security is addressed using WolfSSL features. The kit communicates with the Medium One cloud over MQTT with TLS security, using both publishes and subscribes topics. The mobile app communicates with the Medium One cloud via REST over HTTPS.

The DM990101 comes with pre-configured code to support 4 sensors : pressure, temperature/humidity, air quality and motion. In addition, hundreds of other different sensors can be plugged into the MikroElektronka mikroBUS™ footprint allowing for prototyping a large variety of IoT proof-of-concepts.

## Features

- Connect your IoT product to cloud and customize your applications in no time
- Connect 100's of sensors or your own sensor to cloud with minimum modification using the reference design
- Leverage the PIC32MZ EF and Ethernet LAN8740A PHY to aggregate data and connect
- Utilize production ready reliability and secure cloud connectivity and identity management over MQTT with TLS
- Extract data intelligence from your sensor data
- Perform data analytics with Medium One's machine learning libraries
- Get daily and weekly reports on your sensor data

## Package Contents

- IoT Ethernet Monitoring kit
- PICkit3 in-circuit debugger
- USB Male-A to Male Mini-B cable
- USB Male-A to Male Micro-B cable