The Avnet MicroZed™ Industrial IoT Starter Kit supports designers’ edge-to-cloud development of Internet-connected solutions and includes all the necessary building blocks for developing a production-ready, IoT-enabled, industrial processing system. The platform is based on Avnet’s MicroZed system-on-module (SoM) with Zynq®-7000 All Programmable SoC from Xilinx and pluggable sensor solutions from Maxim Integrated and ST Microelectronics. The kit integrates the IBM Watson IoT agent on top of a custom-configured, certified image of the Wind River® Pulsar™ Linux operating system. The provided out-of-box example design uses a standard MQTT messaging protocol to communicate with Watson IoT, which enables registered, secure connection to additional cloud services and applications, including the IBM Bluemix® portfolio. Bluemix provides a rich palette of composable services to rapidly enhance IoT solutions with cognitive capabilities.

**FEATURES**

**Cloud enabled**
- Supports IBM Watson Services
- Watson IoT ready

**Production ready, MicroZed 7010 SOM**
- Based on Xilinx Zynq-7000 SoC
  - Dual ARM® Cortex™-A9 processing system
  - FPGA logic

**Expandable development platform**
- R3 Arduino-compatible shield expansion slot
- Two 2x6 peripheral module expansion slots
- Additional user header providing access to SPI, I2C, UART, and GPIO on MicroZed

**Linux enabled**
- Runs Wind River Pulsar Linux
- Eases application development
- Certified binary image

**Connectivity**
- 10/100/1000 Ethernet Port
- Optional WILINK8 WiFi/BLE add-on

**Pluggable sensor options**
- ST Microelectronics motion MEMS and environmental sensor shield
  - Connects to shield site
  - Six I2C based sensor solutions
    - 3-axis accelerometer + 3-axis gyroscope
    - 3-axis magnetometer
    - Humidity and temperature
    - Pressure
  - Maxim Integrated thermocouple-to-digital peripheral module
    - Connects to 2x6 peripheral module
    - SPI-based interface
    - Able to measure temperatures from -270°C to +1800°C
    - Includes K-type thermocouple

**KIT INCLUDES**
- MicroZed 7010 SOM
- MicroZed Carrier Card for Arduino™
- uSD card pre-loaded with Wind River Pulsar Linux and IoT example
- ST Microelectronics sensor shield
- Maxim Integrated thermocouple sensor peripheral module
- Ethernet cable
- (2) Micro USB cables
- AC power adapter
- IBM Bluemix Services free trial offer
- Quick start card

**TARGET APPLICATIONS**
- Factory Automation
- Building Automation
- Smart City
- Smart Agriculture
- Test and Measurement

To purchase this kit, visit www.microzed.org

1. The AES-Z7MB-IIOT-UP-G kit does not include the MicroZed 7010 SOM and is intended for developers that already have a MicroZed SOM or want to target the larger 7020 version.
2. Although not required for development, a JTAG programming cable is recommended for enhanced debugging and Zynq programming. See related parts for ordering information.
**FEATURED MANUFACTURERS**

- IBM Bluemix
- Maxim Integrated
- STMicroelectronics
- WindRiver
- Xilinx

**PARTS**

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<td>MicroZed IIoT Upgrade Kit</td>
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**RELATED PARTS**

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<td>WL1837MODCOM8I</td>
<td>WiLink™ 8 Dual Band 2.4 and 5 GHz Wi-Fi® + Bluetooth® COM8 Evaluation Module</td>
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**Countries Available for Purchase:** Americas, EMEA, Asia, Japan

*VISIT ONLINE CATALOG: WWW.AVNET.COM

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