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

**Target Applications**

- Factory Automation
- Building Automation
- Smart City
- Smart Agriculture
- Test and Measurement

To purchase this kit, visit www.microzed.org

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1. The AES-Z7MB-IOT-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

PARTS

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<tr>
<th>Part Number</th>
<th>Description</th>
<th>Resale</th>
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</thead>
<tbody>
<tr>
<td>AES-Z7MB-IIOT-SK-G</td>
<td>MicroZed IIoT Starter Kit</td>
<td>$299 USD</td>
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<tr>
<td>AES-Z7MB-IIOT-UP-G</td>
<td>MicroZed IIoT Upgrade Kit</td>
<td>$129 USD</td>
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RELATED PARTS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Resale</th>
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<tbody>
<tr>
<td>210-299P-KIT</td>
<td>JTAG Programming/Download Cable (HS3)</td>
<td>$56 USD</td>
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<tr>
<td>AES-Z7MB-7Z010-SOM-G</td>
<td>MicroZed 7010 SOM</td>
<td>$165 USD @ 100 units</td>
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<tr>
<td>AES-Z7MB-7Z020-SOM-G</td>
<td>MicroZed 7020 SOM</td>
<td>$197 USD @ 100 units</td>
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<td>AES-Z7MB-7Z010-SOM-I-G</td>
<td>MicroZed 7010 SOM - Ind. Temp</td>
<td>$201 USD @ 100 units</td>
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<td>AES-Z7MB-7Z020-SOM-I-G</td>
<td>MicroZed 7020 SOM - Ind. Temp</td>
<td>$246 USD @ 100 units</td>
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<td>AES-PMOD-WILINK8-G</td>
<td>WiLink™ 8 Wi-Fi and BT/BLE Pmod Adaptor</td>
<td>$54 USD</td>
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<tr>
<td>WL1837MODCOM8I</td>
<td>WiLink™ 8 Dual Band 2.4 and 5 GHz Wi-Fi® + Bluetooth® COM8 Evaluation Module</td>
<td>$49 USD</td>
</tr>
</tbody>
</table>

Countries Available for Purchase: Americas, EMEA, Asia, Japan

CONTACT INFORMATION

North America
2211 S 47th Street
Phoenix, Arizona 85034
United States of America
eval.kits@avnet.com
1-800-585-1602

Europe
Gruber Str. 60c
85586 Poing
Germany
marketing@silica.com
+49-8121-77702

Japan
Yebisu Garden Place Tower, 23F
4-20-3 Ebisu, Shibuya-ku
Tokyo 150-0003 Japan
eval-kits-jp@avnet.com
+81-(0)3-5792-8210

Asia
151 Lorong Chuan
#06-03 New Tech Park
Singapore 566741
XilinxAPAC@avnet.com
+65-6580-6000