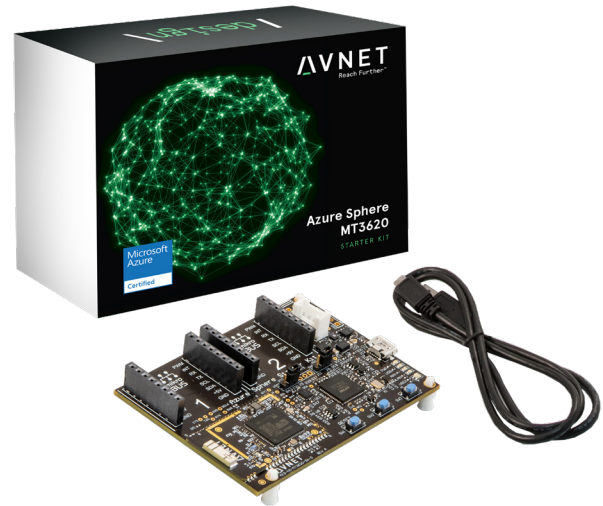


Azure Sphere MT3620 Starter Kit



KIT DESCRIPTION

The Avnet Azure Sphere MT3620 Starter Kit supports rapid prototyping of highly secure, end-to-end IoT implementations using Microsoft's Azure Sphere. The small form-factor carrier board includes a production-ready MT3620 Sphere module with WiFi connectivity, along with multiple expansion interfaces for easy integration of off-the-shelf sensors, displays, motors, relays, and more. The downloadable getting started tutorial guides developers through the development steps from board setup to application coding.

The Avnet designed, production-ready Sphere MT3620 module is based on the MediaTek MT3620 SoC, which includes built-in Microsoft security, WiFi connectivity and the combined versatility and power of an Arm® Cortex™-A7 processor with the low overhead and real-time guarantees of two Arm Cortex-M4F microcontrollers. A suite of on-chip peripherals, real-time clock, Flash, and RAM are also available. In addition to the MT3620, the 33 x 22 mm module includes a dual-band WiFi chip antenna and system clock. Up to 27 configurable GPIOs and three configurable serial ports (UART, I2C, or SPI) are provided as I/Os on the module.

The carrier board connects the Sphere module I/Os to two MikroE Click sockets, an I2C Grove connector, a connector supporting the addition of a 128 x 64 OLED graphical display, a 3D accelerometer, 3D Gyro, temperature sensor, and an ambient light sensor. Debugging is accomplished through a USB-to-UART interface, which also provides the necessary 5V power for the board.

User applications for the embedded Sphere controller are developed in C using Microsoft's Visual Studio IDE and the Azure Sphere SDK. Visual Studio provides a powerful, yet easy-to-use development environment for compiling and debugging application code. The combination of Visual Studio, the versatile carrier card, and the production ready Sphere module delivers a powerful starting point for IoT developers interested in learning, prototyping, and deploying Azure Sphere based solutions.

To purchase this kit, visit: <http://avnet.me/mt3620-kit>

KIT INCLUDES

- Carrier board with Azure Sphere MT3620 module
- USB cable
- Quick start card

TARGET APPLICATIONS

- IoT edge devices
- Consumer appliances
- Smart retail
- Remote access
- Building automation
- Factory automation

FEATURES

Carrier Board

- Two MikroE Click board expansion sockets
- Grove expansion connector (I2C)
- On-board sensors
 - 3-Axis accelerometer and gyro
 - Ambient light
 - Temperature
 - Pressure/Barometric
- Interface for optional OLED 128x64 display
- USB Interface
 - Supports debug, service & recovery UARTs, and JTAG
- User push switches and LEDs
- 5V to 3.3V Power regulation
- DC Supply Input:
 - USB 5V from host computer
 - Terminal foot prints for external 5VDC and VBAT supplies

Azure Sphere MT3620 Module

- MediaTek MT3620AN SoC
- 3x ISU interfaces pre-configured for UART, SPI, I2C
- ADC/GPIO: 3x 12-bit ADC inputs (or 3 GPIOs)
- PWM/GPIO: 9x PWM outputs (or up to 24 GPIOs)
- RTC (requires VBAT supply)
- Dual-band 2.4/5GHz 802.11 a/b/g/n WiFi
- Dual-band 2.4/5GHz chip antenna

NOTE: Azure Sphere OS support for some MT3620 features has not yet been released by Microsoft.

