

# Azure Sphere MT3620 Modules



## PRODUCT PREVIEW

The Avnet Azure Sphere MT3620 Modules support Microsoft's Azure Sphere end-to-end solution for highly secured, Wi-Fi connected Microcontroller (MCU) devices. The production-ready, certified modules come in two versions: an on-board chip antenna module for cost-optimized systems and an external U.FL antenna module supporting two external antennas for applications requiring higher performance, external antennas. Both modules are pin and footprint compatible, allowing for easy design migration and end-product enhancements.

By integrating all the necessary support and RF front end circuitry onto the small 33 mm x 22 mm module, Avnet has reduced the design time for implementing Sphere-based solutions. More importantly, developers can leverage the modules wireless certifications (pending) for their end product, saving considerable certification costs and testing time.

The Azure Sphere MT3620 modules are based on the MediaTek MT3620AN SoC, which supports dual-band 802.11 a/b/g/n Wi-Fi connectivity, a 500 MHz Arm® Cortex™-A7 core for user applications, and two general purpose 200MHz Arm Cortex-M4F I/O subsystem cores designed to support real-time requirements. The on-chip peripherals (GPIO, UART, I2C, SPI, PWM and ADC) can be mapped to dedicated I/O pins on the module for connection to external sensors, I/O connectors, or other user application circuits.

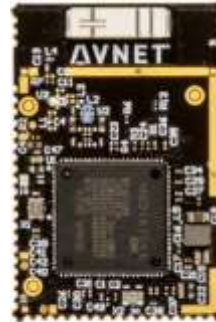
Microsoft's end-to-end security, OTA update service, and user-friendly Visual Studio development environment add significant value when compared to traditional MCU solutions.

For development with these Avnet modules, Avnet's Azure Sphere MT3620 Starter Kit (based on the chip antenna version Azure Sphere MT3620 module) provides extremely versatile expansion options using a wide-range of inexpensive add-on boards to facilitate rapid prototyping and fast time-to-market

To purchase the Azure Sphere MT3620 Starter Kit featuring the on-board chip antenna version of the module, visit:

<http://avnet.me/mt3620-kit>

For more information on the Azure Sphere MT3620 Modules, visit: <http://avnet.me/mt3620-modules>



Chip Antenna Module



U.FL Antenna Module



## TARGET APPLICATIONS

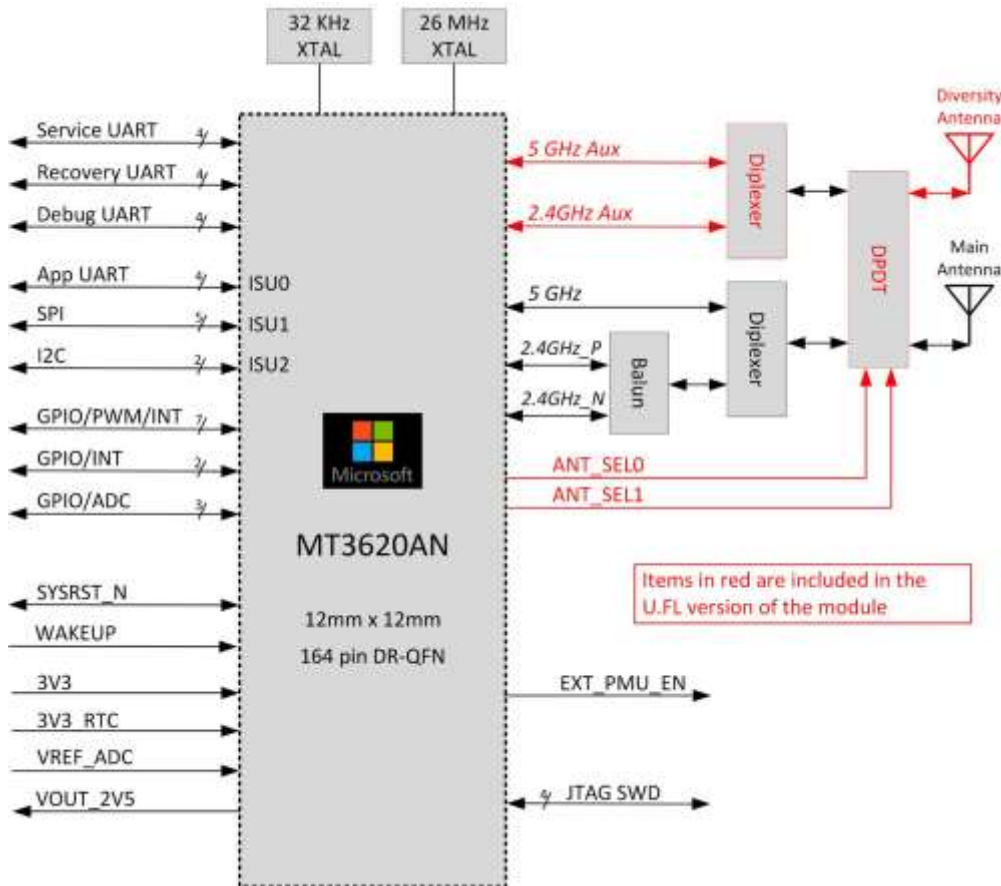
- IoT edge devices
- Consumer appliances
- Smart retail
- Remote access
- Building automation
- Factory automation

## FEATURES

- On-board (chip) or external (U.FL) antenna module versions
- Pin and footprint compatible
- Based on the MediaTek MT3620AN SoC
  - 1x 500MHz ARM Cortex A7, 4MB SRAM
  - 2x 200MHz ARM Cortex M4F cores, 64KB SRAM
  - Dual-band 2.4/5GHz 802.11 a/b/g/n WiFi
- Module I/O peripheral support
  - 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)
  - Programming & recovery interface
- Chip antenna version
  - Dual-band 2.4/5GHz chip antenna (Pulse W3006)
  - Operating temperature: -30~85°C
- External UFL antenna version
  - Supports full TX and RX antenna diversity
  - Two U.FL connectors for external 2.4/5GHz flex antennas
  - Operating temperature: -40C~85°C industrial rating
- Dimensions: 33mm x 22mm x 3mm
- Certification: FCC / IC / CE / RoHS (pending)

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

## BLOCK DIAGRAM



## FEATURED SUPPLIERS

Microsoft®

Pulse  
Electronics

molex

## PARTS

Part Number	Description
AES-MS-MT3620-M-G	Azure Sphere MT3620 Module with Chip Antenna
AES-MS-MT3620-UFL-M-G	Azure Sphere MT3620 Module u.FL Connectors

## RELATED PARTS

Part Number	Description
1461530050	Molex 2.4GHz/5GHz Flexible Wi-Fi Antenna (50mm 50 ohm RF cable, U.FL connector)
AES-MS-MT3620-SK	Azure Sphere MT3620 Starter Kit

Countries Available for Purchase: Americas and EMEA

## CONTACT INFORMATION

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