Wi-Fi 6 with Bluetooth 5.4 for Next Generation Industrial IoT

Introducing the latest of the Sona™ Wi-Fi 6 product line from Ezurio, the MT320, the first industrial grade Wi-Fi/BT module based upon the technology leading MediaTek Filogic 320 Wi-Fi 6 chipset. A truly robust industrial IoT module: one that's rugged, small, globally certified, has reliable connectivity, and is easy to integrate.

Our new Sona™ MT320 answers the call for next-gen wireless IoT. The Sona™ MT320 is purpose-built for easy integration with the MediaTek Genio™ family of processors and industrial IoT connectivity, supporting a SDIO host interface, industrial operating temp range, latest generation Wi-Fi and BT combined with both pluggable card and SMT M.2 packaging.

When matched with our industry leading services and support, the Sona MT320 is the only Wi-Fi module of its kind specifically designed to be paired with the Genio platform, addressing all your Wi-Fi 6 needs.

- **Compatible**: Tested with the MediaTek Genio family of processors and latest MediaTek Genio SDKs.
- **Reliable**: Integrated PA (Power Amplifier) and LNA (Low Noise Amplifier) with 2x2 MU-MIMO antenna for reliable connectivity in harsh RF environments.
- **Robust**: Rich feature-set including 802.11ax Wi-Fi 6 and Dual-Mode BT v5.4. Reliable industrial temperature range, and solder-down module is suitable for industrial rugged applications.
- **Secure**: Supports the latest WPA2/3 Personal and Enterprise security standards.

- Antenna: 2x2 **Wi-Fi 6** (802.11ax), 1x1 **Bluetooth 5.4**
- Support for 2.4 and 5GHz (UNII-1 – 3)
- 802.11ax STA mode and Soft AP mode
- **Bluetooth 5.4** Bluetooth Low Energy (BLE)
- Integrated **Wi-Fi + Bluetooth coexistence** for seamless connectivity
- High Speed host interface:
    - SDIO 3.0 (Wi-Fi and BT)
- Industrial Temperature Rating (-40° to +85 °C)
- **Ultra-small footprint** (14mm x 20mm) including on-board antenna MHF4 connectors.
- Module options: RF Antenna pin, On-board MHF4 connector, M.2 2230 Key E Plug-in module, M.2 1420 SMT module
- **Rugged Design** – solder down form factor
- **Global Certifications** – FCC, IC, CE, UKCA, BT SIG
- **Linux support** for MediaTek Linux and Android SDK.

Key Features

Dual-Band Wi-Fi 6 2x2
2.4/5 GHz spectrum availability for flexibility and higher performance.

Reliable Connectivity
802.11ax Wi-Fi with integrated PA and LNA combined add up to a reliable module for harsh RF conditions.

Software Flexibility and Speed to Market
Mediatek IoT Open Linux (based on Yocto): an open, standard, secure structure for IoT applications. Android integrations also available.

Industrial Temperature Operating Range
Designed to the industrial temperature range of -40ºC to +85ºC for every component utilized.

Global Approvals
Carries FCC, IC, CE, and Bluetooth SIG approvals. Capability to support worldwide regulatory certification.

Application Areas

Smart Signage and Retail POS

Industrial IoT Connectivity, Printers, Gateways

Rugged Handheld Devices and Terminals

Interested in our Sona MT320 Series?
Visit https://www.ezurio.com/sona-mt320-series

Specifications

Category	Feature	Specification	
Wireless Specification	Wi-Fi	Wi-Fi 6 (802.11 a/b/g/n/ac/ax)	
	Bluetooth®	v5.4 (BDR + EDR + BLE)	
	Frequency	Dual-Band 2.4 GHz & 5 GHz	
	Transmit Power	TBD	
	Antenna Options	On-board MHF4 connector(s), trace pin for external antennas Combined Wi-Fi and BT antenna RF connections	
	Raw Data Rates (PHY)	2.4 GHz: Up to 720 Mbps, 1024-QAM, 2x2 MIMO (MCS7) 5 GHz: Up to 1.2 Gbps, 1024-QAM, 2x2 MIMO (MCS11)	
Key Wi-Fi Features	Wi-Fi 6 (802.11ax)	• 20, 40, and 80MHz wide channels, 1024 QAM • Integrated PA/LNA • On-board x2 MHF4 connectors • Supports OFDMA, TWT, Upstream/Downstream MU-MIMO, BSS Coloring • 802.11d/e/h/i/j/k/mc/r/v/w	
Host Interface and Peripherals	Network Interfaces	SDIO 3.0 (Wi-Fi and HCI BT), PCM (BT Audio)	
Key Bluetooth Features	Bluetooth Low Energy	• BDR + EDR + BLE • LE 2 Mbps PHY • LE Long Range (LE-LR) • Adaptive frequency hopping (AFH)	• Secure simple pairing (SSP) • UART baud rates up to 4 Mbps • 7 x BT links/16 x BLE links • Secure connection (AES128 & ECC256)
Supply Voltage		3.3VDC (Supply) and 1.8VDC (I/O)	
Software	Supported OS	Linux and Android	
Physical	Dimensions	14 mm x 20 mm (M.2 1420 SMT Module) 22 mm x 30 mm (M.2 E-Key Module)	
Environmental	Operating Temp Range	-40°C to +85°C	
Miscellaneous	Lead Free	Lead-free and RoHS-compliant	
	Development Kit	Development board, accessories, and evaluation software	
Regulatory	Approvals	FCC/IC/CE/UKCA (Pending)	
Qualifications	Bluetooth SIG	Bluetooth SIG Approval	

Ordering Information

Part #	Description
453-00176R	Module, Sona MT320, MIMO, M.2 1420, MHF4, Tape and Reel
453-00176C	Module, Sona MT320, MIMO, M.2 1420, MHF4, Cut Tape
453-00177R	Module, Sona MT320, MIMO, M.2 1420, RF Trace, Tape and Reel
453-00177C	Module, Sona MT320, MIMO, M.2 1420, RF Trace, Cut Tape
453-00178	Module, Sona MT320, MIMO, M.2 2230, MHF4, Tray