

Wi-Fi 6E with Bluetooth Core 6.0 for Next Generation Industrial IoT

Introducing the first of the Sona™ Wi-Fi 6/6E product line from Ezurio, the IF573, based upon Infineon's leading AIROC™ CYW55573 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™ IF573 answers the call for next-gen wireless IoT. The Sona™ IF573 is purpose-built for industrial IoT connectivity with access to a SDIO 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 IF573 is the only Wi-Fi module of its kind, addressing all your Wi-Fi 6E needs.

Compatible: Our **Linux Backports** package supports many Linux kernels including v6.1.x.

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 6E and Dual-Mode BT Core 6.04. Support for the 6GHz spectrum. Reliable **industrial temperature range**, and solder-down module is suitable for industrial rugged applications.

Secure: Supports the latest WPA3 security standards.



- Antenna: 2x2 **Wi-Fi 6E** (802.11ax), x1 **Bluetooth Core 6.0**
- Support for 2.4, 5 and 6GHz (UNII-1 – 3 & UNII-5 – 8)
- 802.11ax STA mode and Soft AP mode
- **Bluetooth Core 6.0** Bluetooth Low Energy (BLE)
- Integrated **Wi-Fi + Bluetooth coexistence** for seamless connectivity
- High Speed host interface: PCIe or SDIO 3.0 (Wi-Fi) and UART (BT)
- Industrial Temperature Rating (-40° to +85 °C)
- **Ultra-small footprint** (13 mm x 18 mm) including on-board antenna MHF connectors
- Module options:
 - RF Antenna pin
 - On-board MHF4 connector
 - M.2 2230 Key E Plug-in module
 - M.2 1318 SMT module
- **Rugged Design** – solder down form factor
- **Global Certifications** – FCC, IC, CE, MIC, RCM, BT SIG
- **Linux Backports** for broad kernel support. Includes Android 12/13 support.

Key Features



Tri-Band Wi-Fi 6 (6GHz Spectrum Support)

2.4/5/6 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

Open-Source software and Linux Backports ensures compatibility with a wide variety of Linux kernels and latest security standards.

Industrial Operating Range

Designed to the industrial temperature range of -40°C to +85°C for every component utilized.

Global Approvals

Carries worldwide FCC, IC, CE, RCM, MIC, and Bluetooth SIG approvals.



Application Areas



Medical Devices (Infusion pumps, HD Imaging, Vitals Monitoring, Gateways, Beds, blood analyzers)

Industrial IoT Connectivity

Rugged Handheld Devices

Specifications

Category	Feature	Specification
Wireless Specification	Wi-Fi	Wi-Fi 6E (802.11 a/b/g/n/ac/ax)
	Bluetooth®	Core 6.0 (BDR + EDR + BLE)
	Frequency	Tri-Band 2.4 GHz & 5 GHz & 6 GHz (Up to 7.125 GHz)
	Transmit Power	+18 dBm (maximum)
	Antenna Options	On-board MHF4 connector(s), trace pin for external antennas Separate Wi-Fi and BT antenna RF connections
	Raw Data Rates (PHY)	2.4 GHz: Up to 574 Mbps, 1024-QAM, 2x2 MIMO 5 GHz/6 GHz: Up to 1.2 Gbps, 1024-QAM, 2x2 MIMO
Key Wi-Fi Features	Wi-Fi 6E (802.11ax)	• 20, 40, and 80MHz wide channels, 1024 QAM • Integrated PA/LNA • On-board x3 MHF4 connectors • Supports OFDMA, TWT, Virtual Simultaneous Dual Band, Zero Wait DFS, BSS Coloring • 802.11d/h/k/r/v/w/ai
Host Interface and Peripherals	Network Interfaces	PCIe or SDIO 3.0 (Wi-Fi) and HCI using HS-UART (BT)
Key Bluetooth Features	Bluetooth Low Energy	• BDR + EDR + BLE • LE 2 Mbps PHY • LE Long Range (LE-LR) • Adaptive frequency hopping (AFH) • Quality of service (QoS) • Secure simple pairing (SSP) • UART baud rates up to 4 Mbps • Fast connect (interlaced page and inquiry scans) • Dedicated BT path with MHF4 connector or trace pin
Supply Voltage		3.3VDC (Supply) and 1.8VDC (I/O)
Physical	Dimensions	13 mm x 18 mm x 0.43 mm (M.2 1318 SMT Module) 22 mm x 30 mm x 3.1 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/MIC/RCM (Pending)
Qualifications	Bluetooth SIG	Bluetooth SIG Approval

For full specifications on the Sona IF573 modules, please see the appropriate datasheet.

Ordering Information

Part	Description
453-00117R	Module, Sona IF573, MIMO, M.2 1318, MHF4, Tape and Reel
453-00117C	Module, Sona IF573, MIMO, M.2 1318, MHF4, Cut Tape
453-00118R	Module, Sona IF573, MIMO, M.2 1318, Trace Pin, Tape and Reel
453-00118C	Module, Sona IF573, MIMO, M.2 1318, Trace Pin, Cut Tape
453-00119	Module, Sona IF573, MIMO, M.2 2230, Key E, SDIO, UART
453-00120	Module, Sona IF573, MIMO, M.2 2230, Key E, PCIe, UART
453-00119-K1	Development Kit, Sona IF573, MIMO, M.2, Key E, SDIO, UART
453-00120-K1	Development Kit, Sona IF573, MIMO, M.2, Key E, PCIe, UART

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