Sona™ IF573

Wi-Fi + Bluetooth® Module

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

Introducing the first of the Sona™ Wi-Fi 6/6E product line from Laird Connectivity, 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 both PCIE and SDIO interfaces, 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 v5.4. 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 5.4**
- Support for 2.4, 5 and 6GHz (UNII-1 – 3 & UNII-5 – 8)
- 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:
  - Mode 1: PCIe 3.0 (Wi-Fi) and UART (BT)
  - Mode 2: 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.

Features at a Glance

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 -40ºC to +85ºC 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

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For documentation, software, sample apps and more visit:
http://www.lairdconnect.com/sona-if573

KEY SPECIFICATIONS

CATEGORY	FEATURE	SPECIFICATION
Wireless Specification	Wi-Fi	Wi-Fi 6E (802.11 a/b/g/n/ac/ax)
	Bluetooth®	v5.4 (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 v3.0 Gen 2 (Wi-Fi) and HCI using HS-UART (BT) 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.

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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