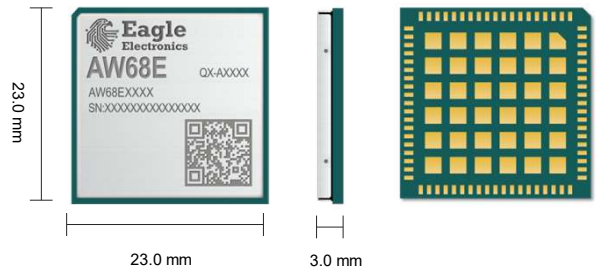


Eagle AW68E

Automotive Grade Wi-Fi 6E & Bluetooth 5.3 Module Compact LGA Package



AW68E is an automotive grade Wi-Fi 6E and Bluetooth 5.3 module with high performance, supporting 2×2 MIMO and Dual-Band Simultaneous with dual-MAC. It is designed to be used in Telematics and intelligent cockpit scenario to establish WLAN and Bluetooth connections, with data rate up to 2.975 Gbps.

With a compact and unified form factor of $23.0 \text{ mm} \times 23.0 \text{ mm} \times 3.0 \text{ mm}$, AW68E is an ideal Wi-Fi/Bluetooth solution for size-sensitive applications, and helps customers reduce product size and optimize application design cost. The surface-mount technology enhances its durability and robustness, and the LGA package makes sure the module can be easily embedded into size-constrained applications and provide reliable connectivity with these applications. The advanced package allows for large-scale automated manufacturing which has strict requirements on cost and efficiency.

Designed with a reliable PCIe Gen 3 interface to provide WLAN capability, AW68E achieves low-power and high-speed data transmission. Coupled with its compact size and wide temperature range, AW68E enables the module to meet Wi-Fi/Bluetooth design requirements in automotive industry.



Key Features

- ✓ Automotive grade Wi-Fi & Bluetooth module supporting 2.4 GHz + 5 GHz/6 GHz, and Bluetooth 5.3
- ✓ Support Dual-Band Simultaneous (DBS) with dual-MAC
- ✓ Support IEEE 802.11a/b/g/n/ac/ax standards
- ✓ Support PCIe Gen 3 interface which provides higher data transmission rate and lower power consumption
- ✓ Support LE Audio
- ✓ Ideal for automotive premarket applications with IATF16949: 2016 requirement
- ✓ Compliant with automotive quality processes such as APQP and PPAP
- ✓ Wide operating temperature range and superior anti-electromagnetic interference capability meet the demanding requirements for automotive devices



Ultra-compact
Size



LGA Package



IEEE 802.11
a/b/g/n/ac/ax



Bluetooth 5.3



Operating Temperature
Range: $-40 \text{ }^{\circ}\text{C}$ to $+85 \text{ }^{\circ}\text{C}$

Eagle AW68E

Wi-Fi 6E & Bluetooth 5.3	AF68E
Region	Global
Function	Wi-Fi 2.4 GHz + 5 GHz/6 GHz; Bluetooth 5.3
WLAN	IEEE 802.11a/b/g/n/ac/ax
Wi-Fi Modulation Mode	BPSK, QPSK, CCK, 16QAM, 64QAM, 256QAM, 1024QAM
Bluetooth Modulation Mode	GFSK, 8-DPSK, $\pi/4$ -DQPSK
Temperature Range	
Operating Temperature Range	-40 °C to +85 °C
Theoretical Data Rate (Max.)	
802.11a	54 Mbps
802.11b	11 Mbps
802.11g	54 Mbps
802.11n	600 Mbps (2 × 2, 802.11n/HT40 MCS 7)
802.11ac	1733 Mbps (2 × 2, 802.11ac/VHT160 MCS 9)
802.11ax	2975 Mbps (2 × 2 + 2 × 2, 802.11ax/HE160 MCS 11 + 802.11ax/HE40 MCS 11)
Bluetooth 5.3	BR: 2 Mbps EDR: 3 Mbps BLE: 2 Mbps
Interfaces	
PCIe Gen 3	× 1
PCM	× 1
UART	× 1
Coexistence Interface	× 1
Antenna Interface	ANT_WIFI0/BT: 2.4/5/6 GHz WLAN and Bluetooth antenna interface ANT_WIFI1: 2.4/5/6 GHz WLAN antenna interface ANT_BT: dedicated Bluetooth antenna interface (Optional)
Electrical Features	
Power Supply Voltage	VDD_PA_A: 3.85 V VDD_PA_B: 1.8 V VDD_CORE: 1.90 V, 1.35 V, 0.95 V
I/O Power Supply Voltage	VDD_IO: 1.71–1.89 V, Typ. 1.8 V
Certification	
Regulatory (To Be Determined)	Europe: CE America: FCC Canada: IC China: SRRC Australia/New Zealand: RCM
General Features	
Encryption Mode	WPA3
Max. Access Point	32
Operating Mode	AP/STA
Dimension	23.0 mm × 23.0 mm × 3.0 mm
Weight	3.39 g