

Air8000N (North America)

4G / GNSS / Wi-Fi / Bluetooth / 4-in-1 Industrial Engine

It can be applied to various scenarios including industrial control, location tracking, and multimedia.

Air8000.CN



*Only after passing overseas network compatibility testing can mass production proceed.

4G Parameters 4G

LTE Features

LTE Cat.1 bis
MAX: 10Mbps (DL)
MAX: 5Mbps (UL)

Frequency Band

LTE-TDD: B38/B40/B41
LTE-FDD:
B2/B4/B5/B7/B12/B13/B17/B18/B19/B25/
B26/B66/B71

Zone Of Application

North America

Output Power

LTE-TDD: Class3(23dBm+1/-3dB)
LTE-FDD: Class3(23dBm+-2dB)

Sensitivity

FDD: -99dBm (10M)
TDD: -100dBm (10M)

GNSS Parameters

Supported Frequency Bands :

GPS L1;
BDS B1;
GLNASS G1;
Galileo E1;

Supports GPS/BDS-3 single-frequency multi-mode

Update Rate: 1~10Hz
Positioning Accuracy: <2m

Acquisition Sensitivity: <-149dBm
Tracking Sensitivity: <-165dBm
Supports hot start and A-GNSS assisted positioning.

Accelerometer Parameters

Measurement Range:

$\pm 2g / \pm 4g / \pm 8g$ (programmable)

Data Resolution:

8-bit / 10-bit / 12-bit selectable
FIFO buffered data storage

Sampling Rate: 14 Hz to 1.3 kHz (adjustable)

Power Consumption:

Sniffing current: 0.4 μA @ 1 Hz ODR

Wi-Fi Parameters Wi-Fi 6

Standard Support:

Wi-Fi 6 (802.11ax)
Backward compatible with 802.11b/g/n

Frequency & Bandwidth:

2.4 GHz band
Supports 20/40 MHz channel bandwidth

RF Performance:

Max TX Power: 21 dBm (per chain)
RX Sensitivity: -98 dBm @ 11b 1Mbps

Operation Modes:

Concurrent AP + STA mode

Connection Capacity

Supports >10 associated clients

Bluetooth Parameters

Protocol Support:

Bluetooth 5.4 LE + Classic Bluetooth (BR/EDR) dual mode

RF Performance:

Max TX Power: 21 dBm
RX Sensitivity: -98 dBm

Concurrency Features:

Simultaneous Wi-Fi/BLE/Bluetooth operation
Concurrent BLE Central & Peripheral roles

Interface Quantity

Interface Name Quantity

USB 2.0 High-Speed Port 1
(480 Mbps (Max))
Charging Interface 1
1.8V/3.0V (U)SIM Interface 2

I2S Digital Audio Interface 1
UART Interface 4
SPI LCD Interface 1

Universal SPI Interface 1
Universal ADC Interface 4
I2C interface 2

4G Antenna Interface 1
Wi-Fi Antenna Interface 1
GNSS Antenna Interface 1

CAN interface 1

Quad-SPI Interface 1
Programmable GPIOs 52
ADC Interface 4
SPI CAMERA Interface 1

Software Specifications

- Supports secondary development
- Supports drivers for RS-485, RS-232, Ethernet
- Enables multi-network convergence
- Provides VoLTE call capability

Hardware Specifications

Package Dimensions (Tolerance ± 0.15 mm):

Length: 22.3 mm

Width: 22.4 mm

Height: 2.3 mm

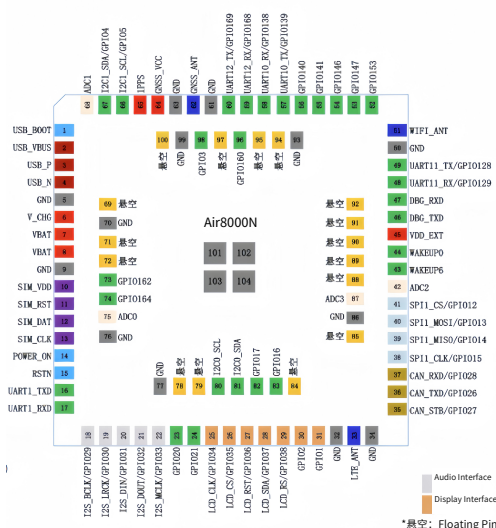
Product Weight: ca. 2.6 g

Operating Temperature: -40°C to +85°C

Supply Voltage: 3.3 V - 4.35 V (Typ. 3.8 V)

RAM: 8 MB (4 MB user-accessible)

Flash: 8 MB (3.5 MB user-available)



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Air8000N Documentation

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