

NEOWAY A590

To quickly Build 5G On-board Solutions



- Applicable to smart internet of vehicles
- Supports both 5G NR NSA and SA modes and can be operated on the sub-6G frequency band
- Supports C-V2X (optional)
- Can be widely used in China, Europe, Southeast Asia, and other regions
- Complies with the international standard IATF16949



Qualcomm chipset

Qualcomm SA515M

A590 is a 5G+C-V2X cellular module, which is designed specially for the smart IoV industry. It supports both 5G-SA and 5G-NSA networking modes.

The module has excellent RF performance and covers a wide range of frequency bands. It also supports the 4G and 3G networks and can be operated in Sub-6 GHz bands.



Operating temperature

-40°C to +85°C

A590 integrates various network protocols and provides industry-standard interfaces including high-speed interfaces such as PCIe and USB3.1 to facilitate customer's applications of ultra-high-speed data transmission. This module also supports the onboard Ethernet protocol and the V2X communication protocol. It is compliant with automotive-grade performance standards and can retain certain functions in environments that exceed its operating condition threshold. A590 is applicable to smart transportation and can be the implementation of C-V2X communications to give vehicles the ability to communicate with each other and beyond.

A590 series modules can be used in most regions including China, Europe, Southeast Asia where 5G networks are deployed. It also supports 4G and 3G networks for application in areas not covered by 5G networks.



Communication protocols

RNDIS, ECM, RMNET, IPv4, IPv6



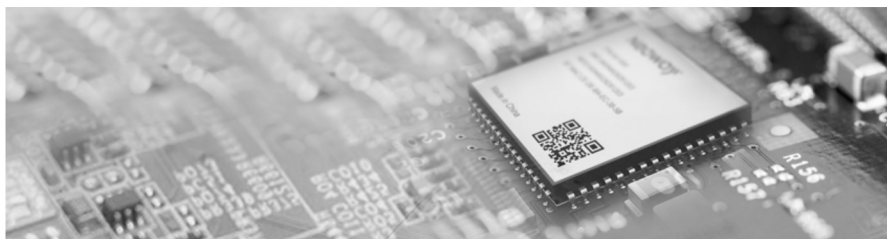
LGA package

LGA package
52.0 mm × 52.0 mm × 2.45 mm



Technical support

Reference designs, evaluation kits
Timely support via emails, calls, and instant messages



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Specifications

Frequency bands	5G: n1/n3/n5/n7/n8/n20/n28/n39/n40/n41/n77/n78/n79/
	4G: B1/B3/B5/B7/B8/B20/B26/B28/B34/B38/B39/B40/B41
	3G: B1/B3/B5/B8
	(optional) V2X: Globle -ITS 5.9 5855-5925
Supply voltage	5G: 3.3 V – 4.3 V (DC), typical value: 3.8 V V2X: 5 V (DC)
Operating temperature	-40°C to +85°C
Dimensions	52.0 mm × 52.0 mm × 2.45 mm
Package	LGA
Processor	Hexagon DSP Cortex-A7 Up to 1500MHz

Application Interfaces

PCIe Gen 3
USB 2.0/3.1
I2S&I2C
SDIO
RGMII

Features

5G NR	Downlink: 1.7 Gbps 100 MHz 256 QAM Uplink: 800 Mbps 100 MHz 256 QAM
LTE	Downlink: 1.6 Gbps Uplink: 50 Mbps
WCDMA	Downlink: 42.2 Mbps Downlink: 11 Mbps
Firmware upgrade	Via USB or FOTA

Enhanced Features

Supports RMNET, RNDIS, and ECM dialing
Supports IPv4, IPv6, and IPv4/v6 dual stacks
Supports the PCIe Gen3 interface
Supports USB 2.0/3.1
Supports dual SIM, dual standby and dual active
Supports the remote upgrade
Supports on-board Ethernet
Supports high-precision positioning

Certification Approvals

CCC*, CTA*, SRRC*, CE-R*, RoHS*

* mean under development