UNISOC®

V620

Industry's First Chip Platform that Fully Supports 5G R16 Broadband IoT Features

V620 is a highly competitive 5G R16 chip platform, with a wide range of applications in 5G FWA, laptops, handheld devices, and more. It is also suitable for vertical industries related to power, energy and high-end manufacturing.

Product Strengths

Higher RF Capability

- Single chip, supporting FAKON connectivity, i.e. TDD NR/FDD NR/FDD-LTE/TDD-LTE/WCDMA/GSM;
- Supports Sub-7GHz, NR, LTE, WCDMA, 70+ GSM frequency ranges, 1000+ combinations of LTE CA, NR CA, and ENDC, suitable for all major global networks;
- Supports 5G frequency ranges such as n78/n41/n79/n1/n28/n8/n5/n66 etc.for global operators;
- Supports PC1.5, a 3dB increase compared to PC2, significantly improving coverage and signal transmission quality.

Industry Leading 5G R16 Specifications

- The first chip to support 5G TSN, suitable for 5G in industrial TSN networks;
- Accuracy (error) for 5G high-precision positioning is less than 3 meters @ 90% probability, making it suitable for precise indoor positioning of people, materials and AGV;
- Low latency and high reliability communication for URLLC. Average RTT latency up to 8ms ;
- R16 low-power characteristics, such as WUS and UAI. Power consumption has been reduced by 20%;

Ultra High Speed Experience

- SA network peak rate: downlink 5Gbps/ uplink 1.875Gbps, a 100% improvement on previous generations;
- Super Uplink: Supports a variety of NUL and SUL combinations

Higher Dual-Card Capability

- Supports DSDS/eDSDS;
- Supports eSIM, soft cards and 5G cloud cards, suitable for a variety of dual-card applications.

Super Powerful OPENCPU Architecture

- 4-core Arm®Cortex®-A55 CPU,computing power, an almost
- 200% improvement on previous generations;
  DDR with 100MB+ resources, meeting the Memory requirements needed to develop more third-party applications.

Multiple Interfaces, Suitable for a Variety of Industry Devices

- More interfaces are provided, including: USXGMII/PCIE3.0/USB3.1/ SDIO3.0/UART/SPI/I2S/I2C/GPIO.

Full Certification, Reducing Market Barriers

- GCF certification;
- Certification for standard operators in different regions.

Product Specifications

CPU	Arm®Cortex®-A55@2.0GHz *4
DDR	LPDDR4/4x @2133MHz
Memory	Nand/eMMC
Operating System	Yocto Linux@Kernel 5.15
Interface	PCIE3.0 1Lane*2,RC&EP mode; USB3.1*1, USB2.0*1; Ethernet USXGMII*1 SPI/I2S/I2C/UART/SDIO3.0/ADC/GPIO SIM/USIM*2
Package Size	10.3mm*10.3mm

Memory design:

- MCP(LPDDR4x/Nand)
- LPDDR4/4x + Nand
  LPDDR4/4x + eMMC