

Getting a Move On With 5G Signal Detection

Industry: Telecommunications

Product: NanoCOM-KBU-A20

Introduction

5G is the next big step in wireless communication. It promises to bring faster internet service to consumers, with larger data transfer capabilities for industries to roll out the next generation of IoT devices and expand the capabilities of cloud and edge computing. It promises to bring a new age of connectivity and communication, further driving Industry 4.0.

As 5G service is rolled out, service providers will need a mobile platform to monitor signal strength and fidelity throughout their coverage area, whether in the countryside, in cities, or even in office buildings and factories. As more devices become part of the IoT environment, ensuring a reliable connection to these services is more important than ever.

Signal detection has been a tool of service providers for a long time. However, a new technology requires new tools, and 4G signal detectors still use components that are outdated, no longer manufactured and sometimes not even supported by their original manufacturers. A technology company is working to provide a solution that is mobile, powerful, and can keep up with the ever changing developments of wireless communication.

Customer Challenges

An effective 5G Signal Detection platform has many requirements and challenges to be mobile, powerful and maintainable.

Mobile Platform

The 5G detector needs to be mobile, mounted on a vehicle for monitoring in large areas, or mounted on a cart for monitoring inside buildings or in places inaccessible to vehicle traffic. Being a mobile platform also means reliance on battery power. The device will be mounted externally on a vehicle, so it needs to be capable of operating in a wide range of conditions.



Computing Power

5G communication broadcasts a much greater amount of data at higher rates than 4G, and much of the data is time sensitive to ensure security and stability. The new device needs to have the processing power to process and analyze the data at the fastest 5G data rates.

Maintainability

The new system requires components which are easy to replace, whether for maintenance, scalability, or to keep up with demands as technology continues to develop.

AAEON's Solution

AAEON is an industry leader in rugged embedded platforms, and worked together with the developer to find the best solution. Utilizing our manufacturer support, the NanoCOM-KBU-A20 was the best choice for the project.

COM Form Factor

The NanoCOM-KBU-A20 is built to the COM Express Module Type 10 specification, meaning it is thin, compact, and built to a common industry standard. Its compact size helps to reduce bulkiness and weight. Being built to a standard form factor allows for quick replacement, making for easier maintenance, upgrading and scalability.

Power Packed

The NanoCOM-KBU-A20 features the Intel Core i7 7600U ULT series processor, offering more than 30% more computing power over a solution using a Type 10 module with Atom processor. Along with 8GB DDR4 memory onboard, the NanoCOM-KBU-A20 provides the processing power needed to handle 5G signals. The NanoCOM-KBU-A20 uses low energy components in its construction, providing the 5G signal detector with up to eight hours of battery life.



Built Tough

AAEON is an industry leader in rugged embedded solutions. Working together with the developer, AAEON created a patented cooling solution, giving the NanoCOM-KBU-A20 an operating temperature range of -40°C to 85°C. This allows the signal detector to operate in a wide range of conditions when mounted on the roof of a vehicle.

Impact

With the power of the NanoCOM-KBU-A20, the developer was able to meet the challenges required to make their application a reality. In addition, AAEON's Manufacturer support assisted with every step of the process, helping to reduce development time, so the 5G signal detectors can be deployed as soon as 5G networks come online.

With the deployment of 5G signal detectors powered by NanoCOM-KBU-A20, service providers can rest assured that their customers are receiving the greatest coverage and best service possible. Cities and industries can ensure reliable connectivity as deployment of Smart City and edge computing applications continue to grow.

Application Story

NanoCOM-KBU-A20

The NanoCOM-KBU-A20 is a COM Express Type 10 pin-out module designed with a compact 84 x 55mm form factor. It features the Intel Core i7 7600U ULT series processor combined with 8GB DD4-2133 non-ECC memory on board and up to 64 GB eMMC storage offering serious power on a compact form factor.

In standard configurations, the NanoCOM-KBU-A20 can operate in temperatures from 0°C to 60°C. With AAEON Manufacturer support, the NanoCOM-KBU-A20 can be configured to meet the specific needs of your application, reducing development time and time-to-market.

With power, ruggedness, and AAEON's support, the NanoCOM-KBU-A20 is the solution for your 5G application.



About AAEON

Established in 1992, AAEON has become one of the leading designers and manufacturers of advanced industrial and embedded computing platforms. Committed to innovative engineering, AAEON provides Industry 4.0 integrated solutions, hardware and intelligent automated services for premier OEM/ODMs and system integrators worldwide, as well as IoT solution platforms that seamlessly consolidate virtual and physical networks. Reliable and high quality computing platforms include industrial motherboards and systems, industrial displays, rugged tablets, PC/104, PICMG and COM modules, embedded SBCs, embedded controllers, network appliances and related accessories. AAEON also offers customized end-to-end services from initial product conceptualization and product development through to volume manufacturing and after-sales service programs. It is also committed to continuously redefining and harmonizing the management and development processes of the industry.

With its constant pursuit of innovation and excellence, AAEON became a member of the ASUS group in 2011, enabling the company to further strengthen its leadership, access advanced technology from ASUS, and leverage resources from within the group. AAEON is poised to offer more diversified embedded products and solutions at higher quality standards to meet world-class design and manufacturing demands in the years to come.

AAEON is an Associate member of the Intel® Internet of Things Solutions Alliance.

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