

Solution Brief

**NEXCPE™ FTA 5180**

**A Powerful Platform for Edge Computing  
in the 5G Era**



FTA 5180 is a compact 1U rackmount uCPE for 5G application at the edge.

## The Trend

The deployment of 5G network services has accelerated Network Slicing, a technology that regained our attention lately enabling high-bandwidth, low-latency yet ultra-reliable network services on enormous connected devices. This new architecture of mobile network will unleash more possibilities for mobile IoT applications, such as autonomous driving, Internet of Vehicles (IoV), Smart Logistics, Virtual Reality (VR), Augmented Reality (AR), smart traffic signs, and various real time applications of AI. These applications all share one thing in common—low-latency is a prerequisite. That is why a low-latency 5G network takes the center stage on the path towards mobile applications.

## The Challenge

In the digital age where cloud services are now commonplace, mobile IoT applications are deployed in the cloud or in data centers for collecting, analyzing, and backhauling data. This pattern simplifies application deployment. However, it works just the opposite for applications, which require high-speed response. Latency accumulates as the communication distance increases. Once the backbone network or data center supporting the cloud services is too far away from where an application is implemented, the signal delay could become unbearable. One second may mean nothing to most of us, but critical for a smart traffic sign or autonomous vehicles.

To minimize latency, services will need to be deployed at the edge, rather than in the cloud, in keeping the applications as close to end-points as possible. These sites are usually less than ideal if compared with a data center setup, mainly for a

lack of qualified spaces or dedicated IT professionals for maintenance. An edge scene in reality, is most likely a crowded room full of equipment, or even simpler, just a stand-alone cabinet. That explains why personnel is already considered a luxury. Therefore, providing sufficient computing resources within limited space and with easy management off-site becomes a really big challenge.

## NEXCOM Solution

In coping with the challenge, NEXCOM launches the nexCPE™ series, a new generation of uCPEs incorporating rich hardware resources, network interfaces and 5G FWA capabilities in a single system. Targeting the growing demands for edge computing appliances, the FTA 5180 features front access design that permits operation and maintenance convenience: primary I/O ports that include the power switch and all in 1U Short Rackmount Chassis that makes it easy to be deployed in space-constrained environments.

Computing wise, FTA 5180 is powered by Next Gen Intel® Xeon® D processor, with up to 10 cores, which also enables Intel QuickAssist Technology (QAT) to optimize resource allocation for various virtual functions.

In terms of network capabilities, the multi-core Xeon® D offers as many as 10 high-bandwidth interfaces for speedy connections, including six 10G SFP+, two 10GBaseT, and two 2.5GBaseT ports. The 10 GbE fiber ports are an essential configuration at the edge, which effectively alleviate transmission bottlenecks when mobile IoT applications compete for computing resources. The copper ports, ready with PoE++ capability, could offer a 90-

FTA 5180 features high-speed ports and 5G FWA capability for seamless connectivity.

watt output when connecting PoE powered devices. FTA 5180 also supports 5G (sub-6 GHz) and Wi-Fi modules installation, offering extra FWA capability and connecting a variety of devices seamlessly.

When it comes to high availability & serviceability, the RunBMC module and power redundancy are features built into FTA 5180. RunBMC enables Out-of-band (OOB) connection for remote management while redundant power supply prevents the risks of single point of failure causing service disruption due to a faulty PSU. Such power redundancy design also covers PoE circuitry to add extra layer of protection against power outage.

## Conclusion

To stay in the leading position, service providers and technology professionals must be able to adapt to the rapid changing IT landscape and keep innovating and optimizing the network infrastructure. Targeting edge computing contexts, FTA 5180 as a high-end networking appliance helps to achieve such needs. With Next Gen Intel® Xeon® D processor inside, it provides impeccable performance while its compact 1U rackmount size can easily fit into limited space. By offering optional 5G FR1 and Wi-Fi 6 connectivity, FTA 5180 can be adapted in various scenarios and use cases at the edge.

### NEXCPE™ FTA 5180



1U Rackmount Professional uCPE for Wireless Broadband Applications w/ Next Gen Intel Xeon® D Processor

- Next Gen Intel® Xeon® D processor
- 6 x 10GbE SFP+ ports
- 2 x 10GbE RJ45 PoE++ ports
- 2 x 2.5GbE RJ45 PoE++ ports
- 1 x LAN module slot
- Supports IPMI 2.0
- Supports 4G LTE/5G FR1
- Supports Wi-Fi 5/6
- Supports Intel® QAT





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