

# Cinterion® Support Package

HW08

## 5G mmWave Design-In Consulting

Security Consulting

Design-In Consulting  
Schematics, Layout Review

Hardware Consulting  
Antenna, ESD, Spurious

Software/Application  
Consulting  
ATC, USB, MUX, RIL

Approval Consulting  
Protocol, Toolkit, SIM (SW, HW)

Production Consulting  
Production line, End of Line

### Motivation

The professional support during the development, deployment and ramp-up phases is one of the valuable qualities of Telit Cinterion. The goal of our Support is to increase the product-reliability, reduce the time to market and save money for our customers. Based on our long-term experience we have developed the most suitable support packages and workshops for each project phase.

### Package Description

In 5G and especially within the mmWave spectrum new challenges rise which require strong collaboration from the very beginning of your new project. With the schematics and layout review package, our experts will be able to provide advice and feedback regarding all critical aspects of your PCB such as e.g. power supply and RF design. They can offer hints and guidance about best practice approaches in the design of WAN hardware applications. Beside this, our experts will review the used components and, if necessary, suggest alternatives. The schematic and layout review can help to prevent common issues in the future and reduce development costs.



## Package Offer

### Package Content

- Review of application design files
- Module position/placement within the application in regards to the thermal design
- Review of the placement, cabling, layout and material of the antennas including the mmWave antenna design
- Review of used I/O pins (timing, levels, leakage currents)
- Review of ESD blocking and immunity
- Design check for matching circuitry
- Review of power circuit design

### Requirements/Pre-Conditions

- Provide the hardware design (e.g. schematic, layout) at an early stage of the design phase for verification
- Antenna track calculation and PCB stack up

### Results/Outcome

- Review highlighted directly in the provided design files (e.g. schematic, layout).

### Conclusion – Next

Our experienced engineers will be glad to share their expertise with you, to improve the hardware and software design of your application. We offer further project attendant services which may be valuable for your project. Feel free to contact our representative for further information.



### Estimated effort:

2 Weeks

Telit Cinterion Deutschland GmbH  
Werinherstraße 81  
81541 Munich  
Germany