



Application Engineering

Design review report

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Rev: 2
Date: 2020-06-10
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1. Scope

Aim of this document is to describe suggestions and corrections that Telit advises to improve **Ovoo Electronics "B106AA(V2)"** application that integrates Telit module **GE910-QUAD V3**.

2. Design review

Design review is based on the following received documentation:

- o Schematic files: "B106AA-R2.PDF"
- o Gerber file:
- o Other: "Telit Design Review R02 (Schematic).pdf"

Summary Tables:

Schematic Review	P	F	I	MI	N/A
Power Supply	✓				
SIM Pins	✓				
Digital Pins	✓		✓		
Audio					✓
RF	✓		✓		

PCB Layout Review	P	F	I	MI	N/A
General Placement					✓
Antenna Waveguide					✓
RF Aspects					✓
Audio Aspects					✓

P: Pass; F: Fail; I: Improvements possible; MI: Missing Information; N/A: Not Applicable

The following symbols will be used throughout the Design Review to indicate:

- ✓ OK: No design changes are required.
- ⓘ Tip: information or possible improvement, not mandatory but recommended.
- ⚠ Warning: if you don't follow the recommendation there's a risk of malfunctioning or issues during the homologation phase, strongly recommended.
- ⛔ Error: it's mandatory to follow the recommendation otherwise the module could be damaged or could not work properly or there's high probability of facing issues during the homologation phase.
- ? Missing Information: some relevant information is missing therefore the DR cannot be accurate on this item.

2.1. Schematic review

2.1.1. Power supply

✓ OK

2.1.2. SIM pins

✓ OK

2.1.3. Digital pins

- ⚠ For testing purposes it could be useful having direct access to the modem from external, with the host MCU isolated. USB is not implemented on GE910-QUAD V3 so we strongly suggest adding test points and/or 0R series resistors on Main-UART lines and wherever needed (e.g. OE control line of level shifter U4) in order to made Main-UART accessible.

2.1.4. Audio pins

N/A

2.1.5. RF aspects

- ❗ Add 33pF capacitor on LEDs anode and/or cathode if not directly tied to a power net (**D6, D3, D4, ...**). They must be mounted only in case of necessity.

2.2. PCB Layout review

2.2.1. General placement

N/A

2.2.2. RF aspects

N/A

2.2.3. Audio aspects

N/A



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2.3. General comments

Review is related to received application information and the supposed use of it.

3. Quality record

This design review is registered internally in Bugzilla with ID#**32846**.
The customer request is registered internally in Salesforce with ID#**00157856**.