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Your letter of  
Our reference  
Date 13 November 2015

## **Tune-up Procedure of Cinterion Wireless Module ELS31-V FCC ID: QIPELS31-V**

### ***LTE Mode:***

During manufacturing each module will be individually calibrated. The measurement is done in a fully calibrated setup, which is based on a Rohde&Schwarz CMW 500 base station simulator (system tester). The highest power level is verified in a service mode on one channel per band.

### ***Procedure:***

1. Set the module to operational voltage and on one certain channel in a special service mode by means of company proprietary software.
2. The actual power is measured at several power levels.
3. The gain factors of each individual module are adjusted until the target value is met. The appropriate gain control settings are stored in each module individually (for each power level). The user has no possibility to change these settings later on.
4. The RMS TX target output power and the tolerances see following table:

[www.gemalto.com/m2m](http://www.gemalto.com/m2m)

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Band	RMS Target	Tolerance
LTE 4 QPSK, #RB=1	23dBm	-1/ +0.5dB
LTE 13 QPSK, #RB=1	23dBm	-1/ +0.5dB
LTE 4 16QAM, #RB=1	22dBm	-1/ +0.5dB
LTE 13 16QAM, #RB=1	22dBm	-1/ +0.5dB

Sincerely yours,

Thorsten Liebig  
Manager Approvals

Dr. Jörg Rook  
Head of System Test