FCC and IC Certification Concept

on

Cellular module

LISA-U201

FCC ID: XPYLISAU201

IC 8595A-LISAU201

Report Reference: MDE_UBLOX_1519_Doc_01

according to FCC, IC

Date: 2015-09-09

7layers GmbH
Borsigstraße 11
40880 Ratingen, Germany
T +49 (0) 2102 749 0
F +49 (0) 2102 749 350

Geschäftsführer/
Managing Director:
Dr. Harald Ansorge
www.7layers.com

Registergericht/registered:
Düsseldorf HRB 75554
USt-Id.-Nr./VAT-No. DE203159652
Steuer-Nr./TAX-No. 147/5869/0385

a Bureau Veritas
Group Company

Commerzbank AG Account No. 303 016 000 Bank Code 300 400 00 IBAN DE81 3004 0000 0303 0160 00 Swift Code COBADEFF

Content:

0 Administrative Data

Applicant Data

Company name	u-blox AG
Address	Zürcherstrasse 68 CH-8800 Thalwil Switzerland
Contact person	Mr. Giulio Comar Certification Manager Mr. Piero Laudicina Senior Cellular Product Certification Engineer

Testing Laboratory

Company name	7layers GmbH
Address	Borsigstr. 11 40880 Ratingen Germany
DAkkS ISO/IEC 17025 accreditation	D-PL-12140-01-01
FCC Test Site Listing	96716
Industry Canady Test Site Acceptance	3699A

Project Data

Project Name	MDE_UBLOX_1519
Date	2015-09-09

1 Introduction

For the following cellular module valid FCC and IC certifications are existing:

LISA-U200

FCC ID: XPYLISAU200
IC 8595A-LISAU200
Hardware: 146001
Software: 21.03.00

Based on this product the manufacturer u-blox derived a variant called:

LISA-U201
FCC ID: XPYLISAU201
IC 8595A-LISAU201
Hardware: 214000
Software: 21.03.00

The changes from HW 146001 to HW 146Axx are described in the u-blox document:
Delta Description LISA-U200.pdf / Doc. ID: UBX-15022802 / dated: 09/09/2015

The changes from HW 146Axx to HW 214000 are described in the u-blox document:
Delta Description LISA-U_Rev_4.0.pdf / Doc. ID: UBX-14045347 / dated: 02/04/2015

The purpose of this document is to describe the FCC and IC certification concept for the variant LISA-U201 partly based on the test results of LISA-U200.

2 Approach in regards to FCC and IC certification

Since some of the changes are related to the transmitter part, a new certification with new FCC ID and IC ID is required. But due to the kind of changes it can be assumed that there are only minor differences in the transmitter performance in comparison to LISA-U200. Accordingly the approach is to re-use some of the results of the previous certification.

The following tables give an overview about all applicable test cases and which of them were tested with XPYLISAU201 / 8595A-LISAU201 and which of them shall be re-used from XPYLISAU200 / 8595A-LISAU200:

A) Intentional Radiator Part

Test Case	GSM modes	UMTS modes
RF Power Output power	tested (1)	tested (1)
Spurious emissions at antenna terminals	tested (1)	tested (1)
Field strength of spurious radiation	re-used (2)	tested (1)
Emission and Occupied Bandwidth	re-used (2)	tested (1)
Band edge compliance	re-used (2)	tested (1)
Frequency Stability	re-used (2)	re-used (3)
Peak to Average Ratio	re-used (2)	re-used (3)
Conducted Emissions on AC Power line	re-used (2)	re-used (3)

(1) Tested with new variant XPYLISAU201 / IC: 8595A-LISAU201
documented in 7Layers Test Report “MDE_UBLOX_1519_FCCa” (GSM & UMTS modes)

(2) Re-used from XPYLISAU200 / IC: 8595A-LISAU200
documented in CETECOM Test Report “TR6-0082-11-1-2a” (GSM modes)

(3) Re-used from XPYLISAU200 / IC: 8595A-LISAU200
documented in CETECOM Test Report “TR6-0082-11-1-2b” (UMTS modes)

B) Unintentional Radiator Part

Test Case	GSM modes	UMTS modes
Conducted emissions in AC power line (§15.107)	re-used (4)	re-used (4)
Spurious Radiated Emissions (§15.109)	re-used (4)	re-used (4)

(4) Tested with new variant XPYLISAU200 / IC: 8595A-LISAU200
documented in CETECOM Test Report “TR6-0082-11-1-2c”