Test Lab
Cert 2951.01

RF EXPOSURE REPORT

Product:	VLC OBU
Model Name:	ZTE AT21
FCC ID:	2AHR8-ZTEAT21
Applicant:	OCTO Telematics S.p:A
Address:	Via Lamaro 51 Rome RM 00173 Italy
Manufacturer:	ZTE Corporation
Address:	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China
Prepared by:	Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch
Lab Location:	No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China
TEL:	+86 769 8593 5656
FAX:	+86 769 8593 1080
E-MAIL:	customerservice.dg@cn.bureauveritas.com
Report No.:	SA160728W002
Received Date:	Jul. 28, 2016
Test Date:	Jul. 29, 2016 ~ Aug. 09, 2016
Issued Date:	Aug. 10, 2016

This report should not be used by the client to claim product certification, approval, or endorsement by A2LA or any government agencies.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA160728W002	Original release	Aug. 10, 2016

Bureau Veritas Shenzhen Co., Ltd.
Dongguan Branch

No. 34, Chenwulu Section, Guantai Rd., Houjie Town, Dongguan City, Guangdong 523942, China

Tel: +86 769 8593 5656
Fax: +86 769 8593 1080
Email: customerservice.dg@cn.bureauveritas.com

1 CERTIFICATION

PRODUCT:	VLC OBU
BRAND NAME:	OCTO
MODEL NAME:	ZTE AT21
APPLICANT:	OCTO Telematics S.p:A
TESTED:	Jul. 29, 2016 ~ Aug. 09, 2016
TEST SAMPLE:	Production Unit
STANDARDS:	**FCC Part 2 (Section 2.1091)**
	FCC OET Bulletin 65, Supplement C (01-01)
	IEEE C95.1

The above equipment has been tested by **Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ , **DATE:** Aug. 10, 2016
(Yuqiang Yin/ Engineer)

APPROVED BY : _____ , **DATE:** Aug. 10, 2016
(Bill Yao / Manager)

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

EUT	VLC OBU	
MODEL NAME	ZTE AT21	
MODEL SUB-NAME	SuperEasy, Compact	
NOMINAL VOLTAGE	12Vdc	
OPERATING TEMPERATURE RANGE	-30 ~ 75℃	
MODULATION TYPE	**GSM**	GMSK, 8PSK
OPERATING FREQUENCY	**GSM**	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR PCS 1900)
ANTENNA TYPE	Fixed Internal Antenna	
ANTENNA GAIN	0.23dBi gain For GSM 850 2dBi gain For PCS 1900	
HW Version	AT21MB_C	
SW Version	L208V01.01B09S	
I/O PORTS	Refer to user's manual	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. Above two sub-names: SuperEasy and Compact are identical in product design except the power port.
3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

3 RF EXPOSURE

3.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm^2)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

3.2 MPE CALCULATION FORMULA

Pd = (Pout*G) / (4*pi*r2)

where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

3.3 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

3.4 CONDUCTED POWER

Band	GSM850		
Channel	128	189	251
Frequency (MHz)	824.2	836.4	848.8
GPRS 8	32.81	**32.89**	32.87
GPRS 10	31.87	31.93	31.87
GPRS 11	29.71	29.75	29.73
GPRS 12	28.60	28.66	28.61

Band	GSM1900		
Channel	512	661	810
Frequency (MHz)	1850.2	1880.0	1909.8
GPRS 8	**29.56**	29.38	29.36
GPRS 10	28.29	28.44	28.58
GPRS 11	25.87	25.81	26.24
GPRS 12	24.58	24.53	24.95

3.5 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

GSM

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Conducted Time Average Power (dBm)	E.I.R.P Power (mW)/8	Power Density (mW/cm^2)	limit (mW/cm^2)	PASS / FAIL
GSM850	836.4	GPRS12	0.23	32.89	256.395	0.051	0.56	PASS
PCS1900	1850.2	GPRS12	2	29.56	179.023	0.036	1.00	PASS