



Symposium on
International
Automotive
Technology 2017
Smart, Safe &
Sustainable Mobility

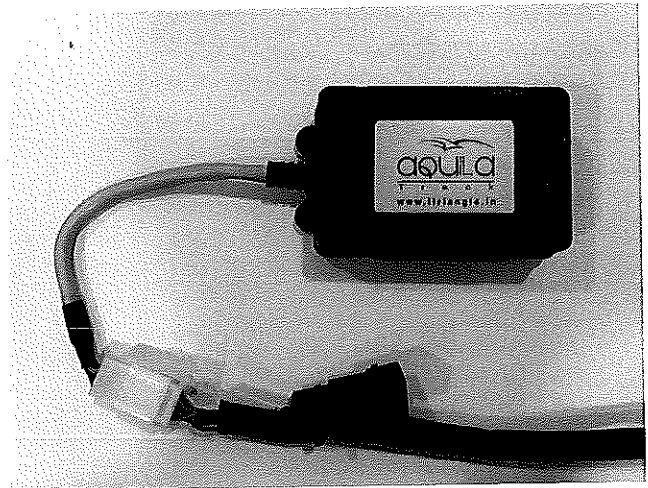
TEST REPORT

Report No.: ARAI/AED/CT/OC-1617-10285/1273
Dated: 17-Mar-2017

CONFIDENTIAL



1.0	Name and address of the customer	ITRIANGLE INFOTECH PVT. LTD. 803/A (803/A-1-3), 76 th 'A' Cross, West of Chord Road, 6 th Block Rajaji Nagar, Bengaluru, Karnataka 560010	
2.0	Customer letter reference	Work Order No. aQa/TS101/16-17/0338 Dated: 23-02-2017	
3.0	Description of the Device Under Test (DUT)	DUT Name	Vehicle Tracking System
		Manufacture Name	ITRIANGLE INFOTECH PVT. LTD.
		Model Name	TS101 Advanced
		Model No.	TS101 Advanced
		Serial No.	170228901
		Software Version	1_34TS101New_E
	Hardware Version	TS101_Advanced_Schematic_Rev1.0	
4.0	Test objective	To carry out EMI/EMC tests as per details given in table 8.0	
5.0	Condition of the test component	The test component was received in good condition.	



A C GAMI ENGINEER	A A PAPADE MANAGER	A A DESHPANDE Dy.DIRECTOR & HoD

ISO 9001, ISO 14001, OHSAS 18001 Certified and ISO/IEC17025 Accredited Organization

Report No: ARAI/AED/CT/OC-1617-10285/1273
Dated: 17-Mar-2017

CONFIDENTIAL

6.0 FUNCTIONALITY VERIFICATION

DUT was a GSM & GPS based Vehicle tracker unit powered with 24 VDC power supply. DUT has a 3.70 V, 700 mAh internal battery. GPS receives the latitude and longitude and other GPS related information and it is stored in flash memory and then transferred to server through GPRS then it is stored and plotted on the map. DUT has 2 digital input/output, and 1 analog input.

For functionality verification data log on the server was checked before, during and after test.

7.0 FUNCTIONAL STATUS CLASSIFICATION

7.1 Class A

All functions of a device/system perform as designed during and after exposure to disturbance.

7.2 Class B

All functions of a device/system perform as designed during exposure: however, one or more of them can go beyond specified tolerance. All functions return automatically to within normal limits after exposure is removed. Memory functions remain Class A.

7.3 Class C

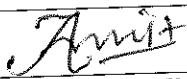
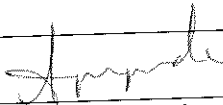
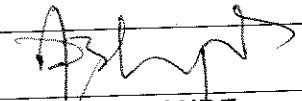
One or more functions of a device/system does not perform as designed during exposure but returns automatically to normal operation after exposure is removed.

7.4 Class D

One or more functions of a device/system does not perform as designed during exposure and does not return to normal operation until exposure is removed and the device/system is reset by simple operator/use action.

7.5 Class E

One or more functions of a device/system does not perform as designed during and after exposure and cannot be returned to proper operation without repairing or replacing the device/system.

		
A C GAMI ENGINEER	A A PAPADE MANAGER	A A DESHPANDE Dy.DIRECTOR & HoD

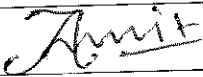
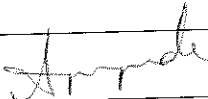
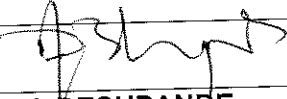
Report No: ARAI/AED/CT/OC-1617-10285/1273
Dated: 17-Mar-2017

CONFIDENTIAL

8.0 TEST DETAILS						
Sr. no.	Test title	Annexure no.	Number of pages	Reference standard	Acceptance criteria	Functional status classification
8.1 Conducted transient immunity on supply line						
8.1.1	Pulse 1	01	06	AIS004 (Part 3) :2009	Class C	Class B
8.1.2	Pulse 2a				Class B	Class A
8.1.3	Pulse 2b				Class C	Class B
8.1.4	Pulse 3a				Class A	Class A
8.1.5	Pulse 3b				Class A	Class A
8.1.6	Pulse 4				Class B	Class A
8.2 Radiated immunity test						
8.2.1	Bulk Current Injection (BCI Method)	02	04	AIS004 (Part 3) :2009	-	Pass
8.2.2	Radiated Immunity (ALSE Method)	03	06		-	Pass
8.3 Radiated emission test						
8.3.1	Radiated emission test	04	07	AIS004 (Part 3) :2009	-	Pass
8.4 Conducted transient emission test						
8.4.1	Positive Transient Emission	05	04	AIS004 (Part 3) :2009	+150V	Pass
8.4.2	Negative Transient Emission				-450V	

9.0 CONCLUSION

DUT complies with the requirements as per AIS004 (Part3): 2009.

		
A C GAMI ENGINEER	A A PAPADE MANAGER	A A DESHPANDE Dy.DIRECTOR & HOD