Risk Assessment and Risk Reduction for DIRECTIVE 2014/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Applicant: Lumi United Technology Co., Ltd
Manufacturer: Lumi United Technology Co., Ltd
Product name: Hub E1
Brand name: Aqara
Model name: HE1-G01
Software version: 3.2.4_0028
Hardware version: T0

We Lumi United Technology Co., Ltd have performed the risk assessment procedure and found that our product in the case of a transmitter, when the transmitter is properly installed, maintained and used for its intended purpose it generates radio waves emissions that do not create harmful interference, while unwanted radio waves emissions generated by the transmitter (e.g. in adjacent channels) with a potential negative impact on the goals of radio spectrum policy should be limited to such a level that, according to the state of the art, harmful interference is avoided; and, in the case of a receiver, it has a level of performance that allows it to operate as intended and protects it against the risk of harmful interference, in particular from shared or adjacent channels, and, in so doing, supports improvements in the efficient use of shared or adjacent channels and also evaluated the health and safety risk and other aspects of public interest protection.

We have tried to avoid the risk by designing inherent benign, pre-testing against relevant requirement and adding more precaution steps to enhance the quality, also will adding warning statement in the relevant documents to avoid non-proper installation which will cause non- intended purpose or usage.

We also seek to the professional authority to test and evaluate our products to get the official certificate, which will prove that our product meet the revenant essential requirements, helping the user to understand that our product is low risk.

Risk Analysis

		Risk Item	Analysis
Environmental Condition	1	OperatingTemperature-10°C ~ 40 °C	Meet the requirement of User manual
	2	Operating Humidity 0% ~ 95%	Meet the requirement of User manual
	3	Operating Voltage DC 5.0V (Supplied by adapter)	Meet the requirement of manufacturer's design
	4	Intended Used	Office or Home used
RF (ZIGBEE)	1	Maximum transmit power	Meet the requirements of Test Standards ETSI EN300 328 V2.2.2
	2	Power Spectral Density	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	3	Duty Cycle, Tx-sequence, Tx-gap	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	4	Medium Uitilisation (MU) factor	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	5	Occupied Channel Bandwidth	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	6	Transmitter unwanted emissions in the out-of-band domain	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	7	Transmitter unwanted emissions in the spurious domain	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	8	Receiver spurious emissions	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	9	ReceiverBlocking	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
RF (2.4G WiFi)	1	RF Output Power	Meet the requirements of Test Standards ETSI EN300 328 V2.2.2
	2	Power Spectral Density	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	3	Duty Cycle, Tx-sequence, Tx-gap	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	4	Medium Utilisation (MU) factor	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	5	Adaptivity	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	6	Occupied Channel Bandwidth	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	7	Transmitter unwanted emissions in the out-of-band domain	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	8	Transmitter unwanted emissions in the spurious domain	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	9	Receiver spurious emissions	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
	10	Receiver Blocking	MeettherequirementsofTest Standards ETSI EN300 328V2.2.2
EMC	1	EMI Performance	Meet the requirements of Test Standards ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4 EN 55032:2015/A11:2020 EN 55035:2017
	2	EMS Performance	Meet the requirements of Test Standards ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4 EN 55032:2015/A11:2020 EN 55035:2017
	3	UnderVehicularEnvironment	MeettherequirementsofTest Standards
Safety	1	ElectricShockHazards	InherentRegulating Network Protected (Meet Test Standard

			EN 62368-1:2014+A11:2017
	2	MechanicalHazards	InherentRegulating Network Protected (Meet EN 62368-1:2014+A11:2017
	3	FireHazards	InherentRegulating Network Protected (Meet Test Standard EN 62368-1:2014+A11:2017
RF Exposure	4	RF Health	Fulfilled the requirements of Test Standards EN 50663:2017 EN 62479: 2010

After evaluation, our product is found to satisfy all the technical regulations applicable to the product within the scope of Council Directives2014/53/EU , according to 3.1a, 3.1b and 3.2 of the Directive. Some Harmonized Standard have not published, based on the Non-Harmonized Standard and evaluated by NB, when the harmonized standards published, we will renew them.

List of the Followed Test Standards for Assessment of RED Requirement

EN 62368-1:2014+A11:2017
EN 50665:2017
EN 62311: 2008
EN 55032:2015/A11:2020
EN 55035:2017
ETSI EN 301489-1 V2.2.3
ETSI EN 301489-17 V3.2.4
ETSI EN 300328-1 V2.2.2

Yours sincerely,

Signed by or for the Applicant: 

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