

## RF Exposure Report

**Report No.:** SA170510C11

**FCC ID:** VUICGA4131

**Test Model:** CGA4131

**Series Model:** CGA4131XXXXX (X = 0-1, A-Z, a-z, "-" or blank, for marketing purpose)

**Received Date:** May 10, 2017

**Test Date:** May 22, 2017

**Issued Date:** June 08, 2017

**Applicant:** PEGATRON CORPORATION

**Address:** 5F, No. 76 Ligong St., Beitou, Taipei 112, Taiwan

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Hsin Chu Laboratory

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Taiwan R.O.C.

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by any government agencies.

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### Release Control Record

Issue No.	Description	Date Issued
SA170510C11	Original release.	June 08, 2017

## 1 Certificate of Conformity

**Product:** D3.1 Cable Gateway

**Brand:** Technicolor

**Test Model:** CGA4131

**Series Model:** CGA4131XXXXX (X = 0-1, A-Z, a-z, "-" or blank, for marketing purpose)

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** PEGATRON CORPORATION

**Test Date:** May 22, 2017

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan 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 :**

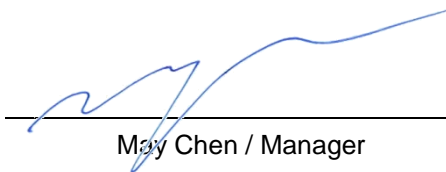


**Date:**

June 08, 2017

Claire Kuan / Specialist

**Approved by :**



**Date:**

June 08, 2017

May Chen / Manager

## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

f = Frequency in MHz ; \*Plane-wave equivalent power density

### 2.2 MPE Calculation Formula

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 26cm away from the body of the user.  
So, this device is classified as **Mobile Device**.

## 2.4 Antenna Gain

2.4GHz					
Transmitter Circuit	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type	Cable Length
Chain 0	2.0	2400 ~ 2483.5	PCB	i-pex(MHF)	95mm
Chain 1	2.0	2400 ~ 2483.5	PCB	i-pex(MHF)	210mm
5GHz					
Transmitter Circuit	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type	Cable Length
Chain 0	2.1	5150 ~ 5250	PCB	i-pex(MHF)	95mm
	2.6	5250 ~ 5350	PCB	i-pex(MHF)	155mm
	2.4	5470 ~ 5725			
	2.4	5725 ~ 5850			
Chain 1	2.7	5150 ~ 5250	PCB	i-pex(MHF)	210mm
	2.3	5250 ~ 5350	PCB	i-pex(MHF)	135mm
	2.3	5470 ~ 5725			
	2.7	5725 ~ 5850			
Chain 2	2.7	2400 ~ 2483.5	PCB	i-pex(MHF)	170mm
	2.6	5150 ~ 5250			
	2.4	5250 ~ 5350			
	2.4	5470 ~ 5725			
	2.4	5725 ~ 5850			
Chain 3	3.5	5150 ~ 5250	PCB	i-pex(MHF)	240mm
	3.0	5250 ~ 5350			
	3.4	5470 ~ 5725			
	3.9	5725 ~ 5850			

## 2.5 Calculation Result

Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	537.032	5.01	26	0.10019	1
5180-5240	844.646	8.78	26	0.75079	1
5745-5825	995.2	8.89	26	0.90730	1

Note:

2.4GHz: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 5.01\text{dBi}$

5GHz:

UNII-1: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 8.78\text{dBi}$

UNII-3: Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / 4] = 8.89\text{dB}$

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