

FCC RF EXPOSURE REPORT

FCC ID: PJZ272XY1

Project No. : 1601C101
Equipment : (1) GE 4 Port WiFi 802.11ac Gateway
(2) GPON 4 Port WiFi 802.11ac Gateway
Model : (1) ZNID-GE-2726A1-XX, ZNID-GE-2726A1-NYY,
ZNID-GE-2726A1-XX-NYY, ZNID-GE-2726H1-XX,
ZNID-GE-2726H1-NYY, ZNID-GE-2726H1-XX-NYY
(2) ZNID-GPON-2727A1-XX, ZNID-GPON-2727A1-NYY,
ZNID-GPON-2727A1-XX-NYY, ZNID-GPON-2726A1-XX,
ZNID-GPON-2726A1-NYY, ZNID-GPON-2726A1-XX-NYY,
ZNID-GPON-2726H1-XX, ZNID-GPON-2726H1-NYY,
ZNID-GPON-2726H1-XX-NYY
Applicant : ZHONG TECHNOLOGIES, INC.
Address : 7195 Oakport Street Oakland, CA 94621 USA
According: : FCC Guidelines for Human Exposure IEEE C95.1

B T L I N C .

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MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filed Antenna

2.4G WIFI

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	N/A	N/A	PCB	U.FL	3
2	N/A	N/A	PCB	U.FL	3

Note:

(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R).

(2) ANT 1 for 1TX was the worst case.

Operating Mode	1TX	2TX
TX Mode		
802.11b	V (ANT 1)	-
802.11g	V (ANT 1)	-
802.11n(20MHz)	-	V (ANT 1+ ANT 2)
802.11n(40MHz)	-	V (ANT 1+ ANT 2)

5G WIFI

Ant.	Brand	Model Name	Antenna Type	Connector	Gain(dBi)
1	N/A	N/A	PCB	U.FL	2
2	N/A	N/A	PCB	U.FL	2
3	N/A	N/A	PCB	U.FL	2

Operating Mode TX Mode	1TX	3TX
802.11a	V (ANT 1)	-
802.11n(20MHz)	-	V (ANT 1+ANT 2+ANT 3)
802.11n(40MHz)	-	V (ANT 1+ANT 2+ANT 3)
802.11ac(20MHz)	-	V (ANT 1+ANT 2+ANT 3)
802.11ac(40MHz)	-	V (ANT 1+ANT 2+ANT 3)
802.11ac(80MHz)	-	V (ANT 1+ANT 2+ANT 3)

TEST RESULTS

2.4G WIFI

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX B MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3	1.9953	26.48	444.6313	0.17658360	1	Complies
3	1.9953	26.63	460.2566	0.18278913	1	Complies
3	1.9953	26.56	452.8976	0.17986654	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX G MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3	1.9953	26.43	439.5416	0.17456227	1	Complies
3	1.9953	26.66	463.4469	0.18405617	1	Complies
3	1.9953	26.39	435.5119	0.17296187	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N20M MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3	1.9953	26.62	459.1980	0.18236873	1	Complies
3	1.9953	26.57	453.9416	0.18028117	1	Complies
3	1.9953	26.63	460.2566	0.18278913	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N40M MODE /CH03, CH06, CH09		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
3	1.9953	25.61	363.9150	0.14452746	1	Complies
3	1.9953	25.57	360.5786	0.14320242	1	Complies
3	1.9953	25.61	363.9150	0.14452746	1	Complies

UNII-1

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX A MODE_Total / CH36, CH40, CH48		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	19.75	94.4061	0.02978176	1	Complies
2	1.5849	21.87	153.8155	0.04852330	1	Complies
2	1.5849	22.34	171.3957	0.05406925	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_Total / CH36, CH40, CH48		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	21.25	133.3521	0.04206786	1	Complies
2	1.5849	22.33	171.0015	0.05394490	1	Complies
2	1.5849	22.98	198.6095	0.06265423	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_Total / CH38, CH46		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	19.83	96.1612	0.03033544	1	Complies
2	1.5849	24.59	287.7398	0.09077168	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC-20M MODE_Total / CH36, CH40, CH48		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	21.87	153.8155	0.04852330	1	Complies
2	1.5849	22.35	171.7908	0.05419390	1	Complies
2	1.5849	22.96	197.6970	0.06236636	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC-40M MODE_Total / CH38, CH46		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	19.98	99.5405	0.03140150	1	Complies
2	1.5849	25.27	336.5116	0.10615742	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC-80M MODE_Total /CH42		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	19.82	95.9401	0.03026568	1	Complies

UNII-3

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX A MODE_Total / CH149, CH157, CH165		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	18.95	78.5236	0.02477139	1	Complies
2	1.5849	18.47	70.3072	0.02217943	1	Complies
2	1.5849	17.23	52.8445	0.01667057	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_Total / CH149, CH157, CH165		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	13.36	21.6770	0.00683833	1	Complies
2	1.5849	13.11	20.4644	0.00645580	1	Complies
2	1.5849	13.13	20.5589	0.00648560	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_Total / CH151, CH159		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	13.58	22.8034	0.00719367	1	Complies
2	1.5849	13.23	21.0378	0.00663667	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC-20M MODE_Total / CH149, CH157, CH165		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	14.82	30.3389	0.00957085	1	Complies
2	1.5849	13.77	23.8232	0.00751537	1	Complies
2	1.5849	13.09	20.3704	0.00642614	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC-40M MODE_Total / CH151, CH159		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	15.75	37.5837	0.01185633	1	Complies
2	1.5849	15.48	35.3183	0.01114167	1	Complies

EUT:	GE 4 Port WiFi 802.11ac Gateway	Model Name :	ZNID-GE-2726A1
Temperature:	24 °C	Relative Humidity:	52%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC-80M MODE_Total / CH155		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
2	1.5849	17.93	62.0869	0.01958621	1	Complies

For 2.4G+5G simultaneous transmission MPE:

$$0.1841/1+0.1062/1=0.2903<1$$

Note: the calculated distance is 20 cm.