



## **Certification Exhibit**

**FCC ID: R7PMGPM2B1**

**FCC Rule Part: 47 CFR Part 2.1091**

**Project Number: 721002294**

Manufacturer: Landis + Gyr Technology, Inc

Model Name/Number: S6G2 N651

Product Marketing Name: Series 6 Gen 2 Network Node

## **RF Exposure**

**General Information:**

Applicant: Landis + Gyr Technology, Inc  
 Device Category: Mobile  
 Environment: General Population/Uncontrolled Exposure

**Purpose:**

The purpose of this document is the RF exposure evaluation of the S6G2 N651 model in accordance with FCC 47 CFR Part 2.1091.

**Description:**

Landis+Gyr's Series 6 Gen 2 Network Node (S6G2 N651) is key to building a single, integrated IoT network for your utility future. This product is a fully-functional, Network Interface Card (NIC) for the network that is mPCIe standard-enabled to allow simple network and sensor device integration.

**Technical Information (900MHz– FCC 15.247):**

Antenna Type: Dipole Antenna  
 Antenna Gain: 5.7 dBi  
 Maximum Transmitter Conducted Power: 29.81dBm, 957.19mW  
 Maximum System EIRP: 35.51dBm, 3556.31mW  
 Exposure Conditions: 22 centimeters  
 \*Worst Case from all 900 MHz modes (FHSS/Hybrid/DTS)

**Technical Information (900MHz– FCC 15.247):**

Antenna Type: Sector Antenna  
 Antenna Gain: 9 dBi  
 Maximum Transmitter Conducted Power: 26.85dBm, 484.17mW  
 Maximum System EIRP: 35.85dBm, 3845.92 mW  
 Exposure Conditions: 23 centimeters  
 \*Worst Case from all 900 MHz modes (FHSS/Hybrid/DTS)

**RF Exposure Calculation****Table 1: Device Characteristics**

Technical Parameters	Dipole Antenna	Sector Antenna
Frequency Range (GHz)	0.9022-0.9278	0.9022-0.9278
Frequency Range (MHz)	902.2 – 927.8	902.2 – 927.8
Frequency (MHz)	902.2	927.8
Separation Distance (cm)	20.00	20.0
Separation Distance (m)	0.2000	0.200
Antenna Gain (dBi)	5.70	9.00
ERP Easily Determined	YES	YES
1-g body or 10-g extremity	Body	Body
Conducted Power (dBm)	29.81	26.85
Conducted Power (mW)	957.19	484.17
Duty Factor (Source-Based) %	100.0	100.0
Maximum (Source-Based) Time-Averaged Conducted Power (mW)	957.19	484.17
Maximum (Source-Based) Time-Averaged ERP (mW)	2168.48	2345.07

Maximum (Source-Based) Time-Averaged EIRP (mW)	3556.31	3845.92
Maximum Output (mW)	2168.48	2345.07

**Table 2: 47 CFR 1.1307(b)(3)(i)(C) MPE – Based Exemption Pth (mW)**

Technical Parameters	Dipole Antenna	Sector Antenna
$\lambda / 2\pi$ (m)	0.053	0.051
$R \geq \lambda / 2\pi$	YES	YES
Maximum (Source-Based) Time-Averaged ERP (W)	2.1685	2.3451
ERP Threshold (W)	0.4619	0.4750
Exemption	NO	NO

**MPE Calculation**

The Power Density (W/m<sup>2</sup>) is calculated as follows:

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

Where:

S = power density (in appropriate units, e.g., W/m<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g., W)

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 (appropriate units, e.g., m)

**Table 3: MPE Calculation (Dipole Antenna & Sector Antenna)**

Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/cm <sup>2</sup> )	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )
902.2	29.81	0.60	957.19	5.7	3.715	22	0.585
902.2	26.85	0.60	484.17	9	7.943	23	0.579

**Conclusion**

The power density calculation is within compliance as per FCC § 1.1310(e)(1).