Exhibit #2

GPS Re-Radiation System Technical Description

GM proposes to install the five (5) fixed GPS re-radiation GLI-Metro-G repeaters which will be located indoors in the test crash hall, which is a facility/building located at the General Motors Milford Proving Grounds in Milford, Michigan. The building in question is used exclusively for GM operations to conduct vehicle crash testing and telematics system testing under a variety of constraints and scenarios.

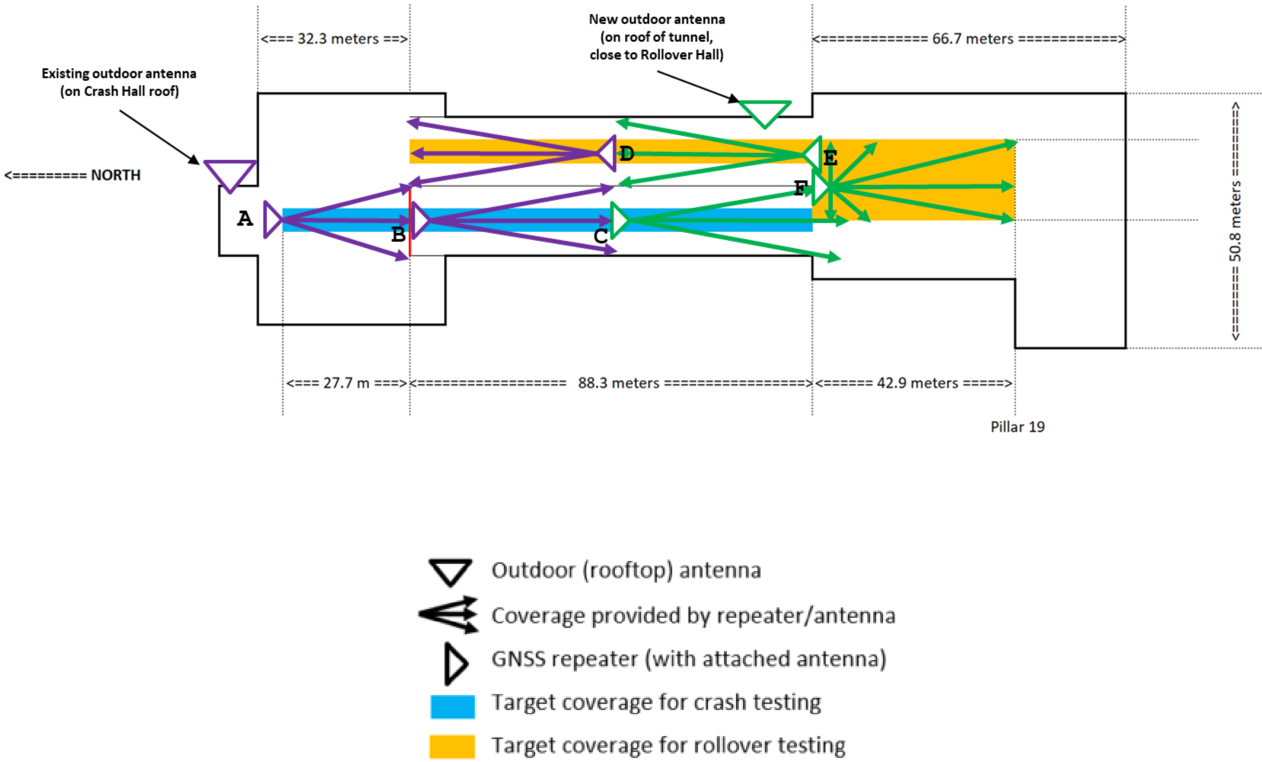
A total of two rooftop active antennas (one existing, one new) will be used and locations are as follows:

No.	Rooftop Antenna (receives GPS signal from satellites)	Latitude	Longitude	Location
1.	Active Antenna	FCC license acquired already		
2.	Active Antenna	42°33'52.76"N	83°40'42.19"W	Outdoor/Rooftop

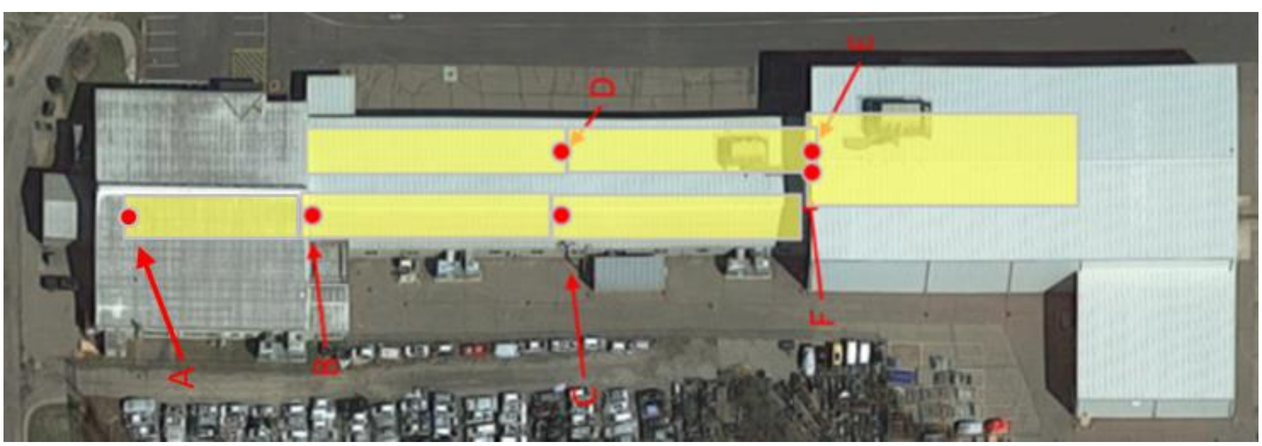
The locations of the GPS Repeaters (with their attached passive transmitting antennas) for which GMRC seeks approval are given in the following table. Repeater A is existing and an FCC license has already been acquired for it; only a change in power level is being proposed. GMRC proposes to add Repeaters B, C, D, E, and F to the license.

Repeater	Transmitting Equipment	Latitude	Longitude	Location
A	GLI-Metro-G Repeater	42°33'56.60"N	83°40'42.70"W	Indoor
B	GLI-Metro-G Repeater	42°33'55.53"N	83°40'42.70"W	Indoor
C	GLI-Metro-G Repeater	42°33'54.10"N	83°40'42.70"W	Indoor
D	GLI-Metro-G Repeater	42°33'54.10"N	83°40'42.41"W	Indoor
E	GLI-Metro-G Repeater	42°33'52.54"N	83°40'42.41"W	Indoor
F	GLI-Metro-G Repeater	42°33'52.54"N	83°40'42.48"W	Indoor

Below is the system diagram of the crash test facility, showing the GPS repeater locations.



Below is the aerial view of the crash test facility with the GPS repeater locations (A is existing, B, C, D, E, and F are proposed).



Emission Calculations

Emission calculation per antenna/GPS repeater[1] are explained below, and compliance with Redbook section 8.3.27 is demonstrated.

For simplicity the calculations are performed as if the antenna were omnidirectional, i.e. the figure for forward gain (gain in the main lobe) is used in all directions. This simplification is acceptable because it never falsely indicates compliance with Redbook section 8.3.27; the simplification never results in understatement of the power (and in some cases results in overstatement of the power).

Repeater A re-radiates both L1 and L2, while Repeaters B, C, D, E, and F re-radiate L1 but not L2.

Power Settings

The GPS repeater offers an output power setting, which is a whole number from -85 to -65 inclusive. It specifies the output power of the repeater, which is then supplied to the passive transmitting antenna that is attached to the repeater. The proposed output power settings in order to receive good coverage in the crash test facility are as below:

Repeater	Transmit ERP L1	Transmit ERP L2	Units
A	-65	-65	dBm
B	-70	NA	dBm
C	-70	NA	dBm
D	-70	NA	dBm
E	-70	NA	dBm
F	-65	NA	dBm

Assessment against 8.3.27 section “e”

Section 8.3.27 of the NTIA “Manual of Regulations and Procedures for Federal Radio Frequency Management (Redbook)”, Sept 2017 Revision of the Sept 2015 edition, states the following in section “e”:

> “The area of potential interference to GPS reception (e.g., military or contractor facility) has to be under the control of the user.”

In this request for license modification GMRC considers the “area of potential interference to GPS reception” to be the area in which the received power (as EIRP) is greater than -140 dBm.

The crash test facility (the building shown earlier) is located inside the GM Milford Proving Grounds, which is a large private access controlled campus surrounded by a fence. Thus this campus is clearly under the control of the user. For each repeater, the area in which the received power is greater than -140 dBm EIRP falls completely within this campus, and thus the area of potential interference to GPS reception is under the control of the user. Therefore the proposed solution is in compliance with 8.3.27 section “e”.

The calculations that support this claim are provided below. First we define the area of potential interference for each repeater by calculating the distance of the -140 dBm threshold from that repeater.

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[1] Each GPS re-radiator consists of a repeater with an attached passive transmitting antenna.

After that we show that all of these areas of potential interference are within the GM Milford Proving Grounds and thus are “under the control of the user”.

Calculate areas of potential interference

Antenna A - L1 Calculation				
Label	**Parameter**	**Value**	**Units**	**Notes / Formula**
A	Transmit ERP	316	pW	Output power of repeater
B	Frequency	1575.42	MHz	L1 center frequency
C	Distance	505	feet	Distance at which received power falls below -140 dBm EIRP = **D** * 3.2808 feet/meter
D	Distance	154	meters	Distance at which received power falls below -140 dBm EIRP
E	Free Space Path Loss	80.1	dB	= 20 * log(**B**) + 20 * log(**D**) - 27.55
F	Transmit ERP	-65.0	dBm	Output power of repeater = 10 * log(**A** / 1,000,000,000)
G	Transmit EIRP	-62.85	dBm	Output power of repeater = **F** + 2.15
H	Antenna Gain	3	dBi	
I	Received Power Threshold of Interest	-140.0	dBm	= **G** – **E** + **H**

Antenna A - L2 Calculation				
Label	**Parameter**	**Value**	**Units**	**Notes / Formula**
A	Transmit ERP	316	pW	Output power of repeater
B	Frequency	1227.60	MHz	L2 center frequency
C	Distance	459	feet	Distance at which received power falls below -140 dBm EIRP = **D** * 3.2808 feet/meter
D	Distance	140	meters	Distance at which received power falls below -140 dBm EIRP
E	Free Space Path Loss	77.2	dB	= 20 * log(**B**) + 20 * log(**D**) - 27.55
F	Transmit ERP	-65.0	dBm	Output power of repeater = 10 * log(**A** / 1,000,000,000)
G	Transmit EIRP	-62.85	dBm	Output power of repeater = **F** + 2.15
H	Antenna Gain	0	dBi	
I	Received Power Threshold of Interest	-140.0	dBm	= **G** – **E** + **H**

Antenna B - L1 Calculation				
Label	**Parameter**	**Value**	**Units**	**Notes / Formula**
A	Transmit ERP	100	pW	Output power of repeater
B	Frequency	1575.42	MHz	L1 center frequency
C	Distance	284	feet	Distance at which received power falls below -140 dBm EIRP = **D** * 3.2808 feet/meter
D	Distance	86.7	meters	Distance at which received power falls below -140 dBm EIRP
E	Free Space Path Loss	75.2	dB	= 20 * log(**B**) + 20 * log(**D**) - 27.55
F	Transmit ERP	-70.0	dBm	Output power of repeater = 10 * log(**A** / 1,000,000,000)
G	Transmit EIRP	-67.85	dBm	Output power of repeater = **F** + 2.15
H	Antenna Gain	3	dBi	
I	Received Power Threshold of Interest	-140.0	dBm	= **G** – **E** + **H**

Antenna C - L1 Calculation				
Label	**Parameter**	**Value**	**Units**	**Notes / Formula**
A	Transmit ERP	100	pW	Output power of repeater
B	Frequency	1575.42	MHz	L1 center frequency
C	Distance	284	feet	Distance at which received power falls below -140 dBm EIRP = **D** * 3.2808 feet/meter
D	Distance	86.7	meters	Distance at which received power falls below -140 dBm EIRP
E	Free Space Path Loss	75.2	dB	= 20 * log(**B**) + 20 * log(**D**) - 27.55
F	Transmit ERP	-70.0	dBm	Output power of repeater = 10 * log(**A** / 1,000,000,000)
G	Transmit EIRP	-67.85	dBm	Output power of repeater = **F** + 2.15
H	Antenna Gain	3	dBi	
I	Received Power Threshold of Interest	-140.0	dBm	= **G** – **E** + **H**

Antenna D - L1 Calculation				
Label	**Parameter**	**Value**	**Units**	**Notes / Formula**
A	Transmit ERP	100	pW	Output power of repeater
B	Frequency	1575.42	MHz	L1 center frequency
C	Distance	284	feet	Distance at which received power falls below -140 dBm EIRP = **D** * 3.2808 feet/meter
D	Distance	86.7	meters	Distance at which received power falls below -140 dBm EIRP
E	Free Space Path Loss	75.2	dB	= 20 * log(**B**) + 20 * log(**D**) - 27.55
F	Transmit ERP	-70.0	dBm	Output power of repeater = 10 * log(**A** / 1,000,000,000)
G	Transmit EIRP	-67.85	dBm	Output power of repeater = **F** + 2.15
H	Antenna Gain	3	dBi	
I	Received Power Threshold of Interest	-140.0	dBm	= **G** – **E** + **H**

Antenna E - L1 Calculation

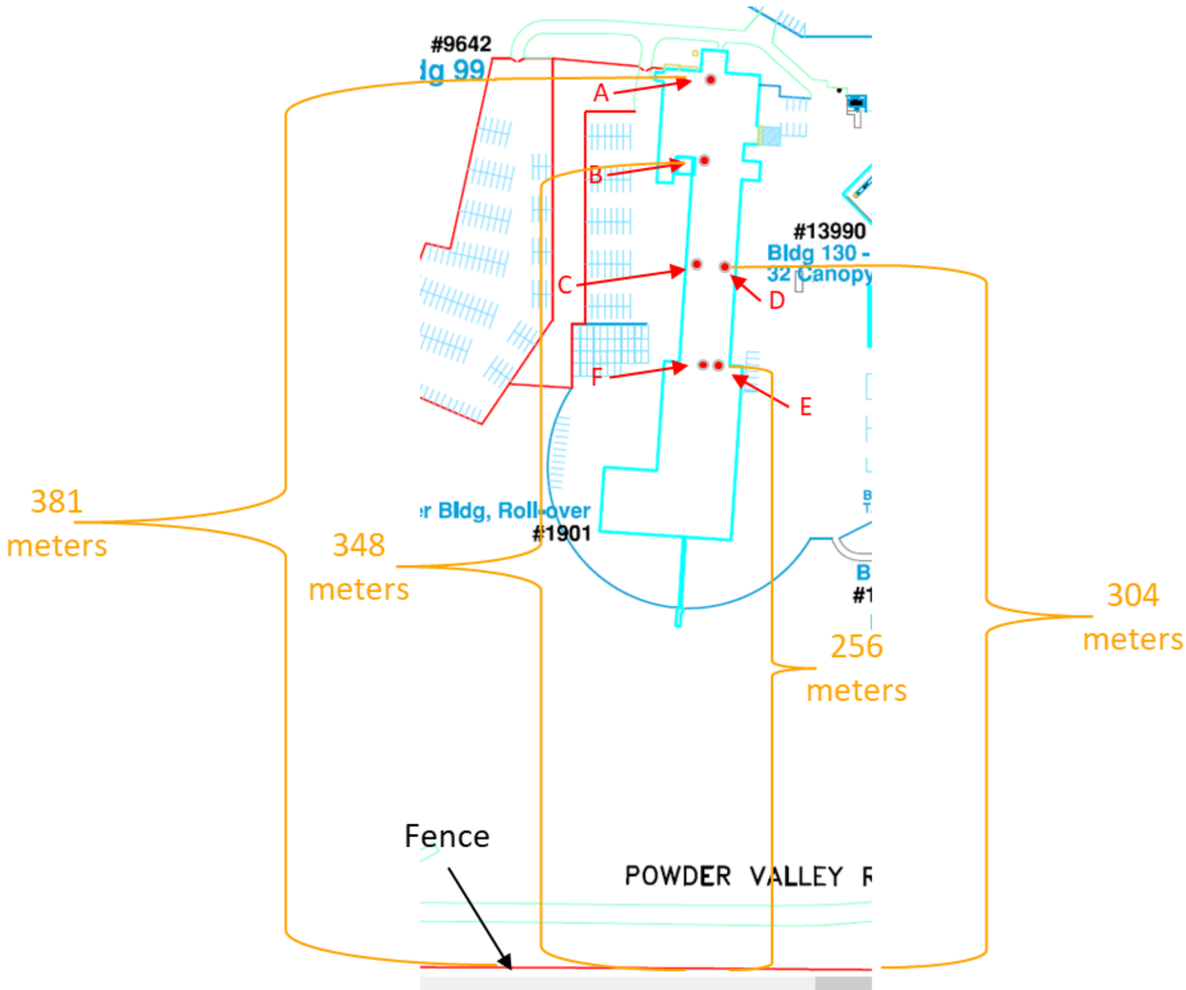
Label	Parameter	Value	Units	Notes / Formula
A	Transmit ERP	100	pW	Output power of repeater
B	Frequency	1575.42	MHz	L1 center frequency
C	Distance	284	feet	Distance at which received power falls below -140 dBm EIRP = **D** * 3.2808 feet/meter
D	Distance	86.7	meters	Distance at which received power falls below -140 dBm EIRP
E	Free Space Path Loss	75.2	dB	= 20 * log(**B**) + 20 * log(**D**) - 27.55
F	Transmit ERP	-70.0	dBm	Output power of repeater = 10 * log(**A** / 1,000,000,000)
G	Transmit EIRP	-67.85	dBm	Output power of repeater = **F** + 2.15
H	Antenna Gain	3	dBi	
I	Received Power Threshold of Interest	-140.0	dBm	= **G** – **E** + **H**

Antenna F - L1 Calculation

Label	Parameter	Value	Units	Notes / Formula
A	Transmit ERP	316	pW	Output power of repeater
B	Frequency	1575.42	MHz	L1 center frequency
C	Distance	505	feet	Distance at which received power falls below -140 dBm EIRP = **D** * 3.2808 feet/meter
D	Distance	154	meters	Distance at which received power falls below -140 dBm EIRP
E	Free Space Path Loss	80.1	dB	= 20 * log(**B**) + 20 * log(**D**) - 27.55
F	Transmit ERP	-65.0	dBm	Output power of repeater = 10 * log(**A** / 1,000,000,000)
G	Transmit EIRP	-62.85	dBm	Output power of repeater = **F** + 2.15
H	Antenna Gain	3	dBi	
I	Received Power Threshold of Interest	-140.0	dBm	= **G** – **E** + **H**

Distances from repeaters to edge of area under the control of the user

The crash test facility building is located inside the GM Milford Proving Grounds. This private access controlled campus is surrounded by a fence which constitutes the edge of the area under the user's control. The closest fence to the building is the fence that lies to the south of the building and runs east-to-west. In the below figure, this fence is the red line near the bottom. Orange brackets/text in the figure show the approximate distances between the various repeaters and the southern fence.



As shown in the above figure:

- The distance from Repeater A to the fence is 381 meters.
- The distance from Repeater B to the fence is 348 meters.
- The distance from Repeaters C and D to the fence is 304 meters.
- The distance from Repeaters E and F to the fence is 256 meters.

Summary and Conclusion

The following table summarizes the above results:

Area of Potential Interference vs. User Control				
Repeater	**Band**	**Distance at which received power falls below -140 dBm EIRP (meters)**	**Distance from repeater to edge of campus (meters)**	**Area of potential interference is under control of user?**
A	L1	154	381	YES
A	L2	140	381	YES
B	L1	86.7	348	YES
C	L1	86.7	304	YES
D	L1	86.7	304	YES
E	L1	86.7	256	YES
F	L1	154	256	YES

For each repeater the area of potential interference is under the control of the user, and therefore the proposal is compliant with Redbook section 8.3.27 section “e”.

Assessment against 8.3.27 section “f”

As stated above the proposed solution is in compliance with 8.3.27 section “e”. Therefore the requirements of section “f” are not applicable. However for completeness we assess each repeater against the requirement in section “f” below.

Section “f” imposes a maximum permissible EIRP in dBm called “P_{Tmax}”, which is calculated according to the following formula:

$$P_{Tmax} = P_R + 20 \log_{10} f + 20 \log_{10}(30 + d) - 27.55$$

Where:

- P_{Tmax} is the maximum permissible EIRP in dBm
- P_R is the power received at 30 meters from the building (i.e. -140 dBm/24 MHz)
- f is frequency in MHz (i.e. 1575.42 for L1, 1227.60 for L2, 1176.45 for L5)
- d is the distance between the radiator and the closest exterior wall of the building in meters.

The following calculations determine P_{Tmax} for each repeater.

Antenna A - L1 Calculation

Label	Parameter	Value	Units	Notes / Formula
A	P_R	-140	dBm	Power received at 30 meters from the building
B	f	1575.42	MHz	L1 center frequency
C	d	7.24	meters	Distance between the radiator and the closest exterior wall of the building
D	P_{Tmax}	-72.2	dBm	Maximum permissible EIRP = **A** + 20 * log(**B**) + 20 * log(30 + **C**) − 27.55
E	P_{Tmax}	60.3	pW	Maximum permissible EIRP = $10^{(\mathbf{D}/10)+9}$

Antenna A – L2 Calculation

Label	Parameter	Value	Units	Notes / Formula
A	P_R	-140	dBm	Power received at 30 meters from the building
B	f	1227.60	MHz	L2 center frequency
C	d	7.24	meters	Distance between the radiator and the closest exterior wall of the building
D	P_{Tmax}	-74.3	dBm	Maximum permissible EIRP = **A** + 20 * log(**B**) + 20 * log(30 + **C**) − 27.55
E	P_{Tmax}	37.2	pW	Maximum permissible EIRP = $10^{(\mathbf{D}/10)+9}$

Antenna B - L1 Calculation

Label	Parameter	Value	Units	Notes / Formula
A	P_R	-140	dBm	Power received at 30 meters from the building
B	f	1575.42	MHz	L1 center frequency
C	d	9.22	meters	Distance between the radiator and the closest exterior wall of the building
D	P_{Tmax}	-71.7	dBm	Maximum permissible EIRP = **A** + 20 * log(**B**) + 20 * log(30 + **C**) − 27.55
E	P_{Tmax}	67.6	pW	Maximum permissible EIRP = $10^{(\mathbf{D}/10)+9}$

Antenna C - L1 Calculation				
Label	**Parameter**	**Value**	**Units**	**Notes / Formula**
A	P_R	-140	dBm	Power received at 30 meters from the building
B	f	1575.42	MHz	L1 center frequency
C	d	5.93	meters	Distance between the radiator and the closest exterior wall of the building
D	P_{Tmax}	-72.5	dBm	Maximum permissible EIRP = **A** + 20 * log(**B**) + 20 * log(30 + **C**) − 27.55
E	P_{Tmax}	56.2	pW	Maximum permissible EIRP = $10^{(D/10)+9}$

Antenna D - L1 Calculation				
Label	**Parameter**	**Value**	**Units**	**Notes / Formula**
A	P_R	-140	dBm	Power received at 30 meters from the building
B	f	1575.42	MHz	L1 center frequency
C	d	4.61	meters	Distance between the radiator and the closest exterior wall of the building
D	P_{Tmax}	-72.8	dBm	Maximum permissible EIRP = **A** + 20 * log(**B**) + 20 * log(30 + **C**) − 27.55
E	P_{Tmax}	52.5	pW	Maximum permissible EIRP = $10^{(D/10)+9}$

Antenna E - L1 Calculation				
Label	**Parameter**	**Value**	**Units**	**Notes / Formula**
A	P_R	-140	dBm	Power received at 30 meters from the building
B	f	1575.42	MHz	L1 center frequency
C	d	4.61	meters	Distance between the radiator and the closest exterior wall of the building
D	P_{Tmax}	-72.8	dBm	Maximum permissible EIRP = **A** + 20 * log(**B**) + 20 * log(30 + **C**) − 27.55
E	P_{Tmax}	52.5	pW	Maximum permissible EIRP = $10^{(D/10)+9}$

Antenna F - L1 Calculation				
Label	**Parameter**	**Value**	**Units**	**Notes / Formula**
A	P_R	-140	dBm	Power received at 30 meters from the building
B	f	1575.42	MHz	L1 center frequency
C	d	7.90	meters	Distance between the radiator and the closest exterior wall of the building
D	P_{Tmax}	-72.0	dBm	Maximum permissible EIRP = **A** + 20 * log(**B**) + 20 * log(30 + **C**) − 27.55
E	P_{Tmax}	63.1	pW	Maximum permissible EIRP = $10^{(D/10)+9}$

The following table summarizes the above calculations.

Repeater	Band	Output ERP of Repeater (dBm)	Gain of Antenna (dBi)	Output ERP of Antenna (dBm)[2]	Output EIRP of Antenna (dBm)[3]	Maximum Permissible EIRP (dBm)
A	L1	-65	3	-62	-59.85	-72.2
A	L2	-65	0	-65	-62.85	-74.3
B	L1	-70	3	-67	-64.85	-71.7
C	L1	-70	3	-67	-64.85	-72.5
D	L1	-70	3	-67	-64.85	-72.8
E	L1	-70	3	-67	-64.85	-72.8
F	L1	-65	3	-62	-59.85	-72.0

Conclusions

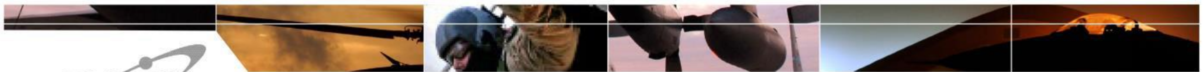
As noted earlier, the proposal is compliant with section “e” of Redbook section 8.3.27, and thus section “f” is not applicable. Section “f” calculations are given here only for information.

One should also bear in mind that while the antenna is directional, the calculations treat the antenna as omnidirectional; more specifically the main lobe gain of the antenna is used in all directions, resulting in overstatement of the power in the side lobes and back lobe. Thus the proposal is closer to meeting the “-140 dBm at 30 meters from the building” threshold than the above calculations indicate.

Also it should be remembered that the repeaters will be located in a metal building with few windows, resulting in greater signal attenuation – and thus lower power outside the building – than the above calculations indicate.

[2] Output ERP of Antenna = Output ERP of Repeater + Gain of Antenna
[3] EIRP (dBm) = ERP (dBm) + 2.15

The following two pages discuss the GLI-Metro-G specifications for transmission of GPS and GLONASS



GPS SOURCE
GPS LIVE INSIDE

GLI-METRO-G

GLI-Metro-G

KEY FEATURES

- Precise control over output signal level
- High Frequency Selectivity - Passes GPS, GLONASS & GALILEO frequencies while rejecting other out-of-band signals.
- Continuous Built-In-Testing (BIT)
- Automatic Oscillation Detection
- Perfect for aircraft hangars, manufacturing test cells, R&D facilities, any automated test environment or an anechoic chamber
- Use for any GNSS retransmission application

OPTIONS

- Waterproof
- L1 Only vs. L1/L2 Filtering
- Multiple Connector Types
- Power Always ON or Power ON/OFF

INTRODUCTION

The GLI-METRO-G is a GNSS* smart amplifier, perfect for the commercial and public sector. When used in conjunction with an active GPS/GLONASS receive antenna, it will pass GPS+GLONASS signals inside a building, hangar or any structure where signal is not accessible. It can be used in an automated test environment or in a shielded room that needs GNSS signal.

GLI-METRO-G has the unique benefit of allowing selection for the power control between signals. A user can easily decide which signal output the GLI-METRO-G will use to control signal power: GPS+GLONASS, GLONASS only or GPS only. This reduces the need for multiple antennas, receive devices and multiple antenna runs, while lowering maintenance and installation costs.

AUTOMATIC SIGNAL LEVEL CONTROL

The GLI-METRO-G employs an automatic control to maintain the set output signal level, regardless of the uncertain loss or gain in the receive antenna cable network. Derived from high performance systems for military applications, this device allows precise determination over effective radiated power (ERP) levels, regardless of the uncertain loss or gain in the receive antenna cable network. It will automatically condition the signal and prevent changes in performance.

BUILT-IN TROUBLESHOOTING

The GLI-METRO-G will identify and isolate the following:

- Oscillation condition
- High gain
- Low gain
- Short/Open circuit
- Internal component failure
- Less than four satellites
- No satellites with adequate signal

(call for complete list of conditions)

**GLI-Metro-G offers support for present and future GNSS signals, including Galileo, ensuring operation with future devices.*

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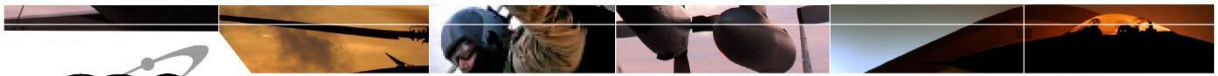

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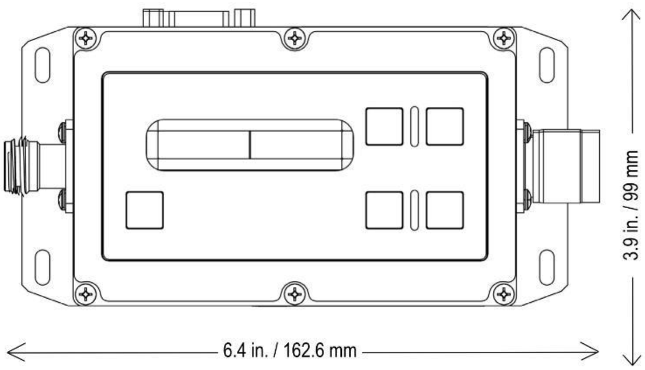
GLI-Metro-G

GLI-METRO-G 1X1



GLI-METRO-G OUTPUT PORTS

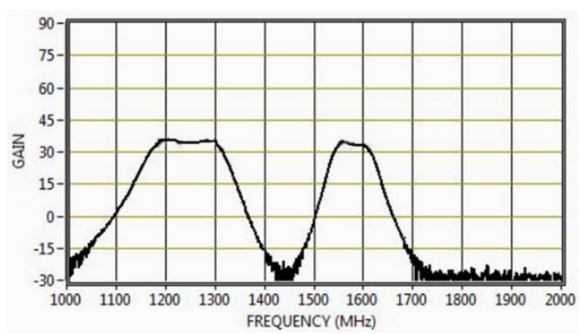
» Number of ports 1

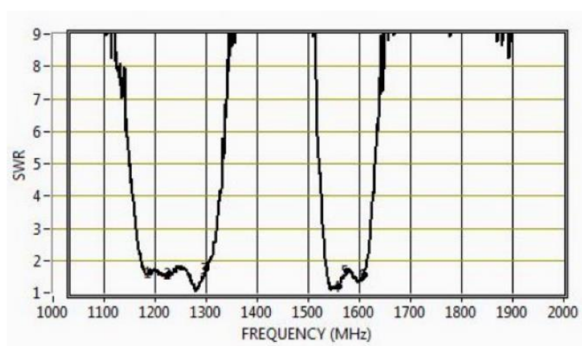
GLI-METRO-G ELECTRICAL SPECIFICATIONS

» Input/Output impedance 50Ω
» SWR all ports (typical)
  Input: 2:1
  Output: 2:1
» Bandwidth
  GPS & GLONASS L1 1560-1615 MHz
  GPS & GLONASS L1/L2 1170 - 1310 MHz
» Gain (nominal) 33 dB
» Gain Range 0-55dB
» Gain flatness <3 dB
» Noise figure <3 dB
» AC input level 110 VAC
  230VAC UK
  230VAC European
» DC input level 16 - 28 VDC
» Active Antenna Output
  Power Supply Output 6.8V

GLI-METRO-G PHYSICAL SPECIFICATIONS

» RF connectors
  N (m, f)
  SMA (m, f)
  TNC (m, f)
  SMB (f)
  SMC (f)
» RS232 serial connector DB9(F) DCE
» Weight:
  1x1 1.2 lbs (544.3 g)
» Size:
  1x1 6.4” x 3.9” x 2.0”
  (162.6 mm x 99 mm x 50.8 mm)
» Operating temperature -40 to +85ºC





AS9100 & ISO 9001:2008 Certified
Veteran Owned Small Business
CCR Registered
CAGE: 1RTJ5
DUNS: 883995677
NAICS: 334220, 334290, 334511, 541330, 541690