

LETTER OF REQUEST

PERMISSIVE CHANGE

Date: June 29, 2026

We, as a manufacturer of following equipment, hereby submit Class 2 Permissive Change application for the FCC and the ISED to have additional antenna in the filings.

MODEL Information

- **Model Name (HVIN / PMN):** GEN11NAN
- **Equipment Type:** Single Modular
- **FCC ID:** BEJGEN11NAN
- **ISED Certification Number:** 2703H-GEN11NAN
- **FCC C2PC Grant Date:** 17 August 2020
- **ISED C2PC Grant Date:** 24 August 2020

A. NEW ANTENNA INFORMATION

We are adding a new antenna to the certified module. We now have a total of 12 antennas, including the additional antenna, and the gain was measured in each band. The worst-case scenarios have been chosen based on these values. We also confirm the measured gains are the highest gain in all directions and all frequencies.

According to KDB 178919 and KDB 996369, the host manufacturer can use an antenna including cable loss that has a gain less than the following table.

GSM 850, WCDMA 5, LTE 5	4.00 dBi
WCDMA 4, LTE 4	6.19 dBi
GSM 1900, WCDMA 2, LTE 2	5.33 dBi
LTE 12/17, LTE 13	4.35 dBi

The final gain values reflecting the cable loss of the new antenna are as follows:

- **Antenna Part Number:** 94876047
- **Antenna Model Name:** SUV shark Fin
- **Cable Type:** Type C

Antenna Gain and Cable Loss Table:

ID	PART NUMBER MODEL NAME	Cable Type	Antenna Gain, Cable Loss				Final Gain including Cable Loss			
			715 MHz	829 MHz	1732 MHz	1880 MHz	715 MHz	829 MHz	1732 MHz	1880 MHz
1	84744318 Sharkfin NA	A	3.72 dBi	2.31 dBi	4.64 dBi	3.70 dBi	2.90 dBi	1.43 dBi	3.35 dBi	2.34 dBi
2	42747534-39047412 Hexband 3	A	-1.42 dBi	3.32 dBi	4.90 dBi	4.83 dBi	-2.24 dBi	2.44 dBi	3.61 dBi	3.47 dBi
3	84728097 Sharkfin ChopTop	A	-4.03 dBi	4.69 dBi	5.52 dBi	4.74 dBi	-4.85 dBi	3.81 dBi	4.23 dBi	3.38 dBi
4	84719518-84664058 Hexband 2	A	-5.53 dBi	-6.56 dBi	2.04 dBi	0.01 dBi	-6.35 dBi	-7.44 dBi	0.75 dBi	-1.35 dBi
5	84886535-22969192 Hexband 1	A	2.13 dBi	0.49 dBi	6.10 dBi	3.69 dBi	1.31 dBi	-0.39 dBi	4.81 dBi	2.33 dBi
6	42756075-84664058 Hexband 4	A	-5.80 dBi	-5.57 dBi	3.24 dBi	0.19 dBi	-6.62 dBi	-6.45 dBi	1.95 dBi	-1.17 dBi
7	84881230 MiniMega NA	A	3.74 dBi	-4.48 dBi	7.48 dBi	6.69 dBi	2.92 dBi	-5.36 dBi	6.19 dBi	5.33 dBi
8	84876043 T1xx	A	3.42 dBi	3.78 dBi	2.86 dBi	3.22 dBi	2.60 dBi	2.90 dBi	1.57 dBi	1.86 dBi
9	84744329 Sharkfin RoW	A	-4.52 dBi	-0.21 dBi	3.07 dBi	3.29 dBi	-5.34 dBi	-1.09 dBi	1.78 dBi	1.93 dBi
10	84884131 MiniMega RoW	A	-6.95 dBi	2.44 dBi	6.15 dBi	5.03 dBi	-7.77 dBi	1.56 dBi	4.86 dBi	3.67 dBi
11	84671653 Y2xx	B	4.88 dBi	4.31 dBi	5.16 dBi	2.62 dBi	4.26 dBi	3.66 dBi	4.03 dBi	1.33 dBi
12	94876047 SUV shark Fin (new antenna)	C	5.80 dBi	5.60 dBi	2.90 dBi	5.10 dBi	4.35 dBi	4.00 dBi	0.42 dBi	2.50 dBi
-	CABLE LOSS - TYPE A	A	-0.82 dB	-0.88 dB	-1.29 dB	-1.36 dB				
-	CABLE LOSS - TYPE B	B	-0.62 dB	-0.65 dB	-1.13 dB	-1.29 dB				
-	CABLE LOSS - TYPE C	C	-1.45 dB	-1.60 dB	-2.48 dB	-2.60 dB				

- Type of all antennas is a folded metal type.

B. EVALUATION SUMMARY

The new antenna final gains are slightly higher in certain bands (LTE 12/17, LTE 13: +0.09 dB / 850 MHz bands: +0.19 dB) than the previous filing.

To ensure compliance with FCC/ISED ERP/EIRP limits, we declare the following testing strategy:

1. Power Reduction (Backoff) Mechanism:

The pre-existing power backoff mechanism implemented within the module firmware remains unchanged and fully operational. The current backoff parameters are technically sufficient to suppress the final radiated power within regulatory limits even with the minor gain increases.

2. Radiated ERP/EIRP Verification:

To verify that the existing power backoff mechanism functions properly and is well-maintained under the new antenna configuration, we have performed **Radiated ERP/EIRP Measurements** for both the GSM 850 and GSM 1900 bands rather than relying solely on mathematical calculation.

3. Radiated Spurious Emission (RSE) Testing:

We have performed Radiated Spurious Emission (RSE) testing with the new antenna attached for LTE B12/17 and LTE B2, which exhibited the worst margins in the test history.

4. MPE Compliance:

MPE compliance has been re-calculated based on the new antenna parameters. We have confirmed that it continues to satisfy the FCC Parts 1, 1.1307(b), 1.1310 and ISSED RSS-102 requirements at a 20cm separation distance.

C. CONCLUSION

Based on the thorough technical analysis, radiated data verification, and conservative evaluation strategy outlined above, the module with the new SUV shark Fin antenna complies with all applicable FCC and ISSED regulatory requirements.

We hereby respectfully request the approval of this Permissive Change application.

Sincerely,



Hee-Jae Cho

Director, NA Regulatory & Environmental
LG Electronics USA