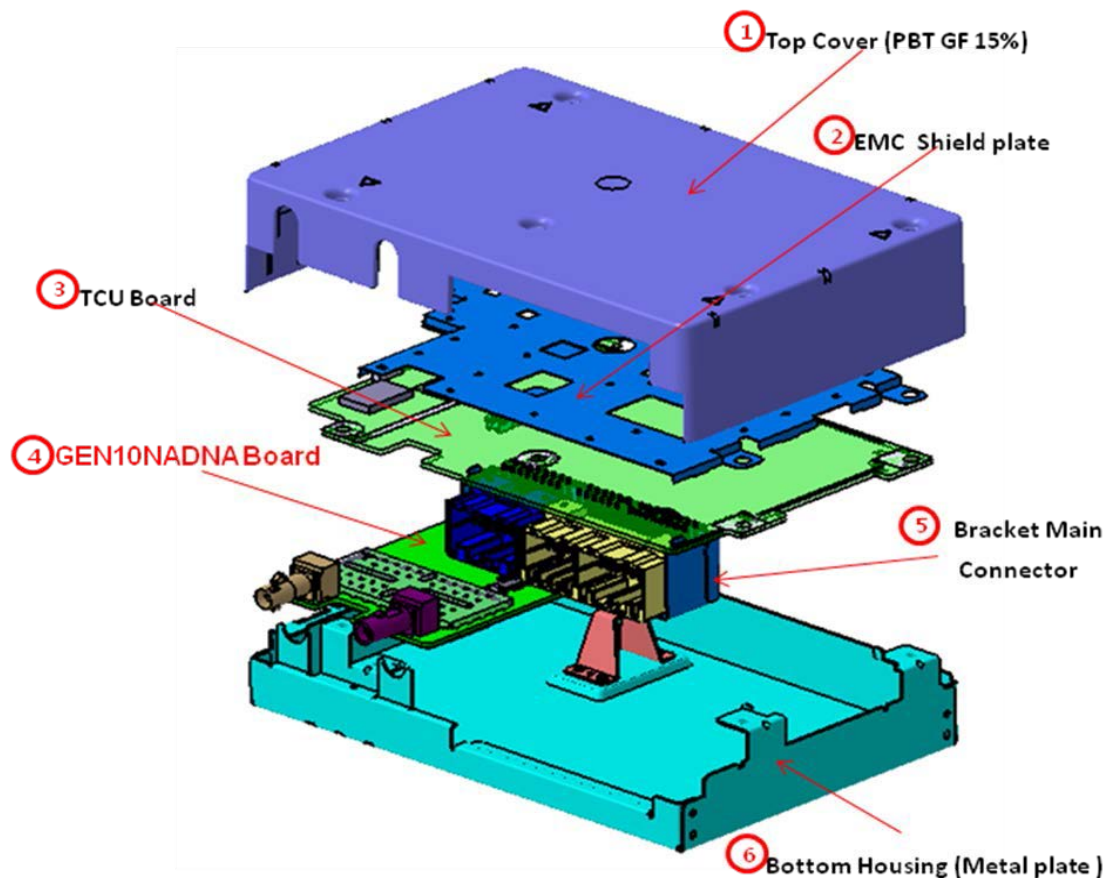


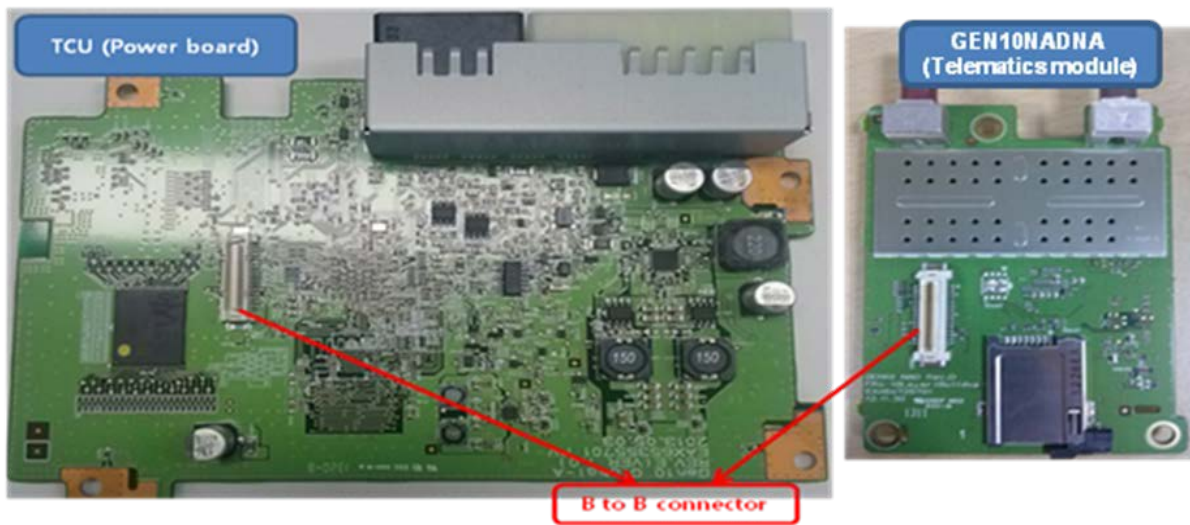
1. Installation Guide for GEN10NADNA

This part establishes the installation guide for GEN10NADNA. Description of installation is shown as below:



1. Number ① : Top cover(Housing PBT GF 15%)
2. Number ② : TCU Shield plate for EMC of VCP device.
3. Number③: TCU (Telematics Control Unit) : Power board
4. Number ④ : **GEN10NADNA module(CDMA/GSM/WCDMA/LTE Telematics NAD module)**
5. Number ⑤ : TCU main connector bracket.
6. Number ⑥ : Bottom cover (Housing metal plate)

[Fig.1] VCP [module(NAD) + Power board(TCU)] setting information



[Fig.2] VCP [module(NAD) + Power board(TCU) + Housing] setting information (Full Assembly)



Regulatory Notices

1. GEN10NADNA module has been granted as limited modular approval that is limited to that specific hosts only (Telematics device). The host manufacturer is LG Electronics USA; Host FCC IDs : BEJLTC10N/BEJLTC10F

2. GEN10NADNA module has no its power supply and it must be connected with this host while working; and the TCU part in this host support the power.

3. A label must be affixed to the outside of the end product into which the GEN10NADNA module is incorporated, with a statement similar to the following:

This device contains FCC ID: BEJLTC10.

4. The transmitter module must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

5. The end product with an embedded GEN10NADNA module may also need to pass the FCC Part 15 unintentional emission testing requirements and be properly authorized per FCC Part 15.

6. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and

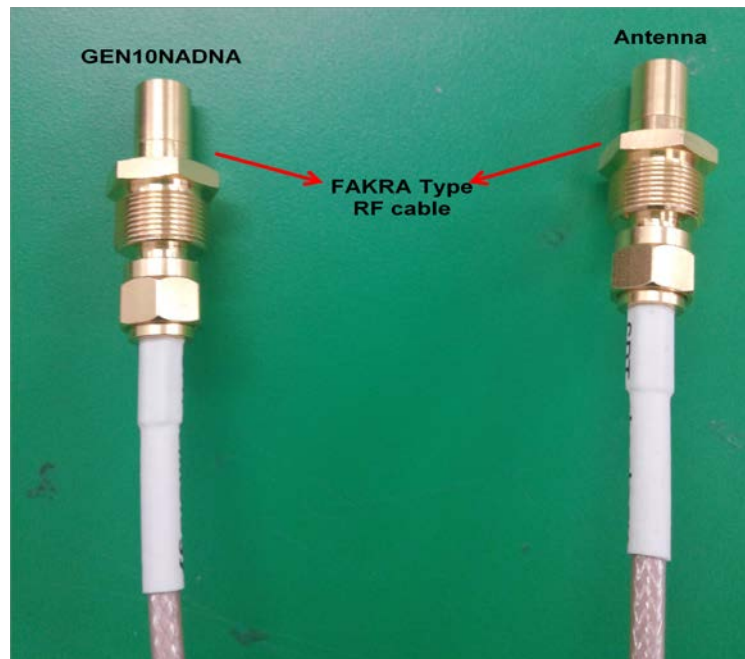
(2) this device must accept any interference received, including interference that may cause undesired operation.

7. Changes or modifications made to this equipment not expressly approved by LG Electronics USA may void the FCC authorization to operate this equipment.

8. This is device is a mobile device with respect to RF exposure compliance. The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons. Final Installers (automobile manufacturer) must be provided with specific information required to satisfy RF exposure compliance for installations and final host devices. Compliance of this device in all final host configurations is the responsibility of the Grantee.

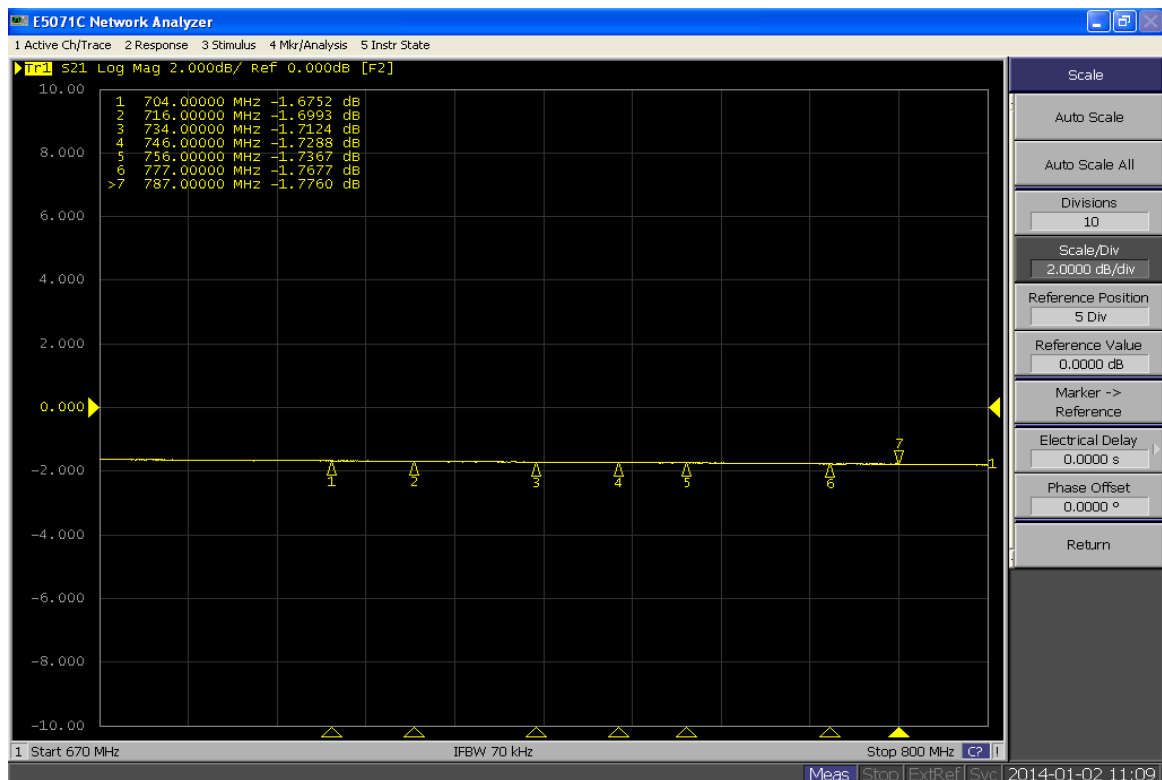
The highest permitted antenna gains including cable loss for use with this device are: GSM850 / WCDMA850 : -2.4 dBi, GSM1900 / WCDMA1900 : -0.3 dBi, WCDMA1700 : -1.6 dBi. CDMA 850 : -2.4 dBi, PCS 1900 : -0.3 dBi, LTE Band 2: -0.3 dBi, LTE Band 5: -2.4 dBi, LTE Band 4: -1.6 dBi, LTE Band 17: -0.3 dBi, LTE Band 13: -1.5 dBi.

9. The cable length that must be used in the final installation is at least 1.5 m.
 - RF cable loss is proportional to the line length increases.
 - RF cable type : straight FAKRA plug type RF cable.



- 1) Low Band RF cable loss (700MHz)
 - LTE Band17/Band13 (704 MHz ~ 787 MHz)

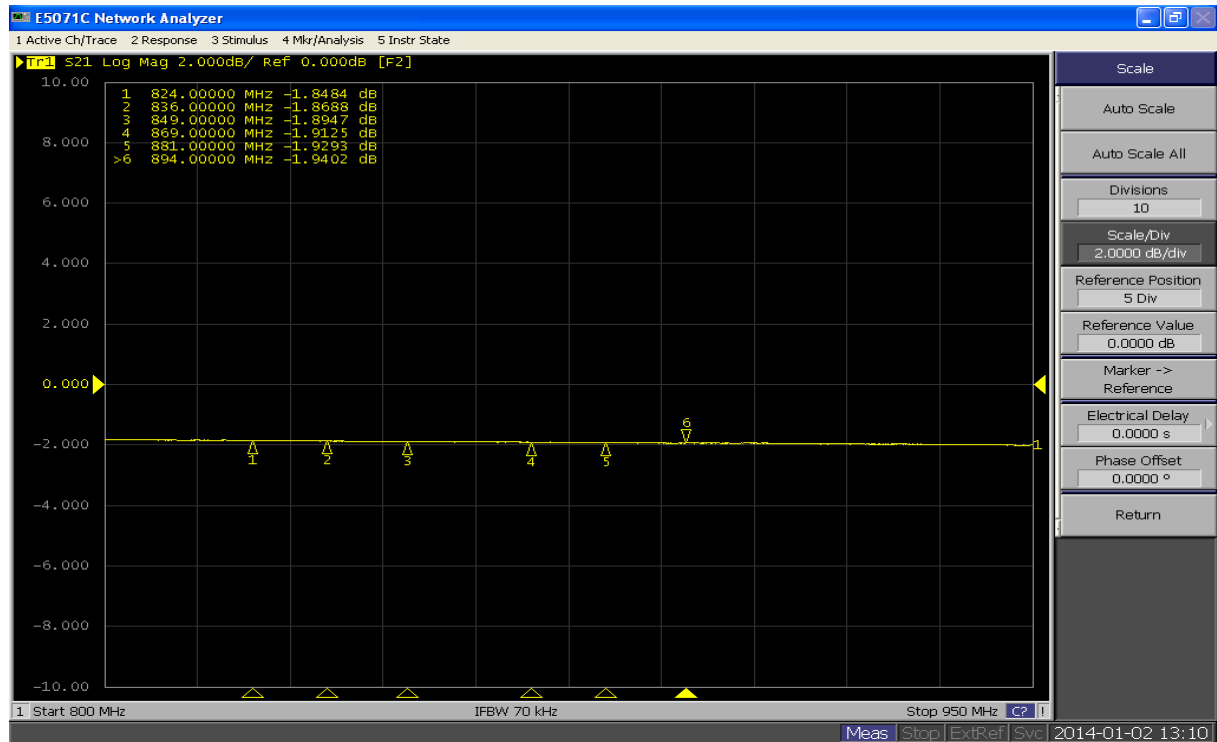
Band		B17				B13			
Frequency (MHz)		704	716	734	746	746	756	777	787
1.5m	I.L (dB)	-1.6752	-1.6993	-1.7124	-1.7288	-1.7288	-1.7367	-1.7677	-1.776
3m	I.L (dB)	-3.3504	-3.3986	-3.4248	-3.4576	-3.4576	-3.4734	-3.5354	-3.552
4.5m	I.L (dB)	-5.0256	-5.0979	-5.1372	-5.1864	-5.1864	-5.2101	-5.3031	-5.328
6m	I.L (dB)	-6.7008	-6.7972	-6.8496	-6.9152	-6.9152	-6.9468	-7.0708	-7.104



2) Low Band RF cable loss (850Mhz)

- CDMA BC0/ GSM850/ WCDMA B5/ LTE B5 (824 MHz ~ 894 MHz)

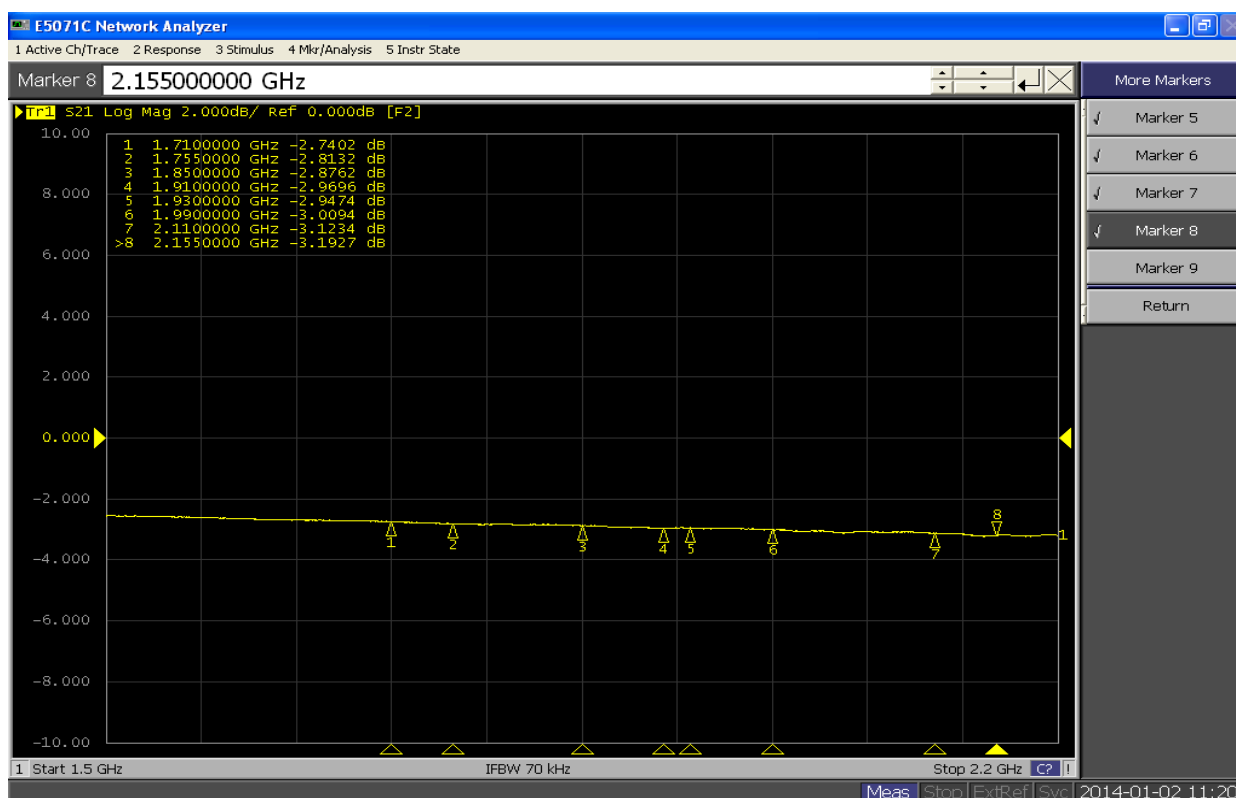
Band		CDMA BC0/ GSM850/ WCDMA B5/ LTE B5					
Frequency (MHz)		824	836	849	869	881	894
1.5m	I.L (dB)	-1.8484	-1.8688	-1.8947	-1.9125	-1.9293	-1.9402
3m	I.L (dB)	-3.6968	-3.7376	-3.7894	-3.825	-3.8586	-3.8804
4.5m	I.L (dB)	-5.5452	-5.6064	-5.6841	-5.7375	-5.7879	-5.8206
6m	I.L (dB)	-7.3936	-7.4752	-7.5788	-7.65	-7.7172	-7.7608



3) High Band RF cable loss

- CDMA BC1/ GSM1900/ WCDMA B2/ LTE B2 (1850MHz ~ 1990MHz)
- WCDMA B4/ LTE B4 (1710MHz ~ 1755MHz , 2110MHz ~ 2155MHz)

Band		CDMA BC1/GSM1900/WCDMA B2/LTE B2				WCDMA B4/ LTE B4			
Frequency (MHz)		1850	1910	1930	1990	1710	1755	2110	2155
1.5m	I.L (dB)	-2.8762	-2.9696	-2.9474	-3.0094	-2.7402	-2.8132	-3.1234	-3.1927
3m	I.L (dB)	-5.7524	-5.9392	-5.8948	-6.0188	-5.4804	-5.6264	-6.2468	-6.3854
4.5m	I.L (dB)	-8.6286	-8.9088	-8.8422	-9.0282	-8.2206	-8.4396	-9.3702	-9.5781
6m	I.L (dB)	-11.5048	-11.8784	-11.7896	-12.0376	-10.9608	-11.2528	-12.4936	-12.7708



*** Note**

I.L : insertion loss is the loss of signal power resulting from the insertion of a device in a transmission line or optical fiber and is usually expressed in decibels(dB).