Gmail raouf abbes <raoufabbes190@gmail.com>

CS1689258: Does the "CC1125EM-420-470-RD.1 "transmit data up to 400km

TI Customer Support <support@ti.com> 13 avril 2023 à 12:58
Répondre à : support@ti.com
À : raoufabbes190@gmail.com

2023-04-13 06:56:59 CDT - Danilo Austria Customer Response

Hi Abbes,

I have consulted our product specialist regarding your inquiry and here is his response.

From the information I can find, the CC1120 has been successfully used in other satellite designs.

1.

a. The customer can use this tool to estimate range: **RF Range Estimator:** https://www.ti.com/tool/RF-RANGE-ESTIMATOR
b. A Front End Module (FEM) can be used to extend the range of the CC1120. In the frequency band(s) proposed here, the reference design

CC1120 Skyworks EM 30 dBm 169 MHz (SWRR111): https://www.ti.com/lit/zip/swrr111 is an example. Other reference designs are available on the CC1120 TI.com page.

c. Please also see **SWRA398** (*CC112x/CC1175/CC120x Operation in 274-320 MHz Frequency Band*): https://www.ti.com/lit/swra398

2. The maximum data rate for the CC1120 is 200 kbps, from the **CC1120 Datasheet:** https://www.ti.com/lit/swrs112 - the CC1310 SoC has a patch allowing data rates of up to 4000 kbps but the customer would need to evaluate their link budget to see if the range would be feasible.
3. The CC1120 is capable of half-duplex so only one device should be needed for this (based on the information provided).
4. The App Note **SWRA479** (*Achieving Optimum Radio Range*): https://www.ti.com/lit/swra479 will be helpful here.
5. **SWRA161** (*AN058 – Antenna Selection Guide*): https://www.ti.com/lit/swra161 gives comprehensive information on antenna selection.

We recommend that the customer becomes familiar with the documentation provided above in the first instance as it should answer the questions.

Please also note that our transceivers are not radiation hardened devices.

I hope this resolves your inquiry. If you need further assistance, please feel free to contact us again so that we could help you.

Have a nice day!

Regards,

Danilo Austria Jr.
Texas Instruments Customer Support

2023-04-13 02:16:27 CDT - abbes raouf Customer Response

Hello,

take your time and Thank you for your response

2023-04-12 11:24:49 CDT - Danilo Austria

Customer Response

Hi Abbes,

Thank you for contacting Texas Instruments Customer Support.

We are now conducting research about your inquiry. Please allow us 1-2 business days to send our update. Thank you for your patience.

Have a nice day!

Regards,

Danilo Austria Jr.
Texas Instruments Customer Support
