Date: 27 November 2023

NB-IoT offset description

Manufacturer: Nordic Semiconductor ASA
Model: nRF9161
FCC ID: 2ANPO00NRF9161

We, ***Nordic Semiconductor ASA***, hereby states that our module nRF9161 has been tested to certify Cat M1 and NB-IoT bands for FCC and ISED certification. The strategy followed to perform this testing was finding the channels outermost of the bands, which complies with the block edge testing; accordingly, we can demonstrate the lowest and highest channels for NB-IoT bands are the following ones:

	Channel Number (Frequency MHz) – NB-IoT										
	B2	**B4**	**B5**	**B8**	**B12**	**B13**	**B17**	**B25**	**B26**	**B66**	**B85**
Lowest	18602 (1850.2)	19952 (1710.2)	20402 (824.20)	21628 (897.80)	23012 (699.20)	23182 (777.20)	23732 (704.20)	26042 (1850.2)	20402 (814.20)	131974 (1710.2)	134004 (698.2)
Middle	18900 (1880)	20300 (1745)	20525 (836.50)	21640 (899)	23090 (707)	23230 (782)	23790 (710)	26365 (1882.5)	20525 (836.50)	132322 (1745)	134092 (707)
Highest	19198 (1909.8)	132670 (1754.8)	20648 (848.80)	21652 (900.20)	23179 (715.9)	23278 (786.80)	23848 (715.80)	26688 (1914.8)	20648 (848.80)	132670 (1779.8)	134181 (715.9)

For NB-IoT technology, an offset of ± 100 kHz for the first/last transmission channel is needed because the bandwidth required for a transmission is 200 kHz. However, for some bands it has been adjusted the lower and/or higher operating band limits in order to be in compliance with the results obtained in the band-edge test. All measurements have been performed in accordance with the allocated channels above, being the result of the band edge limit test case.

The operating frequency bands for this module are defined as above for NB-IoT, and this restriction will be applied by enabling only the above specified bandwidths via firmware setting, without hardware modifications.

Yours sincerely,

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