

**ABELL INDUSTRIES CO., LTD.**

701-702, 7/F, D Bldg, Qianwan Hard Technology Industrial Park, Xixiang Rd.,  
BaoAn Dist., Shenzhen 518054, China

Date: August 22, 2024

Office of Engineering and Technology  
Laboratory Division  
Equipment Authorization Branch  
Federal Communications Commission Laboratory  
7435 Oakland Mills Road  
Columbia, MD 21046

Subject: Extend Frequencies Justification Original Application **FCC ID: TEY-AR8000**

Dear Sir or Madam;

This DMR Digital Repeater was designed to operate in the frequency bands 400-470MHz; We, **ABELL INDUSTRIES CO., LTD.** will disable 25KHz mode by radio at firmware at factory and end-user cannot use 25KHz mode in order to compliance with FCC mandate for Part 90 frequencies;

We, **ABELL INDUSTRIES CO., LTD.** declares that the DMR Digital Repeater meets 47 CFR Section 90.203(j)(4) and 90.203(j)(5) spectrum efficiency requirement; This DMR Digital Repeater is support both 12.5 KHz for FM (analog modulation; Emission Designator: 11K0F3E for voice) and 4FSK (digital modulation; Emission Designator: 7K60FXD for data/7K60FXW for both data and voice) modes, also this DMR Digital Repeater designed in accordance with ETSI TS 102 361-1 requirement, will at least support 9600 bits per second in a 12.5 KHz channel bandwidth, 4fSK will refer 2 time slots in one 12.5 KHz bandwidth accordance to ETSI ETS 102 361-1, which equal with  $9600/2=4800$  bits per second in one 6.25 KHz channel bandwidth;

We, **ABELL INDUSTRIES CO., LTD.** declares that the DMR Digital Repeater capable of operating on the nationwide public safety interoperability calling channel (453.2125 MHz), meets 47CFR Section 90.203(j)(1) requirement;

Please contact me if you required any additional information.

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Sincerely,

A handwritten signature in dark ink, appearing to read 'Wang Bo', is positioned below the word 'Sincerely,'.

(Signed)

Name/Title: Bo Wang / R&D Director

Company: ABELL INDUSTRIES CO., LTD.

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