

GUANGZHOU MERCURY NAVIGATION TECHNOLOGY CO., LTD

**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: **2BA3P-T100L**

Company: GUANGZHOU MERCURY NAVIGATION TECHNOLOGY CO., LTD
Address: Room C401-403, TOPS Beidou Innovation Base, No.83, Kaiyuan Avenue, Huangpu, Guangzhou, Guangdong, China.

Dear Sir or Madam;

We, **GUANGZHOU MERCURY NAVIGATION TECHNOLOGY CO., LTD** declares that the Digital radio meets 47CFR Section 90.203(j)(4) and 90.203(j)(5) spectrum efficiency requirement;

This Digital radio is support 6.25KHz, 12.5 KHz and 25 KHz for GMSK digital modulation; Emission Designator: F1D for data modes, also this Digital radio designed in accordance with ETSI TS 102 361-1 requirement, will at least support 4800 bits per second in a 6.25 KHz channel bandwidth, 9600 bits per second in a 12.5 KHz channel bandwidth and 19200 bits per second in a 25 KHz channel bandwidth, GMSK will refer 2 time slots in one 12.5 KHz bandwidth and refer 4 time slots in one 25 KHz bandwidth accordance to ETSI ETS 102 361-1, which equal with $9600/2 = 4800$ and $19200/4 = 4800$ bits per second in one 6.25 KHz channel bandwidth;

We, **GUANGZHOU MERCURY NAVIGATION TECHNOLOGY CO., LTD** declares that the Digital radio capable of operating on the nationwide public safety interoperability calling channel (453.2125 MHz), meets 47CFR Section 90.203(j)(1) requirement;

Signature: Haoyu Lei **Date:** 2023-05-30
Name: HAOYU LEI
Title: Technical Manager
Company: GUANGZHOU MERCURY NAVIGATION TECHNOLOGY CO., LTD