

PROTOCOL for V20_TRS_KEY_data Project V2015B01

Based on CCS831_IWR6843_ISK_ES2_SDK3303_I401_TRS (Traffic Roadway Sensing)

Firmware: V2015B

V2015B01 2021.05.05 1. basic

Abstract:

This document dedicated description for TRS (Traffic Roadway Sensing) KEY Data Protocol based on mmWave Platform and UART baud as 912600/8/n/1

Description:

The Key Data Protocol structure definition as following,

<Data Structure> := H f F I i X Y R D A P C T (more detail see Appendix A1)

Appendix:

(A1) Protocol: total 45 bytes per record

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/** PROTOCOL for KeyData syntax := H f F I i X Y R D A P C T
/** -----
/** Item      Abbr      Name      Location      Length      Type      Description
/** -----
/** 1         H         Header      0 1 2         3           U8        Header; "{JB}" or "\x7B\x4A\x42"
/** 2         f         flowNum      3             1           U8        JB flow number; or '0'..'9' readable
/** 3         F         FrameNum      4 5 6 7       4           U32       Frame Number; unsigned long
/** 4         I         IndexMax      8 9 10 11     4           F32       Max Targets Number; float
/** 5         i         index        12 13 14 15   4           F32       Target Index; float
/** 6         X         X           16 17 18 19   4           F32       X position; unit: Meter
/** 7         Y         Y           20 21 22 23   4           F32       Y position; unit: Meter
/** 8         R         Range        24 25 26 27   4           F32       Range; unit: Meter
/** 9         D         Doppler      28 29 30 31   4           F32       Doppler; unit: Meter / Sec
/** 10        A         Area          32 33 34 35   4           F32       Area; unit: Meter ^ 2
/** 11        P         PointNum      36 37 38 39   4           F32       PointNumber per Target; float
/** 12        C         Cluster_ID   40 41 42 43   4           F32       Cluster ID; float
/** 13        T         Tail          44           1           U8        Tail; "}" or "\x7D"
/** -----
/** Notes:
/** 1. flowNum := (JB_FlowNum % 10) + '0'; for readable '0'..'9'
/** 2. FrameNum based on type of unsigned long, by LITTLE ENDIAN format
/** 3. Send out Key Data via TX1, baud rate 921600/8/n/1
/** -----

```

(A2) Example: logged KEY data from module via Tx1 Baud 921600/8/n/1 by TeraTerm Tool v4.104 in real case

