## V20 TMD PROTOCOL based on mmWave Platform v20.11

## Abstract:

This document dedicated description for TMD Protocol based on mmWave Platform

## Description:

This Protocol structure includes two sections as followings, <Structure> := <TitleSection(22Bytes)> [<DataSection(22Bytes)>] here [<DataSection>] is optional item depended by Target be found

TotalByesNumber := 22 + (22 \* numberOfTargets)

FramePeriodTime := 100 ms

UART port Baud Rate : 921600/8/n/1

## Appendix:

Item	Abbre	Name	Location	Length	Туре	Description
0	h	Header	0	1	 '['	Header, 0x5B
1	f	"frame="	1	6	U8 Array	"frame="
2	F	FrameNumber	7 8 9 10	4	U32	FrameNumber
3	Р	"target="	1117	7	U8 Array	"target="
4	T	TotalTargetNumber	18	1	U8	TotalTargetNum
5	0	ObjectNumber	19 20	2	U16	ObjectNumber
_	t	Tail	21	1	']'	Tail, 0x5D
•	Section>	/ vx vy T I t				
 ) <data< td=""><td>Section&gt;</td><td>/ vx vy T I t</td><td>Location</td><td></td><td></td><td>Description</td></data<>	Section>	/ vx vy T I t	Location			Description
 ) <data: Syntax</data: 	Section>	/ vx vy T I t				Description
O <data: item<="" syntax="" td=""><td>Section&gt; : h i x y Abbre</td><td>/ VX Vy T I t Name</td><td>Location</td><td>Length</td><td>Type</td><td></td></data:>	Section> : h i x y Abbre	/ VX Vy T I t Name	Location	Length	Type	
O Total  Syntax  Item  O	Section> : h i x y Abbre h	/ vx vy T I t Name Header	Location	Length 1	 Type 	Description Header, 0x3C
O CData: Syntax Item O 1	Section>: h i x y Abbre h	/ vx vy T I t Name Header Index	Location 0	Length 1	Type '<' U8	Description Header, 0x3C
 Syntax  Item  0 1	Section>: h i x y Abbre h i	/ vx vy T I t Name Header Index Position x	Location 0 1 2 3 4 5	Length  1 1 4 4	Type '<' U8 F32	Description Header, 0x3C index position x
Oata: Syntax Item 0 1 2	Section>: h i x y Abbre h i x	/ vx vy T I t  Name  Header Index Position x Position y	Location  0 1 2 3 4 5 6 7 8 9	Length  1 1 4 4 4	Type '<' U8 F32 F32	Description  Header, 0x3C index position x position y
Oata: Syntax Item 0 1 2 3	Section>: h i x y Abbre h i x y vx	/ vx vy T I t  Name  Header Index Position x Position y Velocity x	Location  0 1 2 3 4 5 6 7 8 9 10 11 12 13	Length  1 1 4 4 4	Type '<' U8 F32 F32 F32 F32	Description  Header, 0x3C index position x position y velocity vx
 Syntax  Item  0 1 2 3 4	Section>: h i x y Abbre h i x y vx vy	V vx vy T I t  Name  Header Index Position x Position y Velocity x Velocity y	Location  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Length  1 1 4 4 4 4	Type '<' U8 F32 F32 F32 F32 F32	Description  Header, 0x3C index position x position y velocity vx velocity vy

Notes: Type definition as followings,

```
U8 := unsigned char (1 bytes)
U16 := unsigned int (2 bytes in LittleEndian format)
U32 := unsigned long (4 bytes in LittleEndian format)
F32 := float (4 bytes in LittleEndian format)
```

(A3) Example on data logged in Real case Software Tool : Tera Term V4.104

