

The following amendments were made to TWDL ICD for Akash-NG Doc. No.: DRDL/AKASH-NG/ICD/TWDL/01 Date of Issue: 10July2019 Ver. No.1.2 Copy No.:01

1. In both the Messages 'TWDL Ground DL Health Response/Posting' and 'TWDL Ground DL Status Response/Posting', the valid range of the field 'Rx RSSI' is given as 0x00 to 0xFF in hexa and 0-127 in decimal. The range description in hexa to be changed to 0x00 to 0x7F.
2. In Message 'Target Dwell Message (Pkt-A) from Ground to Missile', offset value is not required for 'Target Position Sigma(m)' and 'Target Velocity Sigma(m/s)'.
3. In ICD, the offset value for the field 'control effort' is 30 (valid range: -30 to +30) for Pkt-C and Pkt-E, but for Pkt-D the offset value is 20 (valid range: -20 to +20). It was decided to use the same offset value (Offset: 30, valid range: -30 to +30) for the field 'Control effort'.
4. Two messages are newly added for TWDL.
 - 4.1 **TWDL_QUERY_GROUND_DL_VERSION** - Message Id: 14
 - a. **Message Description:** This message is sent from CCU/FCS Computer to Ground TWDL on Ethernet to query the version of Ground TWDL subsystem.
 - b. **Source:** CCU/FCS Computer'
 - c. **Destination:** Ground TWDL System
 - d. **Trigger:** After power on or based on requirement from CCU/FCS Computer
 - e. **Frequency:** Need Basis

Byte	Field	Bytes	Data type	Description
0-9	Common Header	10	-	Common Header with message id 0x0E

- 4.2 **TWDL_RESPONSE_GROUND_DL_VERSION** - Message Id: 238
 - a. **Message Description:** This message is sent by Ground DL System to CCU/FCS Computer on Ethernet for sending version number of TWDL subsystem.
 - b. **Source:** Ground DL System
 - c. **Destination:** CCU/FCS Computer/FCS
 - d. **Trigger:** on receiving Query from CCU/FCS Computer
 - e. **Frequency:** Need Basis

Byte	Field	Bytes	Data type	Description
0-9	Common Header	10	-	Common Header with Message id 0xEE
10-13	Ground DL Checksum	4	UInt	Checksum of Ground TWDL subsystem
14	Major Version	1	UChar	Major version number of Ground TWDL
15	Minor Version	1	UChar	Minor version number of Ground TWDL
16	Version Date	1	UChar	Version Release date [1-31]
17	Version Month	1	UChar	Version Release month [1-12]
18-19	Version Year	2	UShort	Version Release year
20-23	Code Size	4	UInt	Number of lines of code
	TOTAL	24		