Inner-Tracker DAQ/LUMI data format **Version 1.3** **Date: 2020-10-05**

Word \ Bit #	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	S-link 128b order (following page)	Notes
0x00000000	Magic #1 (0xC3)								Ver Major (1)			Ver Minor (3)					7	3 bit major version, 5 bit minor version
0x00000001	Error Flags				Chip Count												6	
0x00000002	Reserved																5	
0x00000003	Trig source				BX												4	Trig source: bit 0→ TCDS; bit 1 → LUMI
0x00000004	Orbit # MSBs																3	
0x00000005	Orbit # LSBs																2	
0x00000006	Reserved																1	
0x00000007	Reserved																0	
0x00000008	Chip 1 offset (in 16-bit words)(MSBs)																7	
0x00000009	Chip 1 offset (in 16-bit words)(LSBs)																6	
…	**…**																	
…	Chip N offset (MSBs)																	
…	Chip N offset (LSBs)																	
…	Padding to 128 bit word size																0	padding filled with ‘0’s
…	Magic #3 (0xE)				Res				Error flags				End bit #				7	Error flag bit 0 → LOS ; bit 1 → time-out
…	Chip 1 size (in 16-bit words)																6	
…	Raw chip 1 binary data																	
…	…																	
…	Raw chip 1 binary data											Padding bits (End bit #)						Unused bits are padding with ‘0’s
…	**…**																	
…	Magic #3 (0xE)				Res				Error flags				End bit #					
…	Chip N size (in 16-bit words)																	
…	Raw chip N binary data																	
…	…																	
…	Raw chip N binary data								Padding bits (End bit #)									
…	**Padding to 128 bit word size**																0	
…	Magic #2 (0x3C)								Reserved								7	
…	Reserved																6	
…	Reserved																5	
…	Reserved																4	
…	Reserved																3	
…	Reserved																2	
…	Reserved																1	
END	Reserved																0	

Max size = 8+8+((2 + 2 + MAX_CHIP_SIZE) * N_CHIPS) = 16+ (~54000 * N_CHIPS)

S-link Rocket payload