



HESTA datas sent to DAQ

BYTE 3								BYTE 2								BYTE 1								BYTE 0								COMMENTS
31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
0 1 0 1 0 1 0 1								0 0 0 0 1 0 1 0								• • • • • • • •								0 0 0 0 0 0 • •								LONG 0 : HEADER IF ERROR : 'ZZZZ' (0x5A,0x5A,0x5A,0x5A)
Magic Number : 0xAA								Size of Longs : 10 (0x0A)								Surveillance Counter : Values : 1,2,3,...,255,1,2,3... (incremented +1 each sending)								General Status Bit 0 : Status PC Com OK Bit 1 : Status Set OK Bits 2..7 : spare								
0 0 0 0 0 0 0 0								0 0 0 0 0 0 0 0								• • • • • • • •								• • • • • • • •								LONG 1 : Indexer X Status
Bit 9 : Out Fault Bit 10 : Limit Plus Bit 11 : Limit Minus Bit 12 : Local Mode On Bit 13 : Console X Right Button On Bit 14 : Console X Left Button On Bit 15 : Console X Home Button On Bit 16 : Console X Set Home Button On Bit 17 : User Lamp On Bits 18 to 31 : spare																Bit 0 : Indexer Status OK Bit 1 : Motor is Moving Bit 2 : Composite Fault Bit 3 : Current Fault Bit 4 : Supply Fault Bit 5 : Ambient Temp. Fault Bit 6 : Drive Fault Bit 7 : Config Fault Bit 8 : High Voltage Fault																
0 1 0 0 0 1 1 0								0 1 1 0 0 1 0 0								0 0 0 0 0 0 1 0								0 0 0 1 0 0 1 0								LONG 2 : Indexer X Values (1)
Motor Standby : 70% (0x46)								Motor Current : 100% (0x64)								Major Rev. : 2 (0x02)								Minor Rev. : 18 (0x12)								
0 0 1 0 1 0 0 0								0 0 0 0 1 0 0 0								0 0 0 0 • • • •								0 0 0 0 • • • •								LONG 3 : Indexer X Values (2)
Motor Res. /100 : 40 (0x28)								Motor Vel. x100 : 20 (0x14)								Stand Position (X) [2500 (0x09C4) , 5500 (0x157C)]																
0 0 0 0 0 0 0 0								0 0 0 0 0 0 0 0								0 0 0 0 • • • •								0 0 0 0 • • • •								LONG 4 : Indexer X Values (3)
Bits 16 to 31 : spare																Bit 0 to 14 : Abs. Beam Position (X) < 1500 (0x05DC)								Bit 15 : Sign (0 = + / 1 = -)								
0 0 0 0 0 0 0 0								0 0 0 0 0 0 0 0								• • • • • • • •								• • • • • • • •								LONG 5 : Indexer Y Status
Bit 9 : Out Fault Bit 10 : Limit Plus Bit 11 : Limit Minus Bit 12 : Brake Uncoupled Switch On Bit 13 : Brake Uncoupled On Bit 14 : Console Y Up Button On Bit 15 : Console Y Down Button On Bit 16 : Console Y Home Button On Bit 17 : Console Y Set Home Button On Bits 18 to 31 : spare																Bit 0 : Indexer Status OK Bit 1 : Motor is Moving Bit 2 : Composite Fault Bit 3 : Current Fault Bit 4 : Supply Fault Bit 5 : Ambient Temp. Fault Bit 6 : Drive Fault Bit 7 : Config Fault Bit 8 : High Voltage Fault																
0 1 0 0 0 1 1 0								0 1 1 0 0 1 0 0								0 0 0 0 0 0 1 0								0 0 0 1 0 0 1 0								LONG 6 : Indexer Y Values (1)
Motor Standby : 70% (0x46)								Motor Current : 100% (0x64)								Major Rev.: 2 (0x02)								Minor Rev. : 18 (0x12)								
0 0 1 0 1 0 0 0								0 0 0 1 0 1 0 0								0 0 0 0 • • • •								0 0 0 0 • • • •								LONG 7 : Indexer Y Values (2)
Motor Res. /100 : 40 (0x28)								Motor Vel. x10 : 40 (0x28)								Stand Position (Y) [1000 (0x03E8) , 3000 (0x0BB8)]																
0 0 0 0 0 0 0 0								0 0 0 0 0 0 0 0								0 0 0 0 • • • •								0 0 0 0 • • • •								LONG 8 : Indexer Y Values (3)
Bits 16 to 31 : spare																Bit 0 to 14 : Abs. Beam Position (Y) < 1500 (0x05DC)								Bit 15 : Sign (0 = + / 1 = -)								
• • • • • • • •								• • • • • • • •								• • • • • • • •								• • • • • • • •								LONG 9 : Checksum modulo 2^32
Bits 0 to 31 : checksum, modulo 32 bits (0x100000000) = Σ (LONG 0,1,2,3,4,5,6,7,8)																																