Hiperface communication

The standard configuration for Hiperface communication interface is 9600 Baud with Parity Even, 8 Data Bits, 1 Stop bit.
Default encoder address is 64dec ⇒ 0x40. CRC type is XOR:
https://www.scadacore.com/tools/programming-calculators/online-checksum-calculator/

Broadcast address 0xFF is always available.

These are a list of standard command.

Command	Hex string to send	Hex string to receive	Comment
Read Position (absolute)	0x40 0x42 0x02	0x40 0x42 B3 B2 B1 B0 CRC	B3 is MSB and B0 is LSB of actual position (unsigned 32 bit)
Encoder Reset	0x40 0x53 0x13	No response	–
Read encoder status	0x40 0x50 0x10	0x40 0x50 B1 B0 CRC	B1 is MSB B0 is LSB of encoder status (see table below for encoder faults)
Read out type label	0x40 0x52 0x12	0x40 0x52 0xE4 0xFF 0x80 0x01 0x88	–
Read Analog value	0x40 0x44 CH CRC	0x40 0x44 CH B1 B0 CRC	CH is the channel to read, B1 is MSB and B0 LSB value of the channel. See table below about the channel correspondences
Start calibration	0x40 x054 0x14	No response	–

Encoder Faults	Encoder Status
00	No faults
01	Analog signal outside specification

Channel n.	Description
0x00	Sine signal
0x01	Cosine signal
0x02	Angle in degrees (Arctan calculation)
0x03	Oversampled Sine
0x04	Oversampled Cosine
0x05	Oversampled Arctan value
0x06	Encoder status (machine state)
0x07	Hiperface status (machine state)
0x08	Relative position value
0x09	Hall switch condition
0x0A	Arctan value
0x0B	Status of all Hall switches
0x48	Encoder temperature