HEADER & PAYLOAD FORMAT (KMT version)

Byte	Description	Comment / Example
	32 Byte HEADER	
0	Startbyte 0x84	start sequence for plausibility check
1	Startbyte 0x85	
2	Header Version	1
3	Header Size	32
4	Payload Size MSB	payload size in bytes
5	Payload Size LSB	
6	Counter MSB	circular counter 0x0000 to 0xFFFF
7	Counter LSB	
8	reserve	(0x00; reserved for now)
9	reserve	(0x00; reserved for now)
10	System Status Flags	timestamp quality; ... TBD
11	Data Status Flags	exxxxx00=16Bit, ..01=24Bit; e=endianness(0=big); ... TBD
12	Channel Count MSB	number of channels per sample
13	Channel Count LSB	
14	Sample Count MSB	number of samples in the payload
15	Sample Count LSB	
16	Sample Rate MSB	time between two samples in nanoseconds format = unsigned long (the reciprocal value gives the sample frequency in samples per second)
17	Sample Rate	
18	Sample Rate	
19	Sample Rate LSB	
20	Unix Timestamp MSB	64 Bit UNIX Timestamp in nanoseconds = sample time of the first sample in payload (that's enough for a few hundred years)
21	Unix Timestamp	
22	Unix Timestamp	
23	Unix Timestamp	
24	Unix Timestamp	
25	Unix Timestamp	
26	Unix Timestamp	
27	Unix Timestamp LSB	
28	KMT system stream MSB	substream with system information (module types, channel settings, serial numbers, system status, etc.etc.)
29	KMT system stream LSB	
30	Header Checksum MSB	(0xF0F1 + Byte00 + ... + Byte29) & 0xFFFF
31	Header Checksum LSB	
	Here now follows the payload. Example of a system with two measurement channels: 16 Bit Data Examples (big endian): Ch1=0x6789; Ch2=0xABCD;	
32	Sample 1, Channel 1, MSByte	0x67
33	Sample 1, Channel 1, LSByte	0x89
34	Sample 1, Channel 2, MSByte	0xAB
35	Sample 1, Channel 2, LSByte	0xCD
36	Sample 2, Channel 1, MSByte	0x67
37	Sample 2, Channel 1, LSByte	0x89
38	Sample 2, Channel 2, MSByte	0xAB
39	Sample 2, Channel 2, LSByte	0xCD