

Maximum segment size for a single UDP packet is 1460 Bytes.

If the data size for one cycle exceeds the UDP maximum segment size, the data will be send via multiple segments.

Every UDP package has a header to identify the paket and to allocate the data correctly on host side.

### UDP Paket Structure

Header:	Equal for each segment of the same cycle. Content is not adjustable by the user.
Data Block:	Contains the application data structured in SYNC Status Data, SYNC Runtime Data, and SYNC Spectral Data. Transmitted application data can be configured by setting of SYNC Status Data Setting (ID 140), SYNC Runtime Data Setting (ID 141), and SYNC Spectral Data Setting (ID 142).

### Data Frame Structure (4 bytes)

Start Byte Index	Start Byte Index + 1	Start Byte Index + 2	Start Byte Index + 3
Parameter ID	Status code	MSByte of data	LSByte of data

### Header

Start Byte Index	Stop Byte Index	Parameter ID	Status	Data type	Name
0	3	143	x	U16	SYNC Channel Index
4	7	149	x	U16	SYNC Cycle Counter Internal
8	11	150	x	U16	SYNC Cycle Counter Master
12	15	147	x	U16	SYNC Cycle Error Counter
16	19	138	x	U16	SYNC Segment Quantity
20	23	139	x	U16	SYNC Segment Number

### Data Block

SYNC Status Data: In case all data are enabled using SYNC Status Data Setting (ID 140).

Start Byte Index	Stop Byte Index	Parameter ID	Status	Data type	Name
24	27	143	x	U16	SYNC Channel Index
28	31	66	x	U16	Firmware Version Major
32	35	67	x	U16	Firmware Version Minor
36	39	68	x	U16	Firmware Version Patch
40	43	69	x	U16	Firmware Version Build
44	47	70	x	U16	Firmware Variant
48	51	144	x	U16	SYNC Mode
52	55	145	x	U16	SYNC Cycle Time Low
56	59	146	x	U16	SYNC Cycle Time High
60	63	72	x	U16	MCU Status
64	67	73	x	U16	Board Temperature

SYNC Runtime Data: In case all data are enabled using SYNC Runtime Data Setting (ID 141).

Start Byte Index	Stop Byte Index	Parameter ID	Status	Data type	Name
68	71	132	x	U16	SYNC Run Active
72	75	6	x	U16	Realtime Low
76	79	7	x	U16	Realtime High
80	83	8	x	U16	Lifetime Low
84	87	9	x	U16	Lifetime High
88	91	10	x	U16	Output Counts Low
92	95	11	x	U16	Output Counts High
96	99	12	x	U16	Input Counts Low
100	103	13	x	U16	Input Counts High
104	107	14	x	U16	Output Count Rate Low
108	111	15	x	U16	Output Count Rate High
112	115	16	x	U16	Input Count Rate Low
116	119	17	x	U16	Input Count Rate High
120	123	149	x	U16	SYNC Cycle Counter Internal
124	127	150	x	U16	SYNC Cycle Counter Master
128	131	147	x	U16	SYNC Cycle Error Counter
132	135	148	x	U16	SYNC Com Error

SYNC Spectral Data: In case MCA data are enabled using SYNC Spectral Data Setting (ID 142).

Start Byte Index	Stop Byte Index	Parameter ID	Status	Data type	Name
136	139	20	x	U16	Number of Bins
140	143	21	x	U16	Bytes per bin
144	x	-	-	U16	MCA data in requested size