

Delfi-C3 Housekeeping Frame Telemetry

Variable	Bits	Value	Description
A	AX25StartFlag	8	0x7E ones
B	AX25Address	112	comment source + destination
C	AX25Control	8	0x03 sec.4.2 of AX.25 Spec
D	AX25PID	8	0xF0 sec.3.2 of AX.25 Spec
E	PacketNumber	32	variable boot + sequence counter
0 - 35	Housekeeping Frame Content	812	variable see content table
F	AX25FCS	16	variable frame check sequence
G	AX25Flag	8	0x7E ones
Total bits (w/o bitstuffing):			1004
Total bytes (w/o bitstuffing):			125,5
Max. bits (with bitstuffing):			1176

Housekeeping Frame Content

Nr.	Content	Bits	Source	Min. Acq. Time (ms)
0	frameID=HK	2	OBC	0
1	successful_bootCounter	12	OBC	0
2	LastRxdCmd_RxId	1	OBC	0
3	PIC_status	17	OBC	0
4	LastRxdCmd_cmd	64	OBC	0
5	LastTxwCmd_cmd	64	OBC	0
6	deployStatusVector	12	ADP1+3	300
7	operationalMode	4	OBC	0
8	bus_V_sys	8	OBC	0
9	bus_V_dep	8	OBC	0
10	OBC T	8	OBC	0
11	SP Z+X+I	8	EMP	115
12	SP Z-Y- I	8	EMP	115
13	SP Z-X- I	8	EMP	115
14	SP Z+Y+ I	8	EMP	115
15	FM430 I	10	CEP	145
16	MeBo Z+ I	10	MEP1	145
17	MeBo Z- I	10	MEP2	145
18	ComBo I	10	CEP	145
19	RAP1 Rx I	10	REP1	145
20	RAP1 Tx I	10	REP1	145
21	RAP2 Rx I	10	REP2	145
22	RAP2 Tx I	10	REP2	145
23	RAP1 fwd. P	10	RCP1	8
24	RAP2 fwd. P	10	RCP2	8
25	RAP1 refl. P	10	RCP1	8
26	RAP2 refl. P	10	RCP2	8
27	RAP1 RSSI	10	RCP1	8
28	RAP2 RSSI	10	RCP2	8
29	RAP1 dopplerV	10	RCP1	8
30	RAP2 dopplerV	10	RCP2	8
31	RAP1 T	10	RCP1	8
32	RAP2 T	10	RCP2	8
33	AWSS frame 1	168	AWP	36
34	AWSS frame 2	168	AWP	36
35	RD IV Z+	32	MDP1	10
36	RD IV Z-	32	MDP2	10
Total:		812	Total:	2092

Allocation

	7	6	5	4	3	2	1	0
0	A	A	A	A	A	A	A	A
1	B	B	B	B	B	B	B	B
2	B	B	B	B	B	B	B	B
3	B	B	B	B	B	B	B	B
4	B	B	B	B	B	B	B	B
5	B	B	B	B	B	B	B	B
6	B	B	B	B	B	B	B	B
7	B	B	B	B	B	B	B	B
8	B	B	B	B	B	B	B	B
9	B	B	B	B	B	B	B	B
10	B	B	B	B	B	B	B	B
11	B	B	B	B	B	B	B	B
12	B	B	B	B	B	B	B	B
13	B	B	B	B	B	B	B	B
14	B	B	B	B	B	B	B	B
15	C	C	C	C	C	C	C	C
16	D	D	D	D	D	D	D	D
17	E	E	E	E	E	E	E	E
18	E	E	E	E	E	E	E	E
19	E	E	E	E	E	E	E	E
20	E	E	E	E	E	E	E	E
0	1	5	1	1	1	1	0	0
1	3	2	1	1	1	1	1	1
2	3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	4	4	4	4	4	4	4	4
6	4	4	4	4	4	4	4	4
7	4	4	4	4	4	4	4	4
8	4	4	4	4	4	4	4	4
9	4	4	4	4	4	4	4	4
10	4	4	4	4	4	4	4	4
11	4	4	4	4	4	4	4	4
12	5	5	5	5	5	5	5	5
13	5	5	5	5	5	5	5	5
14	5	5	5	5	5	5	5	5
15	5	5	5	5	5	5	5	5
16	5	5	5	5	5	5	5	5
17	5	5	5	5	5	5	5	5
18	5	5	5	5	5	5	5	5
19	5	5	5	5	5	5	5	5
20	6	6	6	6	6	6	6	6
21	7	7	7	7	6	6	6	6
22	8	8	8	8	8	8	8	8
23	9	9	9	9	9	9	9	9
24	10	10	10	10	10	10	10	10
25	11	11	11	11	11	11	11	11
26	12	12	12	12	12	12	12	12
27	13	13	13	13	13	13	13	13
28	14	14	14	14	14	14	14	14
29	15	15	15	15	15	15	15	15
30	16	16	16	16	16	16	16	16
31	17	17	17	17	17	17	17	17
32	18	18	18	18	18	18	18	18
33	18	18	18	18	18	18	18	18
34	19	19	19	19	19	19	19	19
35	20	20	20	20	20	20	19	19
36	21	21	21	21	20	20	20	20
37	22	22	21	21	21	21	21	21
38	22	22	22	22	22	22	22	22
39	23	23	23	23	23	23	23	23
40	24	24	24	24	24	24	23	23
41	25	25	25	25	24	24	24	24
42	26	26	25	25	25	25	25	25
43	26	26	26	26	26	26	26	26
44	27	27	27	27	27	27	27	27
45	28	28	28	28	28	28	27	27
46	29	29	29	29	28	28	28	28
47	30	30	29	29	29	29	29	29
48	30	30	30	30	30	30	30	30
49	31	31	31	31	31	31	31	31
50	32	32	32	32	32	32	31	31
51					32	32	32	32
52	33	33	33	33	33	33	33	33
53	33	33	33	33	33	33	33	33
54	33	33	33	33	33	33	33	33
55	33	33	33	33	33	33	33	33
56	33	33	33	33	33	33	33	33
57	33	33	33	33	33	33	33	33
58	33	33	33	33	33	33	33	33
59	33	33	33	33	33	33	33	33
60	33	33	33	33	33	33	33	33
61	33	33	33	33	33	33	33	33
62	33	33	33	33	33	33	33	33
63	33	33	33	33	33	33	33	33
64	33	33	33	33	33	33	33	33
65	33	33	33	33	33	33	33	33
66	33	33	33	33	33	33	33	33
67	33	33	33	33	33	33	33	33
68	33	33	33	33	33	33	33	33
69	33	33	33	33	33	33	33	33
70	33	33	33	33	33	33	33	33
71	33	33	33	33	33	33	33	33
72	33	33	33	33	33	33	33	33
73	34	34	34	34	34	34	34	34
74	34	34	34	34	34	34	34	34
75	34	34	34	34	34	34	34	34
76	34	34	34	34	34	34	34	34
77	34	34	34	34	34	34	34	34
78	34	34	34	34	34	34	34	34
79	34	34	34	34	34	34	34	34
80	34	34	34	34	34	34	34	34
81	34	34	34	34	34	34	34	34
82	34	34	34	34	34	34	34	34
83	34	34	34	34	34	34	34	34
84	34	34	34	34	34	34	34	34
85	34	34	34	34	34	34	34	34
86	34	34	34	34	34	34	34	34
87	34	34	34	34	34	34	34	34
88	34	34	34	34	34	34	34	34
89	34	34	34	34	34	34	34	34
90	34	34	34	34	34	34	34	34
91	34	34	34	34	34	34	34	34
92	34	34	34	34	34	34	34	34
93	34	34	34	34	34	34	34	34
94	35	35	35	35	35	35	35	35
95	35	35	35	35	35	35	35	35
96	35	35	35	35	35	35	35	35
97	35	35	35	35	35	35	35	35
98	36	36	36	36	36	36	36	36
99	36	36	36	36	36	36	36	36
100	36	36	36	36	36	36	36	36
101	36	36	36	36	36	36	36	36
0	F	F	F	F	F	F	F	F
1	F	F	F	F	F	F	F	F
2	G	G	G	G	G	G	G	G

Header

Content

Ftr

Delfi-C3 Payload Frame Telemetry				
Variable	Bits	Value	Description	
A	AX25StartFlag	8	0x7E	ones
B	AX25Address	112	1.b.d.	source + destination
C	AX25Control	8	0x03	sec.4.2 of AX.25 Spec
D	AX25PID	8	0xF0	sec.3.2 of AX.25 Spec
E	PacketNumber	32	variable	boot + sequence counter
0 - 7	Payload Frame Content	776	variable	see content table
F	AX25FCS	16	variable	frame check sequence
G	AX25Flag	8	0x7E	ones
Total bits (w/o bitstuffing):		968		
Total bytes (w/o bitstuffing):		121		
Max. bits (with bitstuffing):		1133		

Payload Frame Content			
content(nr)	Variable	Bits	Source
0	FrameID=PL	2	OBC
1	TFSC IV Z+	256	MDP1
2	TFSC IV Z-	256	MDP2
3	TFSC T Z+	16	MDP1
4	TFSC T Z-	16	MDP2
5	RD IV Z+	32	MDP1
6	RD IV Z-	32	MDP2
7	AVSS frame	168	AWP
Total:		776	Total:

Allocation								
	7	6	5	4	3	2	1	0
Header	0	A	A	A	A	A	A	A
Header	1	B	B	B	B	B	B	B
Header	2	B	B	B	B	B	B	B
Header	3	B	B	B	B	B	B	B
Header	4	B	B	B	B	B	B	B
Header	5	B	B	B	B	B	B	B
Header	6	B	B	B	B	B	B	B
Header	7	B	B	B	B	B	B	B
Header	8	B	B	B	B	B	B	B
Header	9	B	B	B	B	B	B	B
Header	10	B	B	B	B	B	B	B
Header	11	B	B	B	B	B	B	B
Header	12	B	B	B	B	B	B	B
Header	13	B	B	B	B	B	B	B
Header	14	B	B	B	B	B	B	B
Header	15	C	C	C	C	C	C	C
Header	16	D	D	D	D	D	D	D
Header	17	E	E	E	E	E	E	E
Header	18					E	E	E
Header	19	E	E	E	E	E	E	E
Header	20	E	E	E	E	E	E	E
Content	0					0	0	
Content	1	1	1	1	1	1	1	1
Content	2	1	1	1	1	1	1	1
Content	3	1	1	1	1	1	1	1
Content	4	1	1	1	1	1	1	1
Content	5	1	1	1	1	1	1	1
Content	6	1	1	1	1	1	1	1
Content	7	1	1	1	1	1	1	1
Content	8	1	1	1	1	1	1	1
Content	9	1	1	1	1	1	1	1
Content	10	1	1	1	1	1	1	1
Content	11	1	1	1	1	1	1	1
Content	12	1	1	1	1	1	1	1
Content	13	1	1	1	1	1	1	1
Content	14	1	1	1	1	1	1	1
Content	15	1	1	1	1	1	1	1
Content	16	1	1	1	1	1	1	1
Content	17	1	1	1	1	1	1	1
Content	18	1	1	1	1	1	1	1
Content	19	1	1	1	1	1	1	1
Content	20	1	1	1	1	1	1	1
Content	21	1	1	1	1	1	1	1
Content	22	1	1	1	1	1	1	1
Content	23	1	1	1	1	1	1	1
Content	24	1	1	1	1	1	1	1
Content	25	1	1	1	1	1	1	1
Content	26	1	1	1	1	1	1	1
Content	27	1	1	1	1	1	1	1
Content	28	1	1	1	1	1	1	1
Content	29	1	1	1	1	1	1	1
Content	30	1	1	1	1	1	1	1
Content	31	1	1	1	1	1	1	1
Content	32	1	1	1	1	1	1	1
Content	33	2	2	2	2	2	2	2
Content	34	2	2	2	2	2	2	2
Content	35	2	2	2	2	2	2	2
Content	36	2	2	2	2	2	2	2
Content	37	2	2	2	2	2	2	2
Content	38	2	2	2	2	2	2	2
Content	39	2	2	2	2	2	2	2
Content	40	2	2	2	2	2	2	2
Content	41	2	2	2	2	2	2	2
Content	42	2	2	2	2	2	2	2
Content	43	2	2	2	2	2	2	2
Content	44	2	2	2	2	2	2	2
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Content	57	2	2	2	2	2	2	2
Content	58	2	2	2	2	2	2	2
Content	59	2	2	2	2	2	2	2
Content	60	2	2	2	2	2	2	2
Content	61	2	2	2	2	2	2	2
Content	62	2	2	2	2	2	2	2
Content	63	2	2	2	2	2	2	2
Content	64	2	2	2	2	2	2	2
Content	65	3	3	3	3	3	3	3
Content	66	3	3	3	3	3	3	3
Content	67	4	4	4	4	4	4	4
Content	68	4	4	4	4	4	4	4
Content	69	5	5	5	5	5	5	5
Content	70	5	5	5	5	5	5	5
Content	71	5	5	5	5	5	5	5
Content	72	5	5	5	5	5	5	5
Content	73	6	6	6	6	6	6	6
Content	74	6	6	6	6	6	6	6
Content	75	6	6	6	6	6	6	6
Content	76	6	6	6	6	6	6	6
Content	77	7	7	7	7	7	7	7
Content	78	7	7	7	7	7	7	7
Content	79	7	7	7	7	7	7	7
Content	80	7	7	7	7	7	7	7
Content	81	7	7	7	7	7	7	7
Content	82	7	7	7	7	7	7	7
Content	83	7	7	7	7	7	7	7
Content	84	7	7	7	7	7	7	7
Content	85	7	7	7	7	7	7	7
Content	86	7	7	7	7	7	7	7
Content	87	7	7	7	7	7	7	7
Content	88	7	7	7	7	7	7	7
Content	89	7	7	7	7	7	7	7
Content	90	7	7	7	7	7	7	7
Content	91	7	7	7	7	7	7	7
Content	92	7	7	7	7	7	7	7
Content	93	7	7	7	7	7	7	7
Content	94	7	7	7	7	7	7	7
Content	95	7	7	7	7	7	7	7
Content	96	7	7	7	7	7	7	7
Content	97	7	7	7	7	7	7	7
Ftr	0	F	F	F	F	F	F	F
Ftr	1	F	F	F	F	F	F	F
Ftr	2	G	G	G	G	G	G	G