

4.2.7 QZSS Decoded Message Blocks

QZSNav	Number: 4095
	"OnChange" interval: block generated each time a new navigation data set is received from a QZSS satellite

The QZSNav block contains the decoded navigation data for one QZSS satellite. The data is decoded from the navigation message transmitted in the L1 C/A signal. Refer to the QZSS ICD for further details.

Parameter	Type	Units	Do-Not-Use	Description
Sync1	c1			Block Header, see 4.1.1
Sync2	c1			
CRC	u2			
ID	u2			
Length	u2	1 byte		
TOW	u4	0.001 s	4294967295	SIS time stamp, see 4.1.3
WNc	u2	1 week	65535	
PRN	u1			ID of the QZSS satellite of which the ephemeris is given in this block (see 4.1.9)
Reserved	u1			Reserved for future use, to be ignored by decoding software
WN	u2	1 week	65535	Week number (10 bits from subframe 1, word 3)
CAorPonL2	u1			Code(s) on L2 channel (2 bits from subframe 1, word 3). Always 2 for QZSS satellites.
URA	u1			User Range accuracy index (4 bits from subframe 1 word 3)
health	u1			6-bit health from subframe 1, word 3 (6 bits from subframe 1, word 3)
L2DataFlag	u1			Data flag for L2 P-code (1 bit from subframe 1, word 4). Always 1 for QZSS satellites.
IODC	u2			Issue of data, clock (10 bits from subframe 1)
IODE2	u1			Issue of data, ephemeris (8 bits from subframe 2)
IODE3	u1			Issue of data, ephemeris (8 bits from subframe 3)
FitIntFlg	u1			Curve Fit Interval, (1 bit from subframe 2, word 10)
Reserved2	u1			unused, to be ignored by decoding software
T _{gd}	f4	1 s	$-2 \cdot 10^{10}$	Estimated group delay differential
t _{oc}	u4	1 s		clock data reference time
a _{f2}	f4	1 s / s ²		SV clock aging
a _{f1}	f4	1 s / s		SV clock drift
a _{f0}	f4	1 s		SV clock bias
C _{rs}	f4	1 m		Amplitude of the sine harmonic correction term to the orbit radius
DEL _N	f4	1 semi-circle / s		Mean motion difference from computed value
M ₀	f8	1 semi-circle		Mean anomaly at reference time
C _{uc}	f4	1 rad		Amplitude of the cosine harmonic correction term to the argument of latitude
e	f8			Eccentricity
C _{us}	f4	1 rad		Amplitude of the sine harmonic correction term to the argument of latitude
SQRT _A	f8	1 m ^{1/2}		Square root of the semi-major axis

t_oe	u4	1 s		Reference time ephemeris
C_ic	f4	1 rad		Amplitude of the cosine harmonic correction term to the angle of inclination
OMEGA_0	f8	1 semi-circle		Longitude of ascending node of orbit plane at weekly epoch
C_is	f4	1 rad		Amplitude of the sine harmonic correction term to the angle of inclination
i_0	f8	1 semi-circle		Inclination angle at reference time
C_rc	f4	1 m		Amplitude of the cosine harmonic correction term to the orbit radius
omega	f8	1 semi-circle		Argument of perigee
OMEGADOT	f4	1 semi-circle / s		Rate of right ascension
IDOT	f4	1 semi-circle / s		Rate of inclination angle
WNt_oc	u2	1 week		WN associated with t_oc, modulo 1024
WNt_oe	u2	1 week		WN associated with t_oe, modulo 1024
Padding	u1[.]			Padding bytes, see 4.1.5

QZSA1m	Number:	4116
	"OnChange" interval:	block generated each time a new almanac data set is received from a QZSS satellite

The QZSA1m block contains the decoded almanac data for one QZSS satellite. These data are conveyed in subframes 4 and 5 of the satellite navigation message. Refer to QZSS ICD for further details.

Parameter	Type	Units	Do-Not-Use	Description
Sync1	c1			Block Header, see 4.1.1
Sync2	c1			
CRC	u2			
ID	u2			
Length	u2	1 byte		
TOW	u4	0.001 s	4294967295	SIS time stamp, see 4.1.3
WNc	u2	1 week	65535	
PRN	u1			ID of the QZSS satellite of which the almanac is given in this block (see 4.1.9)
Reserved	u1			Reserved for future use, to be ignored by decoding software
e	f4			Difference from reference eccentricity
t_oa	u4	1 s		almanac reference time of week
delta_i	f4	1 semi-circle		Difference from reference angle of inclination
OMEGADOT	f4	1 semi-circle / s		Rate of right ascension
SQRT_A	f4	1 m ^{1/2}		Square root of the semi-major axis
OMEGA_0	f4	1 semi-circle		Longitude of ascending node of orbit plane at weekly epoch
omega	f4	1 semi-circle		Argument of perigee
M_0	f4	1 semi-circle		Mean anomaly at reference time
a_f1	f4	1 s / s		SV clock drift
a_f0	f4	1 s		SV clock bias
WN_a	u1	1 week		Almanac reference week, to which t_oa is referenced
Reserved2	u1			Reserved for future use, to be ignored by decoding software
health8	u1			health on 8 bits from the almanac page
health6	u1			health summary on 6 bits (from subframe 4, page 25 and subframe 5 page 25)
Padding	u1[.]			Padding bytes, see 4.1.5