4.2.11 Receiver Time Blocks

ReceiverTime	Number: 5914 "OnChange" interval: 1s

The ReceiverTime block provides the current time with a 1-second resolution in the receiver time scale and UTC.

The level of synchronization of the receiver time with the satellite system time is provided in the SyncLevel field.

UTC time is provided if the UTC parameters have been received from at least one GNSS satellite. If the UTC time is not available, the corresponding fields are set to their Do-Not-Use value.

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	Receiver time stamp, see 4.1.3
WNc	u2	1 week	65535	
UTCYear	i1	1 year	−128	Current year in the UTC time scale (2 digits). From 0 to 99, or -128 if not available
UTCMonth	i1	1 month	−128	Current month in the UTC time scale. From 1 to 12, or -128 if not available
UTCDay	i1	1 day	−128	Current day in the UTC time scale. From 1 to 31, or -128 if not available
UTCHour	i1	1 hour	−128	Current hour in the UTC time scale. From 0 to 23, or -128 if not available
UTCMin	i1	1 minute	−128	Current minute in the UTC time scale. From 0 to 59, or -128 if not available
UTCSec	i1	1 s	−128	Current second in the UTC time scale. From 0 to 59, or -128 if not available
DeltaLS	i1	1 s	−128	Integer second difference between UTC time and GPS system time. Positive if GPS time is ahead of UTC. Set to -128 if not available.
SyncLevel	u1			Bit field indicating the synchronization level of the receiver time. If bits 0 to 2 are set, full synchronization is achieved: Bit 0: WNSET: if this bit is set, the receiver week number is set. Bit 1: TOWSET: if this bit is set, the receiver time-of-week is set to within 20ms. Bit 2: FINETIME: if this bit is set, the receiver time-of-week is within the limit specified by the **setClockSyncThreshold** command. Bit 3: Reserved Bit 4: i Reserved Bits 5-7: Reserved
Padding	u1[..]			Padding bytes, see 4.1.5

xPPSOffset	Number: 5911 "OnChange" interval: PPS rate

The xPPSOffset block contains the offset between the true xPPS pulse and the actual pulse output by the receiver. It is output right after each xPPS pulse.

On receivers with more than one independent PPS outputs, this block always refers to the first PPS output.

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	Receiver time stamp, see 4.1.3
WNc	u2	1 week	65535	
SyncAge	u1	1 s		Age of the last synchronization to system time. The xPPS pulse is regularly resynchronized with system time. This field indicates the number of seconds elapsed since the last resynchronization. SyncAge is constrained to the 0-255s range. If the age is higher than 255s, SyncAge is set to 255. If the PPS is synchronized with the internal receiver time (Timescale = 3), SyncAge is always set to 0.
TimeScale	u1			Time scale to which the xPPS pulse is referenced, as set with the **setPPSParameters** command: 1: GPS time 2: UTC 3: Receiver time 4: GLONASS time 5: Galileo time 6: BeiDou time
Offset	f4	$1 \cdot 10^{-9}$ s		Offset of the xPPS output by the receiver with respect to its true position. Offset is negative when the xPPS pulse is in advance with respect to its true position. See also section 1.19 for an explanation of the xPPS generation principle, and for a description of the xPPS offset.
Padding	u1[..]			Padding bytes, see 4.1.5