4.2.14 L-Band Demodulator Blocks

LBandTrackerStatus	Number:	4201
	"OnChange" interval: 1s	

The LBandTrackerStatus block provides general information on the tracking status of the L-band signals.

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	
N	u1			Number of L-band trackers for which data is provided in this SBF block, i.e. number of TrackData sub-blocks.
SBLength	u1	1 byte		Length of one sub-block
TrackData	...	...		*A succession of N TrackData sub-blocks, see definition below*
Padding	u1[..]			Padding bytes, see 4.1.5

`TrackData` sub-block definition:

Parameter	Type	Units	Do-Not-Use	Description
Frequency	u4	1 Hz	0	Nominal frequency of the beam for which data is provided in this sub-block.
Baudrate	u2	1 baud	0	Baudrate of the beam
ServiceID	u2			Service ID of the beam. Set to 0 for the LBAS1 beam. Set to 1 for the LBAS2 beam when received through an NTRIP connection. This field must be ignored if the `Status` field is set to anything else than 3 (Locked).
FreqOffset	f4	1 Hz	$-2 \cdot 10^{10}$	Frequency offset of the demodulator, if available
CN0	u2	0.01 dB-Hz	0	Current C/N_0 value
AvgPower	i2	0.01 dB	-32768	Not applicable.
AGCGain	i1	1 dB	-128	Not applicable.
Mode	u1			Current operation mode: 0: normal
Status	u1			Current status: 0: Idle 1: Search 2: FrameSearch 3: Locked
SVID	u1			Satellite ID, see 4.1.9
LockTime	u2	1 s		Lock time to the L-band signal, clipped to 65535 seconds.
Source	u1			L-band tracking module: 0: Unknown 1: Internal 2: LBR board 3: NTRIP. L-band data received over NTRIP. In that case, the other fields in this sub-block are not applicable and set to their Do-Not-Use value.
Padding	u1[..]			Padding bytes, see 4.1.5

Rev 2 | (SVID)
Rev 1 | (LockTime)
Rev 3 | (Source)

LBandBeams	Number:	4204
	"OnChange" interval:	Block generated each time beam status data is decoded

This block contains the name, longitude and beam frequency of the L-band geostationary satellites known by the receiver.

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	
N	u1			Number of L-band beams for which data is provided in this SBF block, i.e. number of BeamInfo sub-blocks.
SBLength	u1	1 byte		Length of one sub-block
BeamInfo	...	...		*A succession of N BeamInfo sub-blocks, see definition below*
Padding	u1[..]			Padding bytes, see 4.1.5

BeamInfo sub-block definition:

Parameter	Type	Units	Do-Not-Use	Description
SVID	u1			SVID associated to the satellite for which information is provided in this sub-block. SVID ranges from 107 to 119. See also section 4.1.9.
SatName	c1[9]			Satellite Name, right padded with zeros
SatLongitude	i2	0.01 degrees	−32768	Satellite Longitude (positive east of Greenwich)
BeamFreq	u4	1 Hz	0	L-band beam center frequency
Padding	u1[..]			Padding bytes, see 4.1.5