

The following table lists the set of commands and arguments supported by the AsteRx1-v1.0 receiver. The first column refers to the page number in the Command Line Interface Reference Guide where a full description of the command can be found. Underlined values correspond to default settings.

Page	Mnm.	Name	Argument 1	Argument 2	Argument 3	Argument 4	Argument 5	Argument 6
11	help	lstCommandHelp	<b>Action</b> Overview <i>[cmd list]</i>					
12	lcf	lstConfigFile	<b>File</b> Current Boot RxDefault User1 User2					
13	eccf gccf	exeCopyConfigFile getCopyConfigFile	<b>Source</b> Current Boot RxDefault User1 User2	<b>Target</b> Current Boot User1 User2				
14	lif	lstInternalFile	<b>File</b> Identification Debug Error					
15	imd	lstMIBDescription	<b>Action</b> Overview <i>[cmd list]</i>					
16	epwm gpwm	exePowerMode getPowerMode	<b>Mode</b> ScheduledSleep					
17	grc	getReceiverCapabilities						
19	gri	getReceiverInterface	<b>Item</b> +RxName +SNMPLanguage +SNMPVersion all					
21	erst grst	exeResetReceiver getResetReceiver	<b>Level</b> Soft Hard	<b>EraseMemory</b> none +Config +Position +Ephemeris +Almanac All				
22	sca gca	setChannelAllocation getChannelAllocation	<b>Channel</b> Channel +Ch01 ... +Ch16 all	<b>Satellite</b> G01 ... G32 S120 ... S138 auto	<b>Search</b> manual auto	<b>Doppler</b> -50000 ... 0 ... 50000 Hz	<b>Window</b> 1 ... 16000 ... 100000 Hz	
24	gcc	getChannelConfiguration	<b>Channel</b> +Ch01 ... +Ch16 all					
25	scm gcm	setCN0Mask getCN0Mask	<b>Signal</b> Signal +GPSL1CA +GEOL1 all	<b>Mask</b> 0 ... 28 ... 60 dB-Hz				
26	smm gmm	setMultipathMitigation getMultipathMitigation	<b>Mode</b> off on					
27	sst gst	setSatelliteTracking getSatelliteTracking	<b>Satellite</b> none +G01 ... G32 +GPS +S120 ... S138 +SBAS all					
30	ssi gsi	setSmoothingInterval getSmoothingInterval	<b>Signal</b> Signal	<b>Interval</b>	<b>Alignment</b>			

Page	Mnm.	Name	Argument 1	Argument 2	Argument 3	Argument 4	Argument 5	Argument 6
			+GPSL1CA +GEOL1 <u>all</u>	0 ... 1000 sec	0 ... 1000 sec			
31	stlp gtlp	setTrackingLoopParameters getTrackingLoopParameters	<i>Signal</i> <i>Signal</i>	DLLBandwidth	PLLBandwidth	MaxTpDLL	MaxTpPLL	
			+GPSL1CA +GEOL1 <u>all</u>	0.01 ... <u>0.25</u> ... 5.00 Hz	1 ... <u>10</u> ... 20 Hz	1 ... <u>100</u> ... 500 msec	1 ... <u>10</u> ... 200 msec	
32	sao gao	setAntennaOffset getAntennaOffset	<i>Antenna</i> <i>Antenna</i>	DeltaX	DeltaY	DeltaZ	Type (20)	SerialNr (20)
			+Main <u>all</u>	-1000.0000 ... <u>0.0000</u> ... 1000.0000 m	-1000.0000 ... <u>0.0000</u> ... 1000.0000 m	-1000.0000 ... <u>0.0000</u> ... 1000.0000 m	<u>Unknown</u>	<u>Unknown</u>
33	sdcu gdcu	setDiffCorrUsage getDiffCorrUsage	<i>Mode</i>	MaxAge	BaseSelection	BaseID		
			<u>LowLatency</u>	1 ... <u>20</u> ... 3600 sec	manual <u>auto</u>	0 ... 1023		
34	sem gem	setElevationMask getElevationMask	<i>Engine</i> <i>Engine</i>	Mask				
			+Tracking +PVT <u>all</u>	-90 ... <u>0</u> ... 90 deg				
37	sgd ggd	setGeodeticDatum getGeodeticDatum	<i>Datum</i>					
			<u>WGS84</u>					
38	sgu ggu	setGeoidUndulation getGeoidUndulation	<i>Mode</i> <i>Mode</i>	Undulation				
			manual <u>Auto</u>	-250.0 ... <u>0.0</u> ... 250.0 m				
39	shm ghm	setHealthMask getHealthMask	<i>Engine</i> <i>Engine</i>	Mask				
			+Tracking +PVT <u>all</u>	off <u>on</u>				
40	sim gim	setIonosphereModel getIonosphereModel	<i>Model</i>					
			off Klobuchar SBAS <u>auto</u>					
42	smv gmv	setMagneticVariance getMagneticVariance	<i>Mode</i>	Variance				
			manual <u>auto</u>	-180.0 ... <u>0.0</u> ... 180.0 deg				
43	spm gpm	setPVTMode getPVTMode	<i>Mode</i>	RoverMode				
			<u>Rover</u>	+StandAlone +SBAS +DGPS <u>all</u>				
45	srl grl	setRAIMLevels getRAIMLevels	<i>Mode</i>	Pfa	Pmd	Reliability		
			off <u>on</u>	-12 ... <u>-4</u> ... -1	-12 ... <u>-4</u> ... -1	-12 ... <u>-3</u> ... -1		
46	srd grd	setReceiverDynamics getReceiverDynamics	<i>Level</i>					
			off Low Moderate <u>High</u>					
47	ernf grnf	exeResetNavFilter getResetNavFilter	<i>Level</i>					
			+PVT <u>all</u>					
48	ssu gsu	setSatelliteUsage getSatelliteUsage	<i>Satellite</i>					
			none +G01 ... G32 +GPS +S120 ... S138 +SBAS <u>all</u>					
50	ssbc gsbc	setSBASCORRECTIONS getSBASCORRECTIONS	<i>Satellite</i>	SISMode	NavMode	DO229Version		

Page	Mnm.	Name	Argument 1	Argument 2	Argument 3	Argument 4	Argument 5	Argument 6
			S120 ... S138 EGNOS WAAS MSAS auto	Operational Test	EnRoute PrecApp	DO229C auto		
54	sts gts	setTimingSystem getTimingSystem	System  GPS					
55	stm gtm	setTroposphereModel getTroposphereModel	ZenithModel  off Saastamoinen MOPS	MappingModel  Niell MOPS				
57	stp gtp	setTroposphereParameters getTroposphereParameters	Temperature  -100.0 ... 15.0 ... 100.0 °C	Pressure  800.00 ... 1013.25 ... 1500.00 hPa	Humidity  0 ... 50 ... 100 %			
59	scst gcst	setClockSyncThreshold getClockSyncThreshold	Threshold  usec500 msec1 msec2 msec3 msec4 msec5					
60	sep gep	setEventParameters getEventParameters	Event Event +EventA +EventB all	Polarity  Low2High High2Low				
62	spps gpps	setPPSPParameters getPPSPParameters	Interval  off msec100 msec200 msec500 sec1 sec2 sec5 sec10	Polarity  Low2High High2Low	Delay  -1000000.00 ... 0.00 ... 1000000.00 nsec	TimeScale  GNSS RxClock		
63	swui gwui	setWakeUpInterval getWakeUpInterval	WakeUpTime (30)  2000-01-01 00:00:00	AwakeDuration  0 ... 604800 sec	RepetitionPeriod  0 ... 604800 sec			
65	smp gmp	setMarkerParameters getMarkerParameters	MarkerName (60)  ATRX	MarkerNumber (20)  Unknown	MarkerType (20)  Unknown			
66	soc goc	setObserverComment getObserverComment	Comment (120)  Unknown					
67	sop gop	setObserverParameters getObserverParameters	Observer (20)  Unknown	Agency (40)  Unknown				
68	scs gcs	setCOMSettings getCOMSettings	Cd Cd +COM1 +COM2 +COM3 all	Rate  baud1200 baud2400 baud4800 baud9600 baud19200 baud38400 baud57600 baud115200 baud230400 baud460800	DataBits  bits8	Parity  No	StopBits  bit1	FlowControl  none
69	sdio gdio	setDataInOut getDataInOut	Cd Cd +COM1 +COM2 +COM3 +USB1 +USB2 all	Input  none CMD RTCMv2	Output  none +SBF +NMEA +ASCIIIDisplay			
72	enoc gnoc	exeNMEAOnce getNMEAOnce	Cd	Messages				

Page	Mnm.	Name	Argument 1	Argument 2	Argument 3	Argument 4	Argument 5	Argument 6
			COM1 COM2 COM3 USB1 USB2	<i>+[ NMEA List ]</i>				
73	sno gno	setNMEAOutput getNMEAOutput	<b>Stream</b> <i>Stream</i>  +Stream1 +Stream2 +Stream3 +Stream4 +Stream5 +Stream6 +Stream7 +Stream8 +Stream9 +Stream10 <u>all</u>	<i>Cd</i>  <u>none</u> COM1 COM2 COM3 USB1 USB2	<i>Messages</i>  <u>none</u> <i>+[ NMEA List ]</i>	<i>Interval</i>  <u>off</u> OnChange msec100 msec200 msec500 sec1 sec2 sec5 sec10		
75	snp gnp	setNMEAPrecision getNMEAPrecision	<i>NrExtraDigits</i>  <u>0 ... 3</u>					
78	esoc gsoc	exeSBFOnce getSBFOnce	<b>Cd</b>  COM1 COM2 COM3 USB1 USB2	<b>Messages</b>  <i>+[ SBF List ]</i>				
79	sso gso	setSBFOOutput getSBFOOutput	<b>Stream</b> <i>Stream</i>  +Stream1 +Stream2 +Stream3 +Stream4 +Stream5 +Stream6 +Stream7 +Stream8 +Stream9 +Stream10 +Res1 +Res2 +Res3 +Res4 <u>all</u>	<i>Cd</i>  <u>none</u> COM1 COM2 COM3 USB1 USB2	<i>Messages</i>  <u>none</u> <i>+[ SBF List ]</i>	<i>Interval</i>  <u>off</u> OnChange msec100 msec200 msec500 sec1 sec2 sec5 sec10		
87	sr2u gr2u	setRTCMv2Usage getRTCMv2Usage	<i>MsgUsage</i>  +RTCM1 +RTCM2 +RTCM3 +RTCM9 <u>all</u>					

The AsteRx1-v1.0 supports the following set of NMEA sentences (this list can be obtained by invoking the command **lmd,sno**):

ALM,  
DTM,  
GBS,  
GGA,  
GLL,  
GNS,  
GRS,  
GSA,  
GST,  
GSV,  
RMC,  
VTG,  
ZDA

All Septentrio SBF blocks are listed in the SBF Reference Guide. The AsteRx1-v1.0 supports the following subset of blocks. For each of them, the supported version and revision numbers are mentioned.

```
MeasEpoch (v2, rev0)
MeasExtra (v1, rev0)
EndOfMeas (v1, rev0)
GPSRawCA (v1, rev0)
GEORawL1 (v1, rev0)
GPSNav (v1, rev0)
GPSAlm (v1, rev0)
GPSIon (v1, rev0)
GPSUtc (v1, rev0)
GEOMT00 (v1, rev0)
GEOPRNMask (v1, rev0)
GEOFastCorr (v1, rev0)
GEOIntegrity (v1, rev0)
GEOFastCorDeg (v1, rev0)
GEONav (v1, rev0)
GEODegrFactors (v1, rev0)
GEONetworkTime (v1, rev0)
GEOAlm (v1, rev0)
GEOIGPMask (v1, rev0)
GEOLongTermCorr (v1, rev0)
GEOIonoDelay (v1, rev0)
GEOServiceLevel (v1, rev0)
GEOClockEphCovMatrix (v1, rev0)
PVTCartesian (v2, rev0)
PVTGeodetic (v2, rev0)
PosCovCartesian (v1, rev0)
PosCovGeodetic (v1, rev0)
VelCovCartesian (v1, rev0)
VelCovGeodetic (v1, rev0)
DOP (v2, rev0)
PVTSatCartesian (v1, rev0)
PVTResiduals (v2, rev0)
RAIMStatistics (v2, rev0)
GEOCorrections (v1, rev0)
BaseLine (v1, rev0)
EndOfPVT (v1, rev0)
ReceiverTime (v1, rev0)
xPPSOffset (v1, rev0)
ExtEvent (v1, rev0)
DiffCorrIn (v1, rev0)
ChannelStatus (v1, rev0)
ReceiverStatus (v1, rev0)
ReceiverSetup (v1, rev0)
Commands (v1, rev0)
Comment (v1, rev0)
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