L86 Release Notes

GNSS Module Series

Rev. L86_Firmware_Release_Notes_V0301S

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1. Preamble

This document provides the Release Notes for L86 firmware version **L86NR03A01S** [1]. It describes major changes compared to L86 firmware version **L86NR02A02S**. For more information, refer to the other documents about L86.

2. New Features

NO.	Brief description	Since
1	Added the SDK command **$PQBAUD** to modify and save baudrate.	R01A03S
2	Added the SDK command **$PQ1PPS** to modify output mode of 1PPS.	R01A03S
3	Added the SDK command **$PQEPE** to set PQEPE sentence output.	R01A03S
4	Added packet type **$PMTK351**, **$PMTK352**, **$PMTK262**, **$PMTK285** and **$PMTK875**.	R01A03S
5	Added the SDK command **$PQTXT** to set GPTXT sentence output.	R01A03S
6	Added the SDK command **$PQECEF** to set ECEFPOSVEL sentence output.	R01A04S
7	Added the SDK command **$PQODO** to start or stop odometer reading.	R01A04S
8	Added the SDK command **$PQPZ90** to enable or disable switching from WGS84 to PZ-90.11.	R01A04S
9	Added the SDK command **$PQGLP** to enter into or exit from GNSS low power (GLP) mode.	R01A04S
10	Added the SDK command **$PQVEL** to enable or disable 3 ways velocity sentence output.	R01A04S
11	Added the PMTK command **$PMTK838** to enable or disable jamming detection function.	R01A05S
12	Supported Galileo satellites system. "GPS+GLONASS+Galileo" multi-GNSS can be enabled by PMTK command **$PMTK353,1,1,1,1,0*2B**.	R02A01S
13	Added the PMTK command **$PMTK886** to set navigation mode.	R02A01S
14	Added the SDK command **$PQGEO** to configure parameters of geofencing.	R02A01S
15	Added the SDK command **$PQPREC** to configure decimal places of longitude, latitude and altitude in NMEA sentences.	R02A01S
16	Added the SDK command **$PQJAM** to enable or disable jamming detection.	R02A01S
17	Added the SDK command **$PQGBS** to enable or disable sentence of	R02A01S

	GNSS satellite fault detection sentence.	
18	Added mode 5 to **$PMTK285** to fix that 1PPS period is longer than 1s when just positioning.	R02A02S

3. Improved Features

NO.	Brief description	Since
1	Improved 1PPS time accuracy.	R01A03S
2	Improved the positioning performance under the weak signal environment.	R01A03S
3	Improved driving performance at multipath and weak signal condition.	R02A01S
4	Optimized speed accuracy performance.	R02A01S
5	Modified Locus function for overlap mode.	R02A02S
6	Fixed that latitude and longitude are sometimes 6-bit precision in GGA when data valid segment is invalid in RMC.	R02A02S
7	Fixed the problem of overlapped EPO area and code area in flash. Please note that the entire flash needs to be formatted before upgrading from an earlier version to AXN 5.16.	R02A02S
8	Fixed drift or non-positioning problems caused by QZSS satellites 194 and 195.	R02A02S
9	Modified the mechanism of the four-year interval number (i.e., N4) when the current calendar number of day (i.e., NT) is rolled over to ensure that the GLONASS satellites are not affected by the rollover event when positioning.	R03A01S

4. Functions

Basic Function						
AIC	EASY	EPO	SBAS	Always Locate	LOCUS	PPS Sync NMEA
Y	Y	Y	Y	Y	Y	Y

SDK Command Function								
PQBAUD	PQEPE	PQ1PPS	PQVEL	PQTXT	PQECEF	PQODO	PQPZ90	PQGLP
Y	Y	Y	Y	Y	Y	Y	Y	Y
PQGEO	PQPREC	PQJAM	PQGBS					
Y	Y	Y	Y					

Special Function
Jamming Detection
Y

NOTES

1. [1] From R02A01S to the latest version uses NMEA V4.10 protocol, and added a new segment before "*" in RMC, GSA and GSV sentences. Please note compatibility issues with older versions.
2. "Y" means the firmware supports this function.