

# **L20** Release Notes

## **GPS/GNSS Module Series**

Rev. L20\_ROM2.2\_RN

Date: 2013-01-29



## 1. Preamble

The SIRFstarIV™ chip embedded in L20 has new ROM variant which named **ROM2.2**. This document provides the release notes for L20 firmware version **L20 ROM2.2**. It records the history of firmware modification. Customer can find the differences between the new firmware and the previous release version **L20 ROM1.3**.

## 2. Product Differences Summary

Customer can distinguish L20 ROM2.2 from L20 ROM1.3 based on the module's label. The detailed differences between the two modules are given below:

Item /Category	L20 ROM2.2	L20 ROM1.3
Product Number	S2-W0854	S2-W0268
Ordering Code	L20B-S44	L20-S44

The label of L20 ROM2.2 includes ordering code **L20B-S44** and 2-D code. L20 ROM1.3 uses barcode label and no ordering code L20-S44 on it.

Label



### 3. New Features

Item /Category	Brief Description
<b>Hardware Baud Rate Configuration</b>	Baud rate selection can be set upon startup through SDA2 and SCL2 configuration <sup>(1)</sup> . Please note that if those two pins are unused, set baud rate as 4800bps by default.
<b>SBAS Ranging</b>	SBAS satellite ranging measurements are used in the navigation solution for improved DOP and coverage.
<b>QZSS Support</b>	The Quasi-Zenith Satellite System (QZSS) is supported in ROM2.2 module. The receiver can use available QZSS satellites for ranging, but only use one QZSS satellite at any given time.
<b>5 Hz Navigation Update Rate</b>	User selectable 1 Hz or 5 Hz Navigation computation and message output rate.
<b>Fast Time-sync Mode</b>	The Fast Time-sync Mode enables the receiver to determine time quickly from the GPS satellites and then stop receiving signals.

<sup>(1)</sup> Table 1 lists the settings for SDA2 and SCL2 to configure the baud rate at start-up. After start-up, the Pins can be used for other purposes.

SDA2	SCL2	Protocol	Baud Rate
Floating	Floating	NMEA	4800
Floating	Pull low	NMEA	9600
Pull low	Floating	NMEA	38400

**Table 1: SDA2 and SCL2 Settings**

#### NOTES

This feature is not available if any MEMS or non-volatile memory devices are attached to the auxiliary serial bus. The default baud rate of internal software is NMEA 4800 when an EEPROM device is attached, but can be changed via a CCK patch or an OSP message.

## 4. Improved Features

NO.	Brief Description
1	Improved position accuracy performance of Cold start and Warm start by eliminating the known large position error cases.
2	Improved reporting of C/No values while the receiver is in Trickle Power mode.
3	Improved position accuracy performance of Hot start.
4	Added NMEA command (PSRF 125) and response (PSRF 195) messages to poll the firmware version.
5	Reduced current in acquisition mode from 55mA to 39mA.
6	Reduced current in tracking mode from 40mA to 36mA.
7	Added channel usage control bits in MID 136 to control power used during acquisition and track.
8	Added 2D and 3D adaptive fix mode to reduce the time of navigation, especially in weak signals. If the receiver has three usable satellites first, then it will get a 2D fix, but if it has four or more usable satellites, then it will get 3D fix.

For more information, please refer to other documents about L20 ROM2.2.