

ENGINEERING CHANGE NOTIFICATION FORM

ECN: 80200563	REV: 2	ISSUE DATE: 10/11/2018				
TYPE OF CHANGE: Firmware Modification						
DETAILED DESCRIPTION OF CHANGE: Firmware release 1.42 for M12M Replacement Receiver for bug fixes and functionality improvements in uBlox receiver compatibility.						
REASON FOR CHANGE: Bug fixes and functionality improvements.						
PRODUCTS AFFECTED: <table border="1" data-bbox="131 688 1458 762"> <thead> <tr> <th>Firmware Version</th> <th>Model</th> </tr> </thead> <tbody> <tr> <td>Firmware 1.33 and previous</td> <td>M12M Replacement Receiver</td> </tr> </tbody> </table>			Firmware Version	Model	Firmware 1.33 and previous	M12M Replacement Receiver
Firmware Version	Model					
Firmware 1.33 and previous	M12M Replacement Receiver					
Notes:						
AVAILABILITY: <table border="1" data-bbox="131 821 1458 888"> <thead> <tr> <th>MILESTONE</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>ECN release for firmware release files</td> <td>10/11/2018</td> </tr> </tbody> </table>			MILESTONE	DATE	ECN release for firmware release files	10/11/2018
MILESTONE	DATE					
ECN release for firmware release files	10/11/2018					
<p>Release 1.42 for the M12M Replacement Receiver provides the following improvements:</p> <p>Issue 1:</p> <p>The channel status in the @@Ha output did not correctly indicate that a satellite was used in the GPS solution.</p> <p>Resolution:</p> <p>Firmware 1.42 corrects the issue by setting the proper bits in the channel status fields for being used in the timing solution and used in position solution. This fix improves compatibility when used with the Microsemi XLi.</p> <p>Issue 2:</p> <p>The cold start flag in the receiver status field of the @@Ha output was set for too long causing unnecessary delay in the Microsemi XLi before synchronizing to the UTC time.</p> <p>Resolution:</p> <p>Firmware 1.42 corrects the problem by transitioning the cold start flag to zero after a GPS fix and UTC time is available.</p> <p>Issue 3:</p> <p>Under some conditions, the receiver status field in of the @@Ha output did not correctly indicate position hold mode after completing an auto-survey.</p> <p>Resolution:</p> <p>Firmware 1.42 corrects this problem by properly indicating position hold mode when the survey is complete. This fix improves compatibility when used with the Microsemi XLi.</p>						

Issue 4:

The timing of the @@Ha output relative to the 1PPS rising edge under some conditions causes the Microsemi XLI to interpret the time with 1 second offset.

Resolution:

Firmware 1.42 corrects the issue by adjusting the start of @@Ha output to be within 0 to 50 ms after the 1PPS rising edge to match the specifications of the M12M.

Issue 5:

The jamming level may frequently jump up to 100s due to modified power mode setup in the uBlox receiver with firmware version 3.01. Units with uBlox receiver of version 3.0 or older are not affected by this issue.

Resolution:

Firmware 1.42 corrects the issue by configuring the proper power mode setup to ensure low jamming susceptibility. This fix improves reliability related to the issue of preventing the device acquiring a lock due to consistent high jamming levels.

Issue 6:

The UTC date and time display from start-up is incorrect when GPS signal is not present.

Resolution:

Firmware 1.42 corrects the issue by starting the RTC counter from zero upon start-up before a GPS fix and UTC time is available.

REFERENCE DOCUMENTS/ATTACHMENTS:

CONTACTS	NAME	EMAIL
Software Engineer	Keith Loiselle	keith@jackson-labs.com

PLEASE CONTACT JACKSON LABS TECHNOLOGIES, INC. WITH ANY QUESTIONS