



Conexant Announces the Jupiter 10 GPS Receiver

Greetings:

Conexant is pleased to announce the latest version of the popular Jupiter GPS Receiver: Jupiter 10. For customers currently using the previous Jupiter 8, there are some specific differences you should be aware of. Please see details below.

Compatibility

The key question on everyone's mind is compatibility between Jupiter 8 and Jupiter 10. For software, while Jupiter 10 has several new features, all existing software should work exactly as before. All previous messages in both Conexant binary and NMEA protocols work the same, and the receiver will respond the same. For hardware, there is only one change that might affect customers: pin length on the 20-pin connector has been standardized. The Jupiter 8 with the straight OSX connector (part number TU30-D140-221) used to have a 0.250 inch (6.35 mm) pin length. Jupiter 10 with the same connector (new part number TU30-D140-371) will now have a 0.300 inch (7.62 mm) pin length.. All other pin lengths remain unchanged. Mounting holes and height profiles are also unchanged.

New Features

Jupiter 10 will come with version 2.30 software. This software upgrade brings many new features and capabilities to the receiver. Some specific changes include the following:

- New messages to allow OEMs to save and restore satellite ephemerides, almanacs and the UTC and Ionospheric correction data
- New messages to monitor the system status, output RTCM corrections receiver in the second port, and report on system errors
- Improved navigation performance that enhances Time To First Fix (TTFF) in situations where only 3 satellites are visible
- Improved RF connector mounting to strengthen the antenna connection.

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Page 2

Hardware Changes

Customers will notice some specific hardware differences between Jupiter 8 and Jupiter 10. The primary change is that the board has new, larger memory. Instead of the 1 Mbit ROM found on Jupiter 8, Jupiter 10 has a full 4 Mbit device. This will provide considerable extra space for those customers adding OEM software to the Jupiter board. The RF connector has been changed to a through-hole mount from the previous surface mount. This new mounting will provide added strength and resistance from stress applied by the antenna cable.

The final key hardware change is in the pin length of the 20-pin interface connector. The table below summarizes pin lengths on the various versions of the Jupiter boards.

RF Connector	Jupiter 8 Boards		Jupiter 10 Boards	
	Part Number TU30-D140-	Pin Length (inches/mm)	Part Number TU30-D140-	Pin Length (inches/mm)
Right-Angle SMB	-211	0.400/10.16	-391	0.400/10.16
Straight OSX	-221	0.250/6.35	-371	0.300/7.62
Right-Angle OSX	-231	0.300/7.62	-381	0.300/7.62

Software Changes

Version 2.30 software adds several messages to the Jupiter. Refer to the document “Zodiac GPS Receiver Version 2.30 New Serial I/O Messages” for a list of the ten new messages and their formats.

In addition to the new messages, several improvements and bug fixes have been implemented. The NMEA message GSV has been changed to have a constant number of fields. This will increase its compatibility with other NMEA devices. The system can now be set up to use altitude aiding and get a first fix using only 3 satellites. This will improve TTFF under conditions where sky view is limited or obscured, as in an urban canyon or under heavy foliage.

If you have any questions on the Jupiter 10 board in your application, please refer to the enclosed documents, or contact your Conexant sales representative.