PCN – Product Change Notification

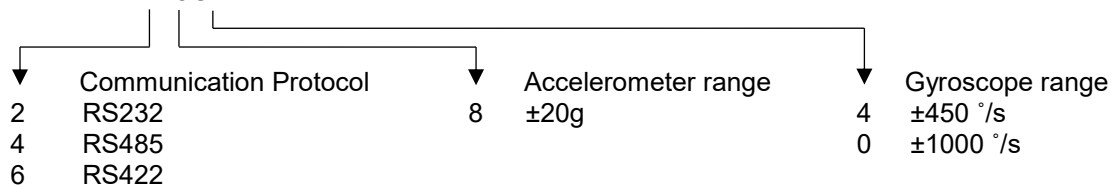| Topic:	**Switching to MTi 5th generation**
Author:	Product Management
Date:	September 2017 (Version 2)

1 Type of Change

☒ Hardware modification
☒ Interface update

2 Affected Products

Series	Current P/N	Current Description	New P/N	New Description
MTi-10	MTi-10-xAxGx	±5g, 450 or 1000º/s	MTi-10-xA**8**Gx	±20g, 450 or 1000º/s
MTi-20	MTi-20-xAxGx	±5g, 450 or 1000º/s	MTi-20-xA**8**Gx	±20g, 450 or 1000º/s
MTi-30	MTi-30-xAxGx	±5g, 450 or 1000º/s	MTi-30-xA**8**Gx	±20g, 450 or 1000º/s
MTi-100	MTi-100-xAxGx	±5g, 450 or 1000º/s	MTi-100-xA**8**Gx	±20g, 450 or 1000º/s
MTi-200	MTi-200-xAxGx	±5g, 450 or 1000º/s	MTi-200-xA**8**Gx	±20g, 450 or 1000º/s
MTi-300	MTi-300-xAxGx	±5g, 450 or 1000º/s	MTi-300-xA**8**Gx	±20g, 450 or 1000º/s
MTi-G-710	MTi-G-710-xAxGx	±5g, 450 or 1000º/s	MTi-G-710-xA**8**Gx	±20g, 450 or 1000º/s

MTi-series-xA8Gx

Communication Protocol		Accelerometer range		Gyroscope range
2	RS232	8	±20g	4 ±450 ˚/s
4	RS485			0 ±1000 ˚/s
6	RS422			

Note that not all combinations are available. Visit http://shop.xsens.com for available configurations.

The last 4 (hexadecimal) digits of the 5th generation will start with 2000, e.g. 07702000 for the first MTi-G-710 of the 5th generation.

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3   Description of Change

3.1   MTi configurations available only with ±20g accelerometers

The 5th generation MTi configurations will be supplied with ±20g high dynamic range accelerometers only. This configuration shall provide improved system performance in high acceleration applications and/or situations with vibrations without compromising system performance in low dynamic applications. The MTi parts with ±5g and ±18g configurations will be discontinued for the 5th generation MTi.

3.2   No legacy mode support

For the 5th generation of MTi, the MTDATA2 will be the only supported data output format along with specific string mode support (NMEA). MTDATA output format will be discontinued and as a consequence 'Legacy' mode support will no longer be available and provided.

3.3   Mean Time Between Failures Improvement (MTBF)

The MTBF has increased from 200.000 hours to 300.000 hours.

3.4   Beidou support

The MTi 5th generation will only be supplied with the MTi-G-710 variant of the GNSS/INS system replacing the MTi-G-700 available in the 4th generation. The MTi-G-710 comes with GPS/GLONASS/Beidou support. Beidou becomes only available in the 5th generation of the MTi-G-710.

3.5   Magnetometer replacement

The magnetometer in the 5th generation of MTi is replaced with a new magnetometer that has an improved performance to the one used in the 4th generations. This was necessitated due to the EOL of the 4th generation MTi magnetometer part.

3.6   Barometer improvement

The barometer in the 5th generation of MTi is replaced with a new barometer that has a comparable performance to the one used in the 4th generations. This applies only to the MTi 100-series and MTi-G-710.

3.7   MTi-OEM 14 pins interface header replacement

For the MTi 5th generation, the 7x2 (14 pins dual row) box header of the MTi 4th generation is replaced by a 3x2 (6 pins dual row) box header. Pin 1 location (x,y) and all other pin functions remain unchanged.

3.8   1 PPS pulse and SyncIn changes

The MTi-G-710 of the MTi 5th generation will feature a 1 PPS pulse, coming directly from the GNSS receiver. The redesign means that the (bi-directional) SyncIn/SyncOut line will be replaced with a SyncOut line only for the MTi 10-series and MTi 100-series. SyncIn and ClockSync lines will not change.

3.9   Processor MTi 10-series

The processor of the MTi 10-series has been upgraded to accommodate new features. Therefore it may be possible that features in firmware versions designed for the 10-series in the MTi 5th generation may not work on 4th generation MTi 10-series.

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4   Customer Impact

4.1   Purchasing

Please update purchasing systems with the new part number as described in section 2.

If MTi 4th generation is ordered, Xsens will deliver the ordered MTi 4th generation until stock runs out. When the stock of the MTi 4th generation runs out, Xsens will deliver the corresponding MTi 5th generation part.

4.2   Interface

If the MTi 4th generation is currently used with MTDATA format, please update your system to support MTDATA2. This is documented in the MT Software Suite and documentation. In case you need help, visit Xsens' support page: www.xsens.com/support.

4.3   GPS/GLONASS/BeiDou support

The 5th generation MTi-G-710 supports GPS/GLONASS/BeiDou, please update your antenna system component to make use of these supported GNSS constellations. The multi-GNSS antenna component - PCTEL 8817D is drop-in replacement part for the GPS PCTEL 3910D antenna.

5   More detailed information

More information and migration information can be found in this article (https://base.xsens.com/hc/en-us/articles/213449449)

6   Schedule

Exact dates to be communicated when information is available.

Event	Timing
Samples:	Q1-2017
Estimated First Shipment date:	Q2-2017
Last Time Buy Date:	September 20th, 2017
Last Ship Date:	December 31st, 2017