

# PCN – Product Change Notification



<b>Topic:</b>	<b>Release of new algorithm framework (XKF3 Core) on MTi product range</b>
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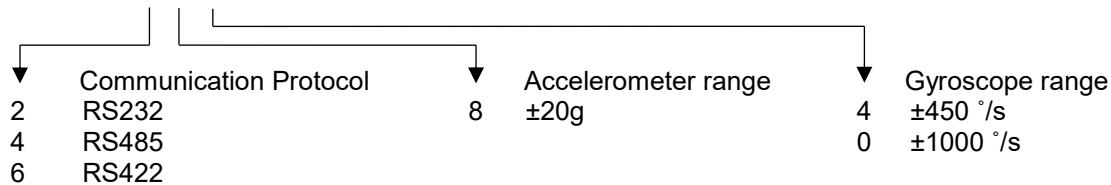
## 1 Type of Change

- Software
- Firmware
- Performance

## 2 Affected Products

Series	Part Number	Remarks
MTi-2	MTi-2	T or R could be added to part number to indicate Tray or Reel packaging
MTi-3	MTi-3	T or R could be added to part number to indicate Tray or Reel packaging
MTi-20	MTi-20-xA8Gx	'-O' could be added to the part number to indicate OEM version
MTi-30	MTi-30-xA8Gx	'-O' could be added to the part number to indicate OEM version
MTi-200	MTi-200-xA8Gx	'-O' could be added to the part number to indicate OEM version
MTi-300	MTi-300-xA8Gx	'-O' could be added to the part number to indicate OEM version

MTi-series-xA8Gx



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

# PCN – Product Change Notification



## 3 Description of Change

Xsens is continually developing and improving the internal algorithms within our product lines. The latest development is the release of a new algorithm framework called XKF3 Core.

This new future proof algorithm framework was designed from the ground up to incorporate the latest insights and developments in this field.

Key improvements of XKF3 Core include new and improved motion models and more flexibility which results in a more robust, reliable and consistent tracking of the orientation in all environments.

## 4 Customer Impact

### 4.1 Performance

XKF3 Core brings many improvements on the algorithm side of the MTi product line.

Xsens is aware that any changes to existing MTi products may affect performance and behavior of customer products. Therefore, Xsens has ensured the performance and behavior under the new framework is similar or increases in all applications.

For example, data from an extensive cross section of applications has already been processed, carefully analyzed and compared before releasing XKF3 Core for evaluation. Testing and validating the framework and algorithms against real world data is a continuing effort within Xsens.

Additionally, besides the addition of two new filter profiles, the available legacy profiles will replicate the behavior of the legacy filter implementations.

If the user of the MTi product does not want to take benefit of XKF3 Core, Xsens offers a manual method to return the firmware to a stable release prior to the effectuation date of this PCN.

# PCN – Product Change Notification



## 4.2 Testing

Xsens will release an Xsens Device API (XDA) offline evaluation implementation prior to releasing XKF3 Core into the onboard processing of the affected MTi products. The purpose of this evaluation release is to allow existing customers to compare performance for themselves and provide feedback to Xsens.

A typical testing workflow can be as follows:

- Record data of the application with existing MTi-2/3/20/30/200/300 using XDA Processing preset.
- Process the recorded data using MT Manager and current filter settings.
- Process the recorded data using the XKF3 Core implementation.
- Compare the output of both data sets using a third party program such as MATLAB or Excel.

## 4.1 Purchasing

Part numbers will remain unchanged.

After the effectuation date of this PCN, all affected MTi products shipped from Xsens will have the new algorithm framework in the default factory firmware.

If desired, customers buying MTi products in volume can contact Xsens directly to discuss the possibilities to 'freeze' a version of the MTi product still using the 'old' algorithms framework.

## 5 Schedule

Exact dates will be communicated when information is available.

Event	Timing
XDA based XKF3 Core implementation available (evaluation version):	October 2018
Estimated First Shipment date:	Q2-2019