

RELEASE NOTES

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1 About this release

In this release, MFM functions are released in the SDK so developers can integrate them into their apps without using the Xsens DOT app. As we continue to focus on improving the reliability of DOT, some bugs that were bothering our customers, including NaN values in measurements, and abnormal LED changes when a USB cable is plugged in, are fixed with the new firmware update. Refer to the follow-up sections for all the other new features and improvements included in the release.

Android and iOS apps will be available for download in Google Play Store and App Store. SDKs can be downloaded from the [Xsens DOT developer page¹](#). DOT firmware can be updated using the "Device Firmware Upgrade" function in the app.

Table 1: Released components

Released component	Release type	New version	Comments
Xsens DOT Firmware	Stable	2.2.1	Compatible with v1 and v2 sensors
Xsens DOT SDK	Stable	2022.0.0	Both Android and iOS
Xsens DOT app	Stable	2022.0.0	Both Android and iOS

2 Compatibility

Table 2: Supported platforms

Software	Supported platforms
Android app and SDK	<ul style="list-style-type: none">Android OS 8.0 and aboveARMv8 CPU architecture, arm64-v8a ABI (64-bit)
iOS app and SDK	<ul style="list-style-type: none">iOS 11.0 and above
Xsens DOT Data Exporter	<ul style="list-style-type: none">Windows, macOS
Bluetooth requirements	<ul style="list-style-type: none">Best performance with BLE 5.0, DLE² supportedCompatible with Bluetooth 4.2

Table 3: List of tested devices

Platform	Tested devices
Android	<ul style="list-style-type: none">Samsung Galaxy S9, Samsung Galaxy S10, Oppo Reno, Huawei Mate20 Pro, Huawei P30 and MI 9, Google pixel 3a.
iOS	<ul style="list-style-type: none">iPhone11 XS Max, iPhone X, iPhone XR, iPhone 8
Others	<ul style="list-style-type: none">Any³

¹ By downloading the Xsens DOT apps and SDKs, you accept the Xsens DOT APP and SDK EULAs accessible on our developer page

² Data Length Extension.

³ Embedded software engineers and system architects can make use of the Xsens DOT BLE Service Specification document to connect to Xsens DOT with any device that supports BLE 5.0.

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3 Major improvements and new features

Meanings of icons: +added, ^changed, !note, #fixed, -removed

2022.0 release includes the following improvements and new features:

3.1 Android SDK

- + MFM functions are added
- + Custom mode 5 including quaternion, calibrated acceleration and calibrated angular velocity is added

3.2 iOS SDK

- + MFM functions are added
- + Custom mode 5 including quaternion, calibrated acceleration and calibrated angular velocity is added

3.3 Android app

- + Custom mode 5 including quaternion, calibrated acceleration and calibrated angular velocity is added

3.4 iOS app

- + Custom mode 5 including quaternion, calibrated acceleration and calibrated angular velocity is added

4 Bug fixes

4.1 Firmware

- # Fixed the bug that NaN values will appear during streaming and recording.
- # Fixed the bug that the LED pattern after sync can be changed by several operations.
- # Fixed the bug that the LED pattern of recording can be changed when the USB cable is plugged in or out.

5 Known issues

Known issue	Affected component(s)	Affected version (s)
Small data packet loss and short-time orientation drift can happen during real-time streaming and recording, as a result of fixing the NaN value bug. Improvements will be provided in future releases.	Firmware	2.2.1

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Xsens DOT
PRECISION MOTION TRACKING

If the recording starts again after a long recording (such as two hours), no data will be recorded. Rebooting the sensor can be a workaround.	Firmware	2.2.1 and below
Sensor will enter unknown status if starting sync when the sensor has already in recording status.	Android and iOS app	2022.0 and below
Sensor will power off when connecting to USB in power saving mode.	Firmware	2.2.1 and below
Information such as synchronization status, output rate and filter profile is not saved in recording files.	Firmware	2.2.1 and below
Cannot distinguish between sensors that have "synced" status that are synced in different synchronization sessions.	Firmware	2.2.1 and below
Tag name will be set to default value "Xsens DOT" when upgrading to FW1.6.0 or downgrading from FW1.6.0.	Firmware	1.6.0 and below