MTi-G-710 Firmware

Changelog

Author: Product Manager
Last updated: April 1, 2020
Document: MT0227P

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Symbol	Meaning
+	Added
^	Changed
!	Note
#	Fixed
-	Removed

Reference documents
- MT Software Suite changelog

Version 1.11.18

Applies to: 5th generation MTi

Release date: March 30, 2020

Compatible MT Software Suite version: 2019.3.2

Release type: Beta

Type	Reference	Comments
Improvement	MKVFW-89	Increased heading performance for GeneralMag filter profile

Version 1.11.12

Applies to: 5th generation MTi

Release date: October, 2019

Compatible MT Software Suite version: 2019.3.2

Release type: Beta

Improvements & features			
Feature	MKVFW-84	**+**	MTi-G-710 can now initialize to a user-specified heading value

Version 1.11.2

Applies to: 5th generation MTi

Release date: March 20, 2019

Compatible MT Software Suite version: 2019.1.2

Release type: Beta

Improvements & features			
Improvement	MKVFW-80	**^**	Update to World Magnetic Model 2015v2

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Bug Fixes

Version 1.10.0

Applies to: 5th generation MTi

Release date: February 14, 2019

Compatible MT Software Suite version: 2019.0.1

Release type: Stable

Improvements & features		
Improvement	MKVFW-17	Added Orientation smoother for MTi-G-710
New Feature	MKVFW-13	Added $GPRMC output

Bug Fixes		
Bug	MKVFW-20	
Bug	MKVFW-25	
Bug	MKVFW-32	Fixed several rarely occurring minor bugs
Bug	MKVFW-36	
Bug	MKVFW-63	
Bug	MKVFW-65	Corrected $GPGGA message

Version 1.8.2

Applies to: 4th generation MTi

Release date: February 14, 2018

Compatible MT Software Suite version: 4.8.0

Release type: Beta

[MKIVFW-48] A settings problem locks up the EMTS client.

^ *[MKIVFW-98]* MAG clip flags are not sticky.

[MKIVFW-124] *ReqAlignmentRotation* does not return parameter.

[MKIVFW-125] Clipping flags for the magnetometer in MTi-G-710 incorrect.

[MKIVFW-128] MTi-G-700 UTC periodically changes from the correct value to an incorrect one.

[MKIVFW-129] Position data often wrong in first packet.

- *[MKIVFW-130]* MTi-G-700/MTi-G-710 FW should not support update rates of 2 and 1 Hz for *GnssPvtData* and *GnssSatInfo*.

^ *[MKIVFW-132]* Status word bit for selftest is 0 with SCR data.

[MKIVFW-150] *reqUTCTime* returns wrong date+time (tomorrow) for MTi-G-710.

+ *[MKIVFW-144]* Add *ReqHardwareVersion* message to MTi Product Family.

[MKIVFW-112] Remember ICC DDT value over *gotoConfig*/*gotoMeasurement.*

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Version 1.7.4

Applies to: 4th and 5th generation MTi

Release date: October 10, 2017

Compatible MT Software Suite version: 4.8.2

Release type: Beta

+ *[MKIVFW-121}* Added possibility to configure USB buffering behavior in order to reduce communication latency.
# *[MKIVFW-133]* Fixed update process of Firmware Update for 5th generation MTi.

Version 1.7.3

Applies to: 4th generation MTi (MTi-G-700 only)

Release date: August 8, 2017

Compatible MT Software Suite version: 4.8

Release type: Stable

[MKIVFW-126] Fixed a bug in the MTi-G-700 where orientation is no longer outputted as soon as the GPS receiver acquired the signal. This patch has no impact for MTi-G-710 devices.

Version 1.7.2

Applies to: 4th and 5th generation MTi

Release date: July 5, 2017

Compatible MT Software Suite version: 4.8

Release type: Stable

- *[MKIVFW-105, MTSDK-4002]* 5th generation MTi's no longer support legacy mode.
+ *[MKIVFW-100, MTSDK-3998]* Calibrated Acceleration and Rate of Turn measurements available at 1 kHz.
+ *[MKIVFW-116, MTSDK-3982]* Added possibility to change navigation platform settings of GNSS module.
# *[MKIVFW-109]* Solved situation where MTi would crash when outputting all NMEA strings at 400 Hz.
# *[MKIVFW-104]* MTi-G-710s with SendLatest setting no longer outputs old UTC timestamps with new data packets.

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Version 1.6.3

Applies to: 4th generation MTi

Release date: March 31, 2017

Compatible MT Software Suite version: 4.7.2

Release type: Beta

+ *[MTSDK-3958, MTSDK-3685, MKIVFW-103]* Added 5th generation MTi support, see BASE.xsens.com.

+ *[MKIVFW-94, MKIVFW-77, MKIVFW-62]* Added 1 PPS synchronization functionality for MTi-G-710 (5th generation only).

Version 1.5.1

Applies to: 4th generation MTi

Release date: December 21, 2016

Compatible MT Software Suite version: 4.7

Release type: Stable

+ *[MTIONE-135, MKIVFW-81]* Added ICC to Firmware. ICC is a beta feature for MTi-G-700/710.

+ *[MTIONE-136, MTSDK-3872, MTSDK-3854, MTSDK-3855]* Representative Motion mode, both in firmware and MT Manager.

+ *[MTSDK-3856, MTIONE-137]* Possibility to store ICC data to non-volatile memory.

^ *[MTSDK-3698, MTSDK-3787, MTSDK-3807]* Gyro Bias Estimation using the No Rotation Update uses a stillness detection mechanism which is more robust to slow rotations and facilitates faster convergence times - this improves the functionality of NRU and AHS features.

^ *[MKIVFW-78, MTSDK-3859]* Improved and simplified Gyro Bias estimation status bits.

[MKIVFW-85] PHTRO (NMEA-output) has a bug fixed when roll is higher than ±90º.

[MTSDK-3785] Fixed Heading initialization in MTi-G-710 when AHS is enabled.

^ *[MKIVFW-59]* When setting a different platform for the GNSS chip it will now be correctly applied without workaround.

[MTSDK-3699] Velocity no longer drifts when roll/pitch are not close to 0 deg.

[MKIVFW-79] Reverting an MTi-G-710 no longer puts it to Legacy Mode.

Version 1.4.18

Applies to: 4th generation MTi

Release date: October 10, 2016

Compatible MT Software Suite version: 4.6.5

Release type: Beta

^ *[MTSDK-3698, MTSDK-3787, MTSDK-3807]* Gyro Bias Estimation improved with faster convergence times.

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^ *[MKIVFW-38, MTSDK-3809]* BusId can now be selected for RS485 bus communication. Note: feature may disappear in favor of more versatile addressing features.

+ *[MTSDK-3798]* Fixed GNSS lock issue.

+ *[MKIVFW-34]* Add NMEA ZDA string.

+ *[MTSDK-3819]* Added HighPerformanceEDR filter profile to replace AutomotiveUrbanCanyon, suitable for the same applications.

Version 1.4.16

Applies to: 4th generation MTi

Release date: August 10, 2016

Compatible MT Software Suite version: 4.6.3

Release type: Beta

^ *[MTSDK-3698]* When AHS is enabled, cZRU is enabled to be used in conjunction with AHS

+ *[MTSDK-3798]* Added $XSVEL (velocity output in ASCII).

Version 1.4.12

Applies to: 4th generation MTi

Release date: July 12, 2016

Compatible MT Software Suite version: 4.6

Release type: Stable

+ *[MTSDK-3661]* Added AHS for all MTi's and MTi-Gs. AHS off by default, also for VRU_general. AHS can be switched on with a boolean in SetOptions.

^ *[MTSDK-3656]* MTi with 15g accelerometers output up to 18g now.

[MKIVFW-40] MTi-OEM can be scanned on 2nd UART again.

[MTSDK-3764] Fixed timing bug with magnetometer, resulting in heading errors in mag-aided filter profiles.

[MTSDK-3699] When the MTi-G-700 is inclined (i.e. roll/pitch not close to 0), the velocity output may be unstable.

[MKIVFW-39] Corrected GPGGA string (decimals, timestamp).

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Version 1.4.10

Applies to: 4th generation MTi

Release date: May 20, 2016

Compatible MT Software Suite version: 4.5.6

Release type: Beta

^ *[MTSDK-1813]* High gyro bias is now successfully estimated.

^ *[MTSDK-3672, MTSDK-3672, MTSDK-3528]* Stillness detector improvements result in higher performance for gyro bias estimation functionality.

Version 1.4.6

Applies to: 4th generation MTi

Release date: April 11, 2016

Compatible MT Software Suite version: 4.5.4

Release type: Beta

+ *[MKIVFW-35]* BeiDou support added to the MTi-G-710

Version 1.4.5

Applies to: 4th generation MTi

Release date: January 18, 2016

Compatible MT Software Suite version: 4.5

Release type: Stable

^ *[MTSDK-3512]* Significantly improved accuracy of MTi-G-700 and MTi-G-710 during initialization and use of magnetic field

[MKIVFW-27] GPGGA output is correct (MTi-G-700)

[MKIVFW-29, MTSDK-2670] Trying to store an orientation reset when the MTi-G-700 has a GPS fix will no longer result in a failure to store the orientation reset

[MKIVFW-25] A timing difference of 500us has been corrected for in the MTi MkIV

^ *[MTSDK-3407]* Legacy mode deprecated for MTi MkIV; normal mode is default mode for all products now

^ *[MTSDK-3410]* FreeAcceleration output improved after periods of excitation

[MKIVFW-22] The magnetometer output will no longer flip polarity when saturated

[MTSDK-3294] Sample mixer now correctly subtracts gyroscope bias.

^ *[MKIVFW-28, MTSDK-3407]* Default output configuration mode is Normal Mode (no longer Legacy Mode)

+ *[MTSDK-3159]* Updated World Magnetic Model to WMM2015

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