

# **Firmware Release Notes**

Date:January 28, 2012Product:GNSS Firmware Platform (m26)

## Introduction

This document is the GNSS FW platform (m26) release notes.

## Firmware list and versions

General FW version number:

- **Km26** for MB800
- Hm26 for MB100

PC based software which could be used with this version:

- AshCom.exe Version: 3.0.46
- GNSS FW Loader Version: 2.06

# **New features**

#### Summary of main evolutions:

- 1. Z-Blade algorithm improvements to achieve better positions availability and reliability, especially in obstructed environment
- 2. RTK performance improvements in difficult ionospheric conditions ; to get protected from the increasing ionospheric activity
- 3. Improved GLONASS bias support in case of 3rd party bases ; Automatic detection of the bias class and receiver name
- 4. Support of QZSS has been implemented on both MB100 and MB800 targets
- 5. Full attitude engine has been implemented to MB800 target:
  - a. New Attitude f/w option has been added
  - b. Attitude is available up to 20Hz (pending option availability)
  - c. Auto calibration mode is available as well as easy configuration via "singlecommand"
  - d. RTK position is available on top of full Attitude determination (pending option availability
  - e. This new Attitude engine is the base of the new ADU800 Sensor (based on ABX housing) which will replace the ADU5
- 6. L1 RTK position is now available on top of Heading solution on MB100 board running in DUO mode (Heading with only 1 board).
- 7. Velocity filters have been improved
- 8. Multipath mitigation scheme has been tuned for getting smaller multipath fluctuation signature
- 9. ATOM format: various updates and corrections

# **Known issues**

### NTR

### Recommendations

- 1. Different products are based on GNSS FW platform m26. Some of these products have limitation of operation due to hardware specific. Some operating modes are not supported or other modes should be used with some precautions. Please refer to each reference manual for additional information.
- 2. The receiver can generate the so-called "trouble ticket" in the form of ATL messages (ATL for All To Log). When experiencing problems with their receivers, users may run the ATL command in order to be able to provide the problem data files to the Ashtech Technical Support. ATL messages are generated using a proprietary format. To enable the generation of ATL messages on a port (e.g. port A), run the following command:

## \$PASHS,ATL,A

To disable ATL messages, use this command:

\$PASHS,ATL,OFF

Please refer to your reference manual for additional information.

- 3. MB100 & MB800 targets:
  - a. Whenever you run a \$PASHS command (set command), you must be aware that the resulting change is not saved to backup memory instantly, but only after a certain delay, which is estimated to be not greater than 120 seconds. There is a requirement behind this operating mode, which is to extend the chip's life cycle as much as possible by reducing the number of write operations in the memory chip.
  - b. Because the \$PASHS commands causing the receiver to restart (i.e. INI, RST, CFG, POP, PWR, etc.) are also part of the "delayed" commands (seen from the backup memory), it is therefore recommended that you run \$PASHS,PWR,OFF about 2 to 3 seconds before you initiate a power cycle or reset through one of these commands.
  - c. \$PASHS,PWR,OFF: this command is used to prepare the board before it is turned off. Using this command allows all the settings and parameters to be saved in the non-volatile memory. This command DOES NOT switch off the on-board power supply