

Cellocator Cello-IQ GNSS Release Notes



Cellocator Division
Pointer Telocation Ltd.

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POINTER



Cellocator Cello-IQ GNSS Release Notes



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1 Introduction

The Cello-IQ device is a driver safety and eco driving application, aligned with Telematics market evolution trends and TSP requirements to improve fleet safety and reduce fleet operation costs. The Cello-IQ processes and interprets vehicle dynamics and vehicle operation patterns into safety and ECO scores for a driver, reflecting the driver's relative level of risk, fuel consumption and emission footprint.

This document describes the new advanced platform for the Cello-IQ, supporting the **GLONASS** positioning system. This new platform also features a number of improvements in the HW platform, CSA and Fleet Management features. Please refer to the *What's New* section for further information.

For further information about the Cello-IQ GNSS, refer to the *Cello-IQ GNSS Product Overview* document. A full list of related documents can be found in the *Documentation* section.

The Cello-IQ, with FW version 33j, is now released for Beta (Field Trials). Further information regarding the FW version content, SW tools and additional documents can be found in *FW V33j for Cello-IQ GNSS and Cello-CANiQ Release Notes*.



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2 Content

The Cello-IQ release includes the components listed in the sections below.

2.1 Hardware

- ◆ CT7800120-000 Cellocator Cello-IQ 50
- ◆ CT7800121-000 Cellocator Cello-IQ 40

2.2 Supported Languages

The DFD supports the following languages:

- ◆ English
- ◆ Spanish
- ◆ French
- ◆ Russian
- ◆ Hebrew
- ◆ Moroccan Arabic
- ◆ Swedish
- ◆ Polish
- ◆ German

2.3 Accessories

2.3.1 *External Antenna*

AN0048 GNSS External Active Antenna

2.3.2 *Harnesses*

- ◆ 711-00299 17 Wires, Colored, DFD compatible Harness
- ◆ 711-00302 Full Installation, 1.2 meter, molded Harness
- ◆ 711-00315 17 Wires, Colored, DFD compatible, molded Harness
- ◆ 711-00312 6 Wires, 1.2 meter, DFD compatible harness

2.3.3 *Driver Feed-back Display (DFD)*

715-50000 DFD

2.4 Evaluation kit

- ◆ K090-001 Cello-IQ Evaluation Kit
- ◆ K090-006 Cello-IQ Evaluation Upgrade Kit



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2.5 Documentation

- ◆ Cello-IQ GNSS Release Notes (this document) Version: 1.6
- ◆ Cello-IQ GNSS Product Overview Version: 1.1
- ◆ FW V33j for Cello-IQ GNSS and Cello-CANiQ Release Notes
Version: 1.0
- ◆ Cello Family Hardware Installation Guide Version: 3.3
- ◆ Cello-IQ Integration Manual Version: 1.1
- ◆ Extended (8K) PL Integration Manual Version: 1.0
- ◆ DFD Customization Package Version: 1.2
- ◆ Cellocator Evaluation Suite Manual Version: 1.4
- ◆ Cellocator Integration Package Full Edition Manual Version: 2.4.2



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3 What's New

This product and version release introduces a new platform and features, as described in the following sections.

3.1 New Platform

The new Cello-IQ platform provides the following improvements over the legacy Cello-IQ platform:

- ◆ GPS and Glonass Hybrid positioning engine for reduced fix acquisition time and better accuracy.

	Cello-IQ GNSS	Cello-IQ Legacy
Sensitivity (tracking)	-162dBm	-159dBm
Acquisition (normal)	Cold <35Sec, Warm<35Sec, Hot<1Sec	Cold <42Sec, Warm<35Sec, Hot<1Sec
Number of Channels	32	20

- ◆ Scalable cellular communication technology – ensures support of future 3G variants.
- ◆ Supports up to 4 Dallas (DS18B20) based temperature sensors on the 1-wire interface, in parallel to driver and trailer ID functionality.
- ◆ Supports an external active hybrid GNSS antenna with disconnection / short notification and advanced algorithm for switching between the internal and external antennas on Ignition On.

	Cello	Cello-IQ	Cello-CANiQ
Antenna disconnection / shortage <u>detection</u>	No	No	Yes
Internal / external antenna automatic selection	No	Once upon Ignition On	Upon damage detection

- ◆ Extended 8K bytes (versus 4K in existing platform) flash memory for the configuration memory (PL).

3.2 FW33j for Cello-IQ

The Cello-IQ is released with FW33j, which is based on the legacy Cello-IQ FW32h and supports all its CSA and Fleet Management features. This section describes the main improvements included in FW33j. Please refer to the *FW V33j for Cello-IQ GNSS and Cello-CANiQ Release Notes* for further information.

3.2.1 New Platform Based Features

- ◆ **Internal and External Antenna Switching** - The unit can switch between internal and external antennas, according to programmable parameters and the GNSS receiving status.



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- ◆ **Support of four DS18B20 based temperature sensors** - The 1-wire interface now supports up to four DS18B20 based temperature sensors. The unit reports on the temperature values but does not support thresholds and alerts.

3.2.2 CSA Improvements

FW V33d includes several CSA improvements. The major improvements are as follows:

- ◆ **Crash detection while parking** - The unit detects and reports on crashes while parking if the average power mode is active.
- ◆ **Fleet management only mode** - The unit allows the enabling / disabling of CSA functionality via a single programmable parameter.
- ◆ **Reset via CSA channel** - When the DBM is served by a distinct SW platform, the CSA can be better managed and controlled without affecting the FM application.
- ◆ **Trip triggering via input** - The unit supports a new trip start/end triggering via a programmable input, in addition to the Ignition signal and Driver ID.
- ◆ **Off-road detection and feedback** - Improved control over the range and type of driver feedback in the DFD (fixed a major bug).
- ◆ **Calibration maintenance** - The device continuously monitors calibration status and can identify and report calibration loss.

3.2.3 Fleet Management Improvements

FW V33d includes several Fleet Management improvements. The major improvements are as follows:

- ◆ **Speed trap alerting** - The unit supports speed trap proximity warnings to the driver by adding a direction parameter to the geo-fence alerting algorithm. When programmed accordingly, the unit alerts the driver when approaching a speed trap.
- ◆ **Satellite terminal control** - The unit supports third party satellite terminal control, enabling control (On/Off) of an auxiliary satellite terminal when GSM communication is not available.

3.3 Cello-IQ Beta Release Package

The Cello-IQ Beta Release Package is a folder which includes all the SW materials (such as documents, SW applications, FW, PL, etc.) required for the evaluation and integration of the Cello-IQ.