Release Notes Demo Meter Application v2.1.3

Summary

This document describes the target devices, supported tools, metrology library version included and features of the Demo Meter Application release, with information regarding enhancements, bug fixes and known issues.

Table of Contents

1 Description

1.1 Versions

- Metrology library version: 3.1.2

1.2 Target Devices

- PIC32CXMTC with ATSENSE-301
- PIC32CXMTSH

1.3 Supported Boards

- PIC32CXMTC-DB
- PIC32CXMTSH-DB

1.4 Supported Development Tools

- IAR Embedded Workbench for ARM v9.20.4
- J-32 Debug Probe
- Segger J-Link debug probe

2 Applicable Documents

- *Metering Demo and Developer User Guide*
- *Microchip PIC32CXMTx Metrology Reference Guide*
- *Microchip PIC32CXMTx Metrology User Guide*
- *PIC32CXMTC-DB HW User's Guide*
- *PIC32CXMTSH-DB HW User's Guide*
- *PIC32CXMTx-DB Getting Started User Guide*

3 Release Contents

3.1 Provided Example Applications

Demo Meter Application (PIC32CXMTSH)	Shows an example of a metering application. Demonstrates the procedure to initialize, configure and interact with the Microchip Metrology Library. Valid for PIC32CXMTSH-DB.
Demo Meter Application (PIC32CXMTC)	Shows an example of a metering application. Demonstrates the procedure to initialize, configure and interact with the Microchip Metrology Library. Valid for PIC32CXMTC-DB.

3.2 Collaterals

METROLOGY_CONFIGURE_CALIBRATE_CALCULATE_v5.0_07-Sept-2023.xlsx	Useful for calibrating and for format conversion
Metrology Firmware 3.01.02 Test Report.pdf	Set of metrology measurements acquired with the Demo Meter Application and the PIC32CXMTSH-DB and PIC32CXMTC-DB, demonstrating the performance of the metrology library

4 New Features / Changes

- This release includes a new version of the metrology library (3.01.02). Main features:
  - Pulse algorithm changed to support testing inter-harmonics in the current circuits (burst fired waveform test) using the pulses.
  - Added counters for the pulses issued:
    - RESERVED_S25 counts the number of PULSE0 issued.
    - RESERVED_S26 counts the number of PULSE1 issued.
    - RESERVED_S27 counts the number of PULSE2 issued.
- Status registers RESERVED_S25, RESERVED_S26 and RESERVED_S27 renamed to PULSE0_COUNTER, PULSE1_COUNTER and PULSE2_COUNTER.

5 Resolved Issues

- Fixed a bug in the metrology library, that in certain circumstances could generate an improper number of pulses when applying the waveform used to test the inter-harmonics (burst fired waveform), as defined in IEC 62052-11:2021.

6 Known Issues

None.

7 Revision History

A	02/2024	First version