

ROM V3.0 RELEASE NOTES

Product Family: **BLE SOC**

Part Number: EM9305

Keywords: ROM, new features, bug fixes, API, v3.0

PURPOSE

The purpose of this document is to list the new features and bug fixes that have been implemented in the ROM version 3.0 compared to the ROM v2.0 (see [Ref1] for detailed information of ROM v2.0 detailed content).

This new ROM version is introduced along with new silicon design DI05.

This detailed description is split in the following parts:

1. Modified and new features (§1)
2. API (§2)

The §1 provides descriptions on the new features and modifications that have been added into the ROM v3.0.

The §2 list the new functions that have been added in ROM v3.0.

REFERENCE DOCUMENTS

[Ref1] EM9305_AN_ROM_v2_Release_Notes.pdf,
rev 1.0

1. ROM NEW/CHANGED FEATURES

The Table 1-1 shows the new/updated features and minor bug fixes as well that have been implemented in the ROM software.

Subsystem	Description
PML	Adding a pre-charge delay table with 4 values to add a configurable delay based on power supply configuration.
PML	Configure the LDO dig level to 1.0v.
PML	Switch CPU core from 24 MHz to 48MHz before jumping to NVM application.
PML	Disable ISR call in PML_ConfigWakeUpByGpio in interrupt is disabled.
PML	Disabling the brown out reset early in the start-up sequence to prevent entering endless reset loop when testing NVM power supply level.
NVM	Fix minor bug for WriteAddress function.
EM_SYSTEM	Wait for complete end of transport before issuing a reset.
EM_SYSTEM	Add CRC32 function for DI03 in EMSystem_Command (config mode now supports this function).
GPIO	Add open drain configuration for GPIOs.
NVM_ENTRY	Prevent header usage when building ROM test application.
UART	Fix UART driver for low speeds (1200 and 2400 bauds).
SECURITY	Invert RNGSampling core order to match DI05 design.

Table 1-1: List of ROM modifications

This table only provides a high level description. To get more technical details, one shall dive into the pull requests which contain all relevant modifications at source code level.

2. API

2.1 NEW FUNCTIONS

The following function sorted by alphabetical order have been added in ROM v3.0.

- EM System
 - EMSG_ReadMacAddress
 - EMSG_ReadProductInformation
 - EMSystem_WaitTransportCompleted
- NVM
 - NVM_ErasePages_PhysAddr
 - NVM_Write_PhysAddr
- PML
 - PML_GetLdoDigLevel
 - PML_GetLdoVccLevel
 - PML_SetLdoDigLevel
 - PML_SetVoltageDoublerPwmValue

No function from ROM v2.0 have been removed in ROM v3.0.

ROM v3.0 = ROM v2.0 + functions listed above

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