TIMAC PG2.0ROM Release Notes

Feb 25, 2018

Revision History

|  |  |  |
| --- | --- | --- |
| revision | date | Description |
| 02000003 | Feb 1,2018 | Due to Crypto Driver change, we need to make minor modification for Agama . <https://jira.itg.ti.com/browse/LPRFXXWARE-258>  As per Vincent, they keep now two drivers, but later they will remove CryptoCC26XX.c/h from Agama driver lib.  Then our ROM code which use APIs from CryptoCC26XX.c/h won’t work and we need to patch for them. |
| 02000004 | Feb 10,2018 | 1. migrate to coreSDK 3.50.00.11\_eng. 2. Support MAC security pair-wise key <https://jira.itg.ti.com/browse/TIMAC-1714> 3. Security-Make maxKeyEntries PIB to be R/W <https://jira.itg.ti.com/browse/TIMAC-1753> 4. Add the timac-rom map file to the package |
| 02000005 | Feb 15, 2018 | Support CC1352P device for new TX power format in MAC. The new TX power format is 22 bit. Change the return type of function prototype from uin16 to uint32. <https://jira.itg.ti.com/browse/TIMAC-1758> |
| 02000006 | Feb 25, 2018 | 1. Use the coreSDK 3\_50\_00\_17 (GA version) 2. Build the TIMAC-ROM image using CCS8 version 8.0.0.00012 3. TIMAC-ticket <https://jira.itg.ti.com/browse/TIMAC-1764> |

# Description

The TIMAC stack consists of lower MAC (LMAC), higher MAC (HMAC) and FH (frequency hopping ) modules. The lower MAC will interact with the RF driver, Crypto driver and hardware. The higher MAC only deals with protocol and is independent of hardware. FH module will handle the frequency hopping related functions. FH module is also independent of hardware components.

TIMAC ROM image only contains the higher MAC and FH modules. TIMAC ROM image interacts with the following modules via jump tables.

* LMAC:
* HMAC
* FH:
* OSAL/Icall:

The same TIMAC ROM image will support both SubG and 2.4G TIMAC stack. By using the TIMAC Rom image, we can build the collector and sensor applications in CC1352, CC1312 and CC2652. The TIMAC Rom image can support both CCS and IAR tool chain.

# Related files

1. timac\_rom\_PG2\_0\_rom.elf: TIMAC ROM only image
2. timac\_rom\_PG2\_0\_rom.hex: TIMAC ROM image in hex format
3. timac\_rom\_PG2\_0\_rom\_debug.elf: TIMAC ROM image including debug symbols (HMAC and FH)
4. timac\_rom\_PG2\_0\_rom\_api\_linker.cmd: TIMAC ROM API linking information (symbol locations) for CCS project
5. iar\ timac\_rom\_PG2\_0\_rom\_api\_linker.cmd: TIMAC ROM API linking information (symbol locations) for IAR project
6. timac\_rom\_PG2\_0\_rom.lst: TIMAC ROM list file generated from timac\_rom\_PG2\_0\_rom.elf by using the following command:

fromelf.exe -c -s –o timac\_rom\_PG2\_0\_rom.lst timac\_rom\_PG2\_0\_rom.elf

# Release Information

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Target | CC1352, CC1312, CC2652 | | | | |
| Path | lprf-timac-2-apps\library\tirtos\bin 🡺 for CCS  lprf-timac-2-apps\library\tirtos\iar\bin 🡺 for IAR | | | | |
| Memory Allocation |  | Start | End | Size/Used | Value/Hex |
| ROM | 0x10030000 | 0x1003C7D7 | 51160 | NA |
| ROM Revision | 0x10030000 | 0x10030003 | 4 | 0x02000006 |
| Checksum | 0x10030020 | 0x1003003F | 32 |  |

# Note: The checksum is generated by CCS tool chain. It is CRC table. The algorithm is CRC16\_802\_15\_4. The syntax in the linker command is crc\_table(TIMAC\_ROM\_FW\_CRC,algorithm = CRC16\_802\_15\_4)

# Configuration and Build Tools

CCS Version: 8.0.0.00012

coreSDK: 3\_50\_00\_17

Git Repositories:

TIMAC-mac:

<ssh://git@bitbucket.itg.ti.com/lpc_sw_rnd/lprf-timac-2.git>,

branch: TIMAC\_ROM\_PG2\_0\_Feb25\_2018

TIMAC-apps:

<ssh://git@bitbucket.itg.ti.com/lpc_sw_rnd/lprf-timac-2-apps.git>

branch: TIMAC\_ROM\_PG2\_0\_ Feb25\_2018

Common Component:

<ssh://git@bitbucket.itg.ti.com/lprf/lprf-sd-common-components.git>

branch: TIMAC\_ROM\_PG2\_0\_ Feb25\_2018

# Build Software Information

|  |  |
| --- | --- |
| FPGA Bit File |  |
| CoreSDK package | CoreSDK 3\_50\_00\_17  <http://www.sanb.design.ti.com/tisb_releases//CORE-SDK/3_50_00_17/>  XDCtools 3\_50\_05\_12  <http://www.sanb.design.ti.com/tisb_releases//CORE-SDK/3_50_00_17/> |