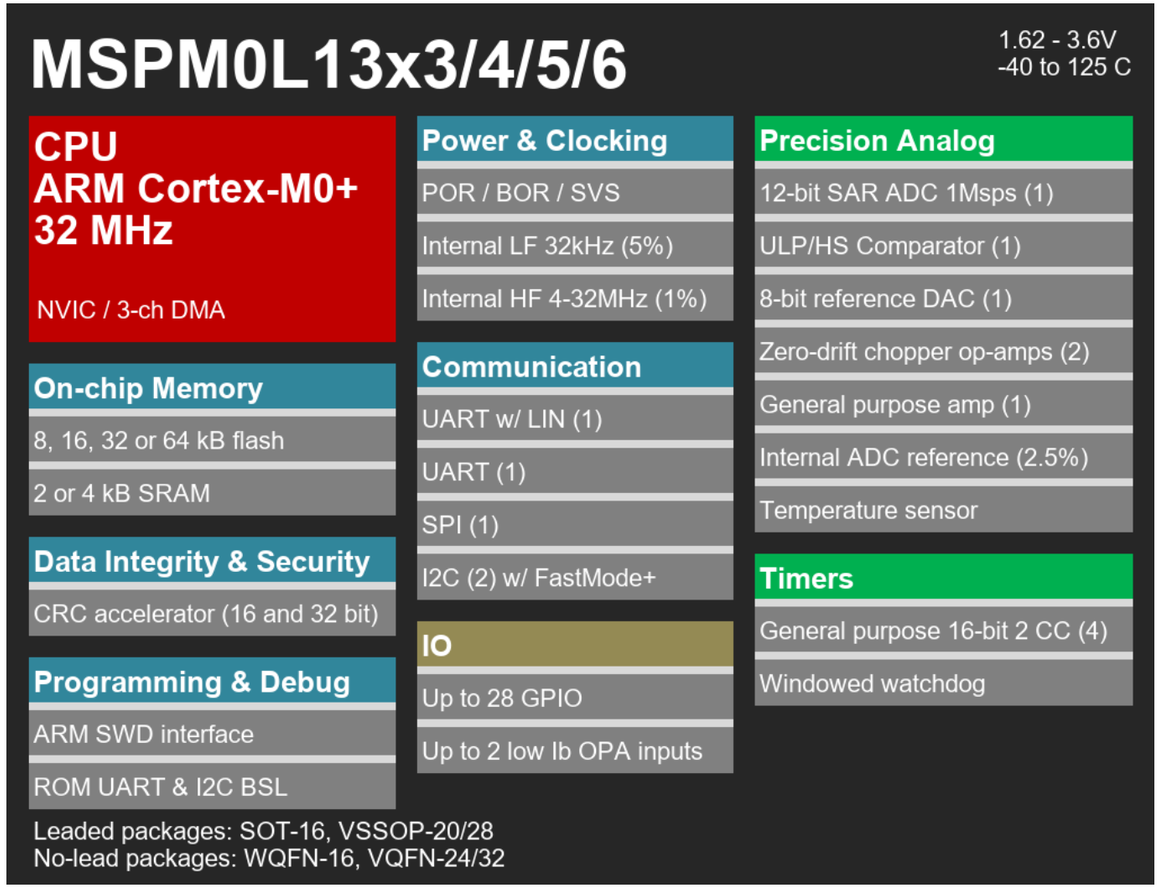
MSPM0 true random number generator(TRNG) module introduction

MSPM0 peripheral training series

Presented by Cash Hao

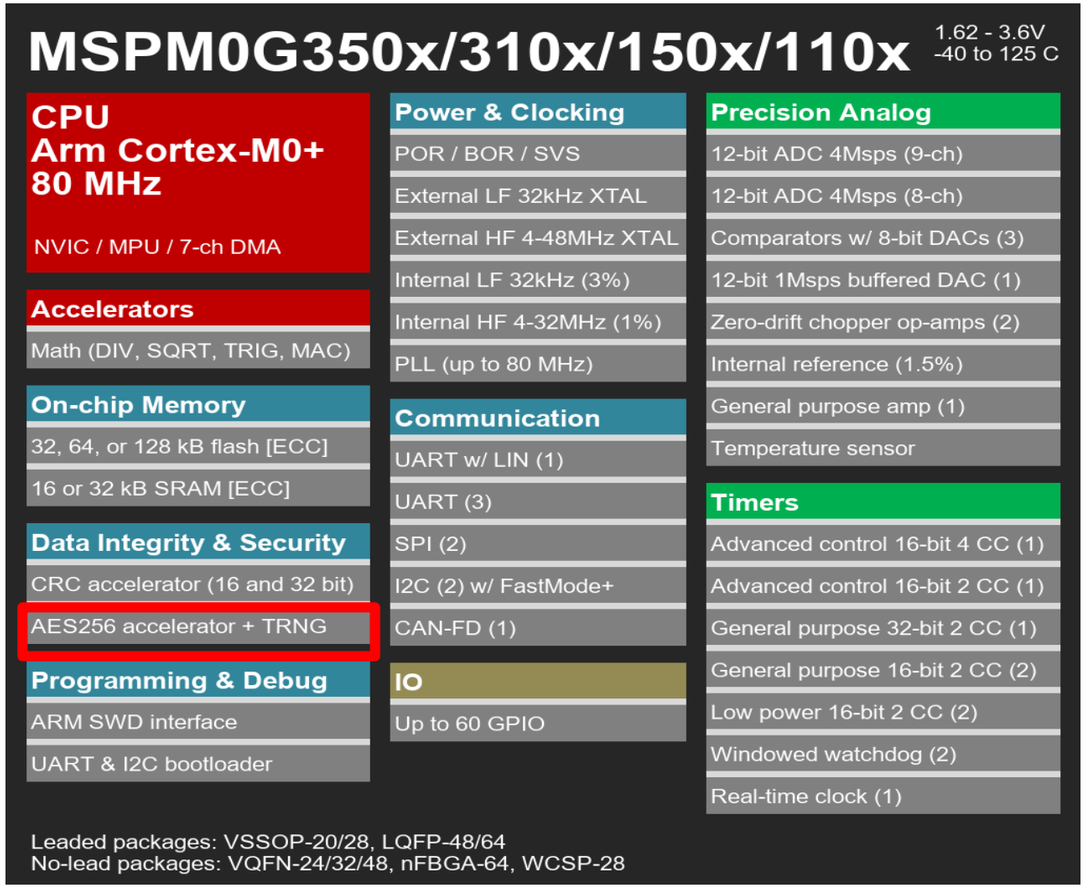
MCU level overview

——MSPM0Lxx series



32 MHz MCU with up to 64kB flash, 32 pins, 12-bit ADC, dual zero-drift OPA/PGA, COMP

——MSPM0Gxx series



80 MHz MCU with up to 128kB flash, 64 pins, advanced analog, AES/TRNG, CAN-FD

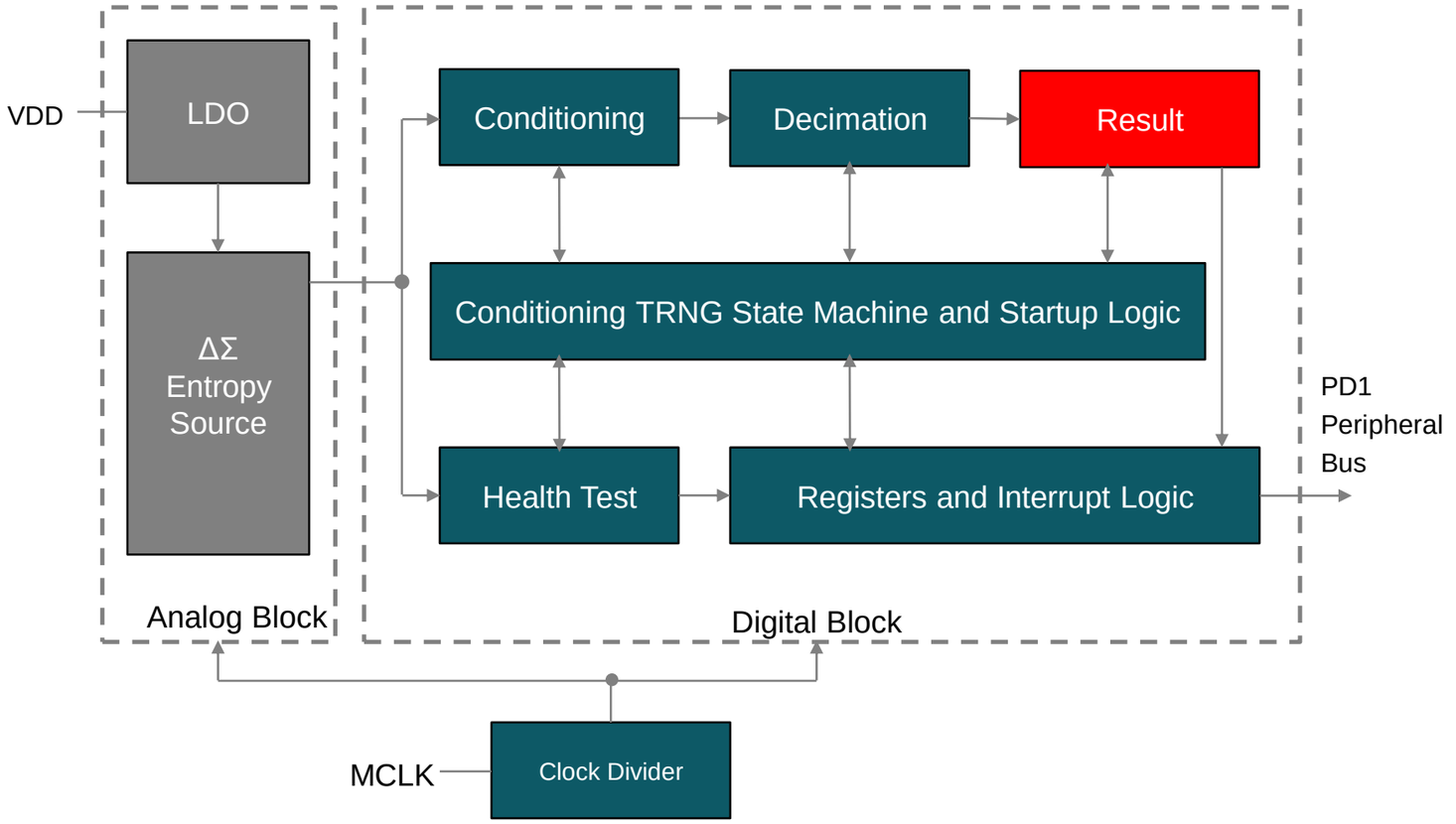
MSPM0G350x TRNG module introduction

Key Features

- 32-bit true random number output
- **TYP 6.4us** for generating one 32bit true random data
- **TYP 51.2us** for generating one 256bit true random data
- Integrated startup and continuous health tests, compliant to **NIST SP800-22**
- Dedicated internal LDO regulator to defend against power manipulation attacks

Key Differences between G and L MCUs

- MSPM0G350x MCUs have **1 TRNG module**



Clock module quick start

Academy

TRNG introduction lab

Driverlib Examples

MSPM0G350x:

- trng_sample
- trng_sample_stop_restore

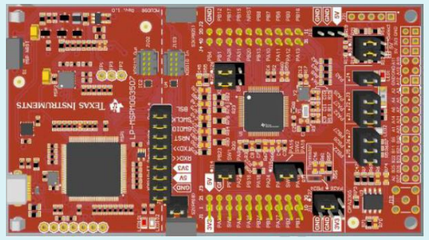
Related Links

MSPM0 online resource
MSPM0 Quick start guide
MSPM0 Sysconfig user's guide

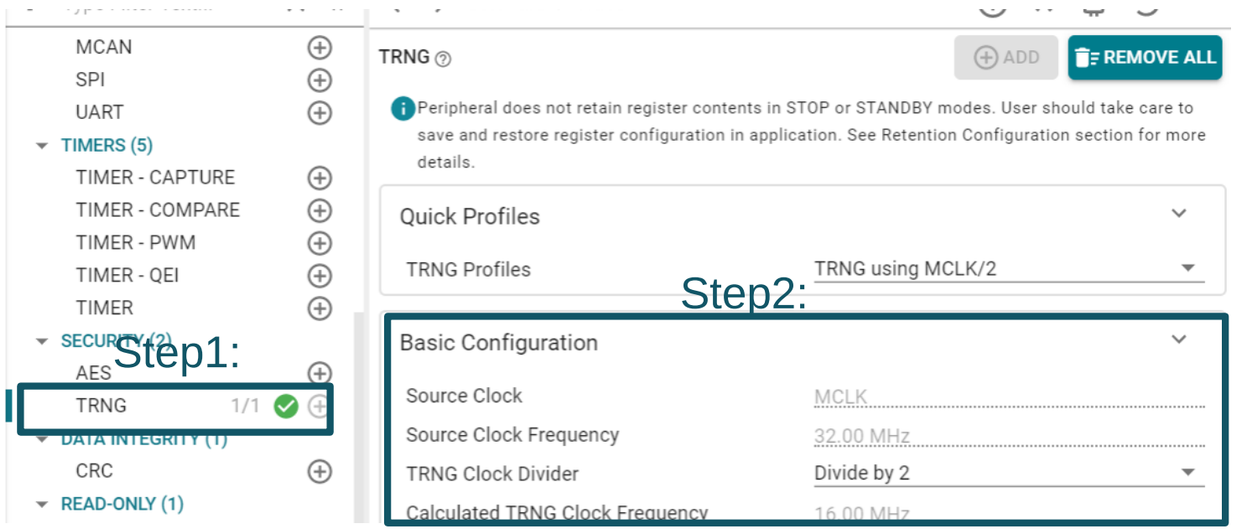
MSPM0G350x datasheet
MSPM0Gxx technical reference manual

Launchpad

LP-MSPM0G3507



Sysconfig Entrance for TRNG Setting



To find more MSPM0 training series, please visit:

- TI.com.cn
- WeChat (德州仪器公众号)
- Bilibili
- 21IC