

MSPM0 CRC module introduction

— MSPM0 peripheral training series

Presented by Cash Hao

MSPM0L/G CRC module introduction

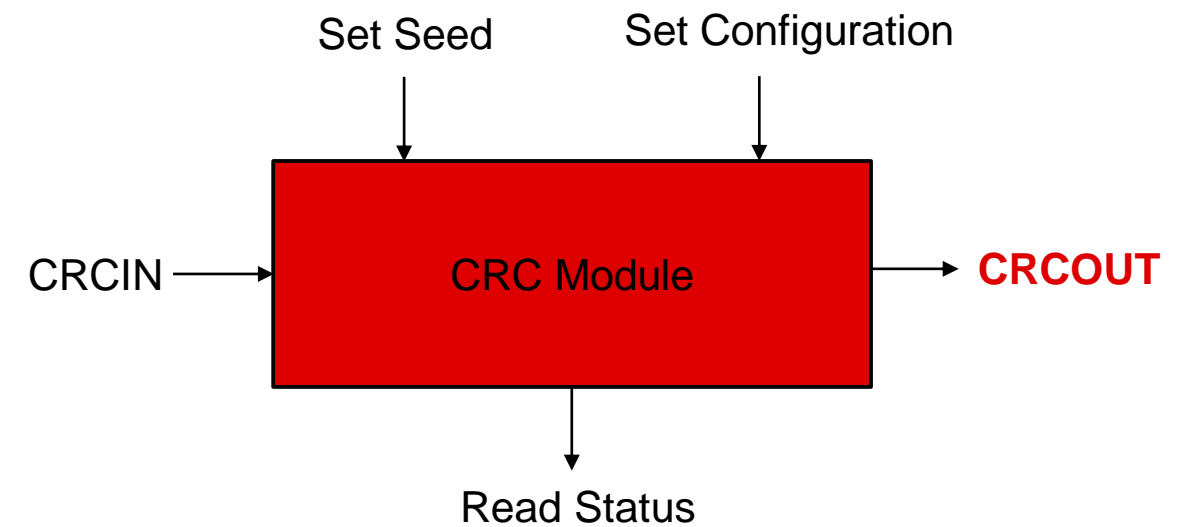
Key Features

- Support for CRC16-CCITT and CRC32-ISO3309
- Support for input/output bit reversal
- Support for little or big endian operation
- Byte, half-word, or word input to CRCIN

CRC Equations

CRC16-CCITT:
 $F(x)=x^{16}+x^{12}+x^5+1$
16-bit CRC result

CRC32-ISO3309:
 $F(x)=x^{32}+x^{26}+x^{23}+x^{22}+x^{16}+x^{12}+x^{11}+x^{10}+x^8+x^7+x^5+x^4+x^2+x+1$
32-bit CRC result



CRC module quick start

Academy

[CRC introduction lab](#)

Driverlib Examples

MSPM0L/G:

- 📁 `crc_calculate_checksum`
- 📁 `crc_calculate_checksum_dma`
- 📁 `crc_calculate_checksum_standby_restore`

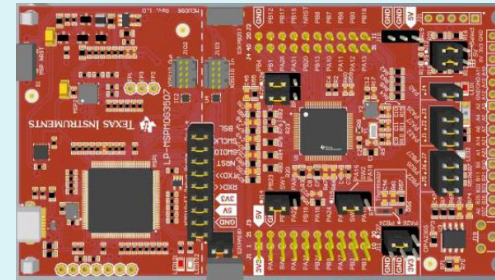
Related Links

- [MSPM0 online resource](#)
- [MSPM0 Quick start guide](#)
- [MSPM0 Sysconfig user's guide](#)

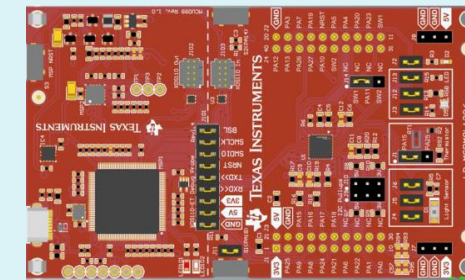
- [MSPM0G350x datasheet](#)
- [MSPM0L13xx datasheet](#)
- [MSPM0Gxx technical reference manual](#)
- [MSPM0Lxx technical reference manual](#)

Launchpad

LP-MSPM0G3507



LP-MSPM0L1306



Sysconfig Entrance for CRC Setting

Step 1: Select the CRC module in the left sidebar.

Step 2: Set the Quick Profiles to Custom.

Parameter	Value
CRC polynomial	CRC-32 ISO-3309
Input/Output bit order	Reversed
Input byte order (Endianness)	Little
CRC seed	0xFFFFFFFF

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