

**Doc No.:** AN-212

**Version:** 1.0

**Date:** 08 August 2008

**Subject:** CRC16 16Bit CRC Command

## APPLICATION NOTE

### 1. CRC16

**1.1. Required Version:** MC302X V1.9404, MC464 V2.00.18

**1.2. Type:** Command

**1.3. Syntax:** *RESULT=CRC16(MODE, POLY/DATA\_SOURCE, START, END, REG)*

Mode 0: CRC16(0, POLY)

Mode 1: CRC16(1, DATA\_SOURCE, START, END, REG)

**1.4. Description:** *Calculates a 16 bit CRC*

Calculates the 16 bit CRC of data stored in contiguous Table Memory or VR Memory locations.

**1.5. Parameters:**

**MODE:** Specifies the mode of the command

0 - Initialises the command with the Polynomial

1 - Returns the CRC in RESULT. Will return 0 if Initialise has not been run

**POLY:** Polynomial used as seed for CRC check

range 0-65535 (or 0-\$FFFF)

**DATA\_SOURCE:** Defines where the data is loaded

0 - Table Memory

1 - VR Memory

**START:** Start location of first byte

**END:** End Location of last byte

**REG:** Initial CRC value. Normally \$0 - \$FFFF

## 1.6. Examples:

### Using Table Memory:

```
poly = $90d9
reginit = $ffff
CRC16(0, poly) 'Initialise internal CRC table memory
TABLE(0,1,2,3,4,5,6,7,8) 'Load data into table memory location 0-7
calc_crc = CRC16(1,0,0,7,reginit) 'Source Data=TABLE(0..7)
```

### Using VR Memory:

```
poly = $90d9
reginit = $ffff
CRC16(0, poly) 'Initialise internal CRC table memory
'Load 6 bytes into VR memory location 0-5
for i=0 to 5
  VR(i)=i+1
Next i
calc_crc = CRC16(1,1,0,5,reginit) 'Source Data=VR(0)..VR(5)
```