

## Specification



**CMR3000-D0X PWB**  
**CMR3100-D0X PWB**

## 1 Introduction

The purpose of evaluation PWBs is to enable fast prototyping. This document is applicable following evaluation PWBs:

- CMR3000-D0X PWB
- CMR3100-D0X PWB

## 2 CMR3000-D0X PWB and CMR3100-D0X PWB

CMR3000-D0X PWB includes:

- CMR3000-D01 sensor soldered on PWB
- PWB design # VT129702 with pin headers
- Connectors and passive components

Refer to "CMR3000-D0X\_Product\_Family\_Specification\_8281000" when using the CMR3000-D01 assembled on the PWB.

CMR3100-D0X PWB includes:

- CMR3100-D01 sensor soldered on PWB
- PWB design # VT129702C3 with pin headers
- Connectors and passive components

Refer to "CMR3x00\_Product\_Family\_Specification\_SPEC\_0000122" when using the CMR3100-D01 assembled on the PWB.

Detailed BOM of CMR3000-D0X PWB and CMR3100-D0X PWB is presented in Table 1 below.

Table 1. BOM.

| Item | Qty | Ref        | Part Name / type                                                                                                                        | Value  |
|------|-----|------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | 1   | J1         | 8-pin through hole pin header, pitch 100 mils, pin size 0.63x0.63mm, length ~5.85mm (example mating part: Samtec: SSQ-107-01-S-S)       |        |
| 2    | 1   | J2         | 7-pin through hole pin header, pitch 100 mils, pin size 0.63x0.63mm, length ~5.85mm (example mating part: Samtec: SSQ-108-01-S-S)       |        |
| 3    | 3   | C1, C4, C6 | capacitor, package size 0603                                                                                                            | 100 nF |
| 4    | 3   | C7         | capacitor, package size 0603, not assembled                                                                                             | 1 uF   |
| 5    | 1   | IC1        | CMR3000-D01 sensor or CMR3100-D01 sensor                                                                                                |        |
| 6    | 1   | R1         | resistor, package size 0603, not assembled                                                                                              | 0 Ohm  |
| 7    | 1   |            | PWB (design #VT129702C0) for CMR3000-D01 or PWB (design #VT129702C3) for CMR3100-D01<br>Material FR4, thickness 1,6 mm, size 20 × 23 mm |        |

Detailed pictures of PWBs are presented in following pages:

- Circuit diagram
- PWB layout

When using I2C-bus, cut the wire short circuiting pads of R1.

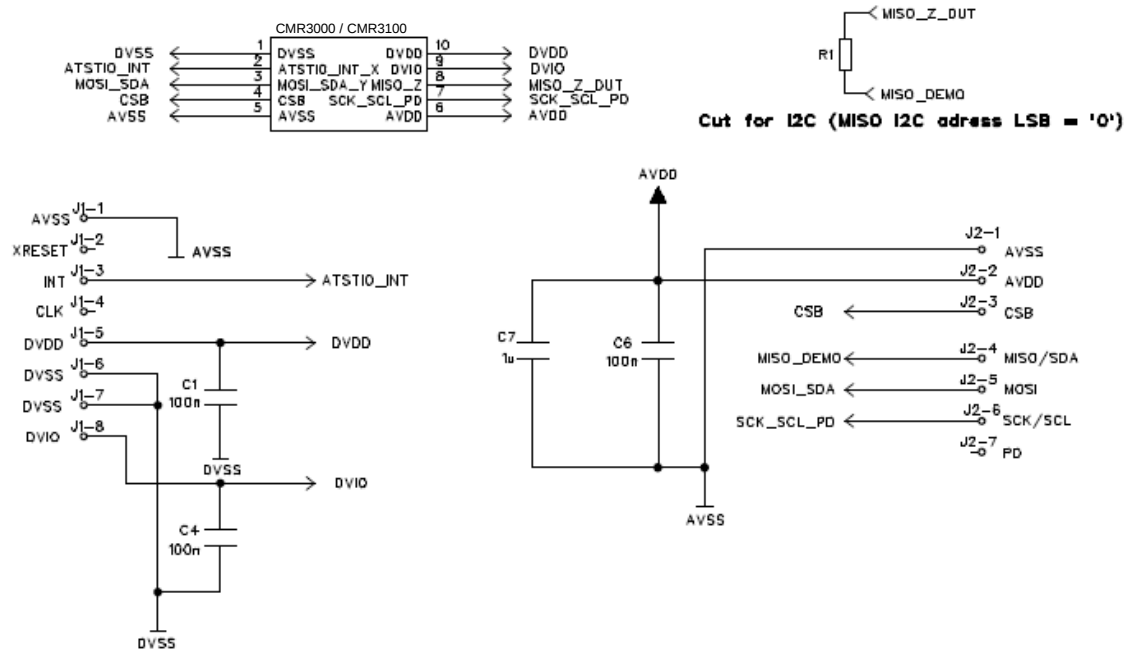
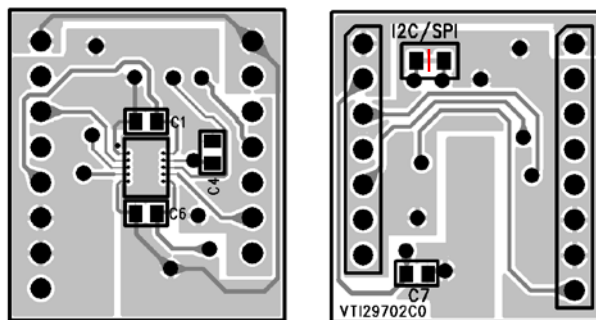


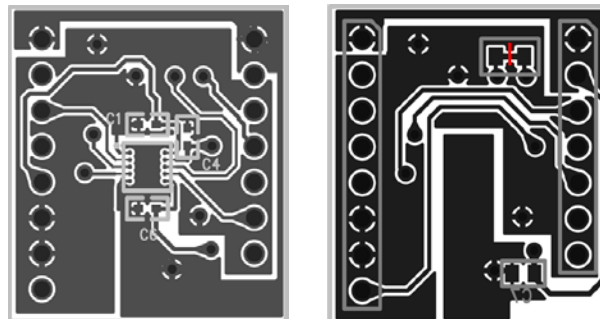
Figure 1. Circuit diagram for CMR3000-D0X PWB and CMR3100-D0X PWB.



CMR3000-D01 connection  
on eval PWB is SPI only.

In case I<sup>2</sup>C is used, the  
trace marked with red  
needs to be cut (R1 in  
circuit diagram).

Figure 2. Layouts of CMR3000-D0X PWB.



CMR3100-D01 connection  
on eval PWB is SPI only.

In case I<sup>2</sup>C is used, the  
trace marked with red  
needs to be cut (R1 in  
circuit diagram).

Figure 3. Layouts of CMR3100-D0X PWB.

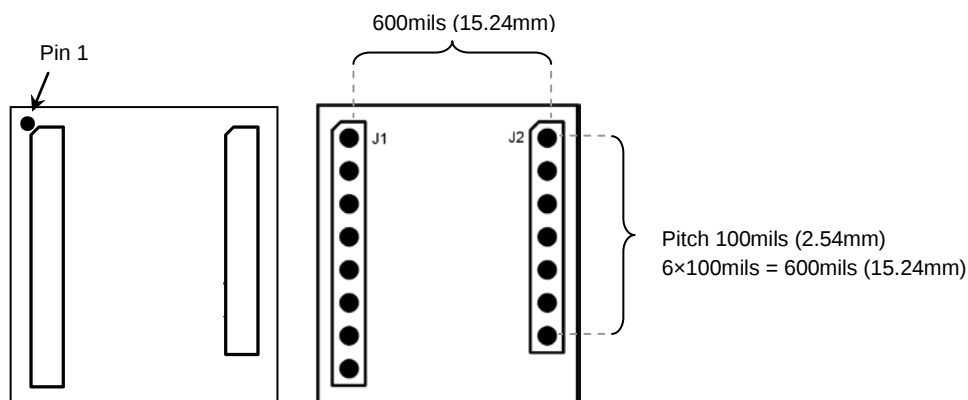


Figure 4. Assembly drawings for CMR3000-D0X PWB and CMR3100-D0X PWB.

### 3 Document Revision History

| Version | Date       | Change Description                                                       |
|---------|------------|--------------------------------------------------------------------------|
| 0.01    | 17.06.2010 | Initial release                                                          |
| 0.02    | 20.08.2010 | Fig 1 & 2 updated, Table 1 updated, info on I2C-usage added in section 2 |
| 0.03    | 03.11.2010 | Release for product launch                                               |
| 0.04    | 02.01.2012 | CMR3100 added, document number updated to SPEC-0000096                   |