Description

CambridgeIC's CAM204 Central Tracking Unit (CTU) chip is a single-chip processor for position measurement. It implements the electronic processing for resonant inductive position sensing technology.

The CAM204 measures the position of contactless, inductively coupled targets relative to sensors that are built from printed circuit boards to CambridgeIC's design. A selection of sensor geometries is possible, including rotary and linear.

The Type 3&4 CTU Development Board is a PCB including the CAM204 CTU chip and external Type 4 circuitry. This is compatible with up to two Type 4 or Type 1 sensors. Type 3 circuitry is a subset of Type 4, and the board may also be used with a single Type 3 sensor.

Please refer to the CAM204 datasheet for more details on features and specifications of the CAM204 chip, and to the appropriate sensor datasheet for sensor details and performance.

Features

- CAM204 CTU chip
- Processes one Type 3 sensor or up to two Type 4/1
- Test points for key CTU connections
- 14-way header for host interface connection
- 6-way headers for sensor connection

Applications

- Prototyping CTU chip based applications
- Processor board for position sensor solutions

Host Interface Connector P2		
Pin	**Signal**	**Description**
1	3V3	Supply voltage input 2.7V … 3.6V
2	GND	Supply voltage return (0V)
3	IO1	User IO outputs
4	IO2	
5	IO3	
6	IO4	
7	GND	Supply voltage return (0V)
8	MOSI	Master Out Slave In input
9	nSS	Slave Select input
10	SCK	Serial Clock input
11	MISO	Master In Serial Out output
12	IO5	Not connected
13	IO6	
14	nRST	CTU chip reset input

Product identification	
Part no.	**Description**
013-5029	Type 3&4 CTU Development Board

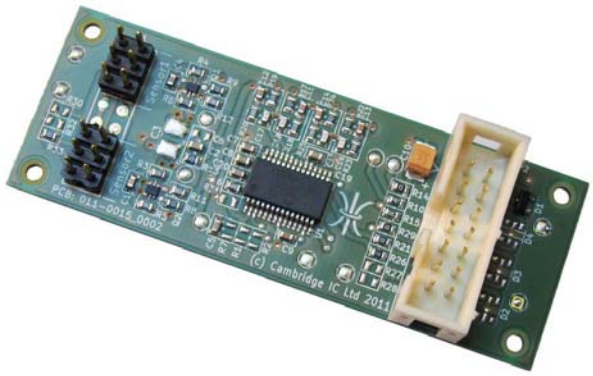


Figure 1 Type 3&4 CAM204 Development Board

Sensor Connections		
Connector	**Type 3 Sensor**	**Type 4 Sensor**
P1A	Sensor 1	Sensor 1
P1B	Do not use	Sensor 2

Pinout of Sensor Connectors P1A, P1B		
Pin	**Signal**	**Description**
1	EXA	Type 4/1: EX coil connection Type 3: EXA coil connection
2	VREF	Common return for EX coil(s)
3	EXB	Type 4/1: do not connect Type 3: EXB coil connection
4	COS	Sensor output coil connection
5	VREF	Common return for COS and SIN
6	SIN	Sensor output coil connection

1 Component Layout and Schematic

Figure 2 shows the location of the Type 2&5 CTU Development Board's components, connectors and their pin numbers, and mechanical dimensions. Figure 3 shows the board's schematic.

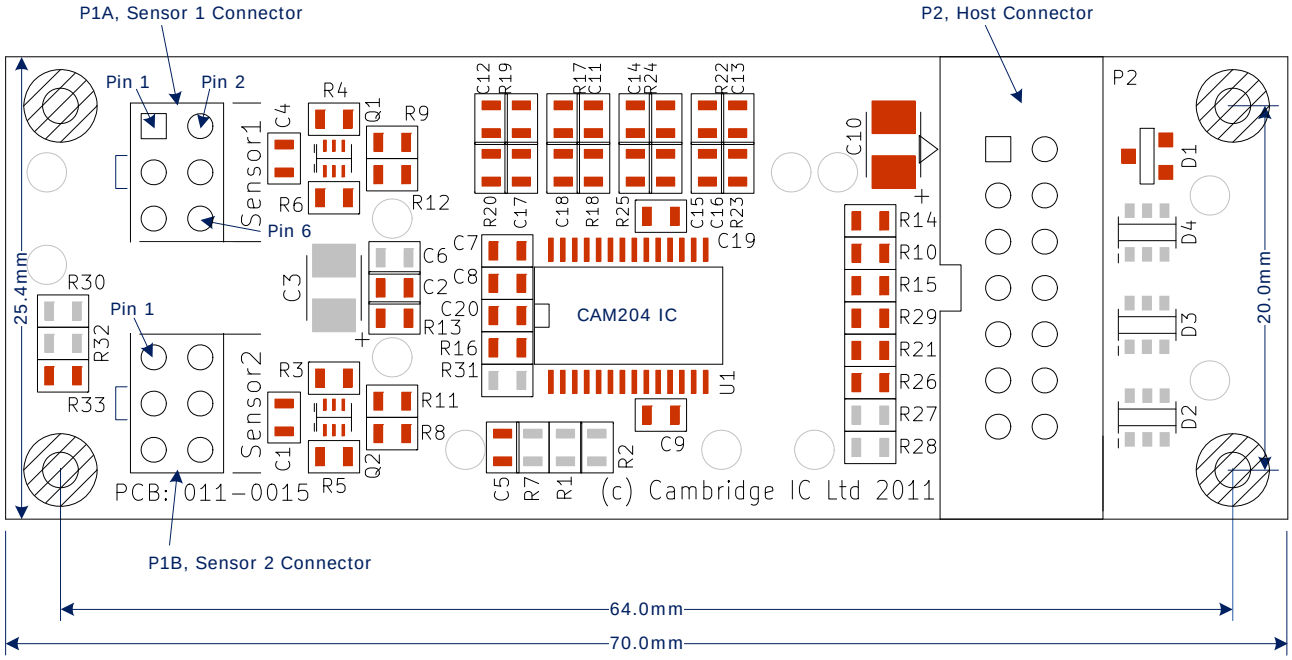
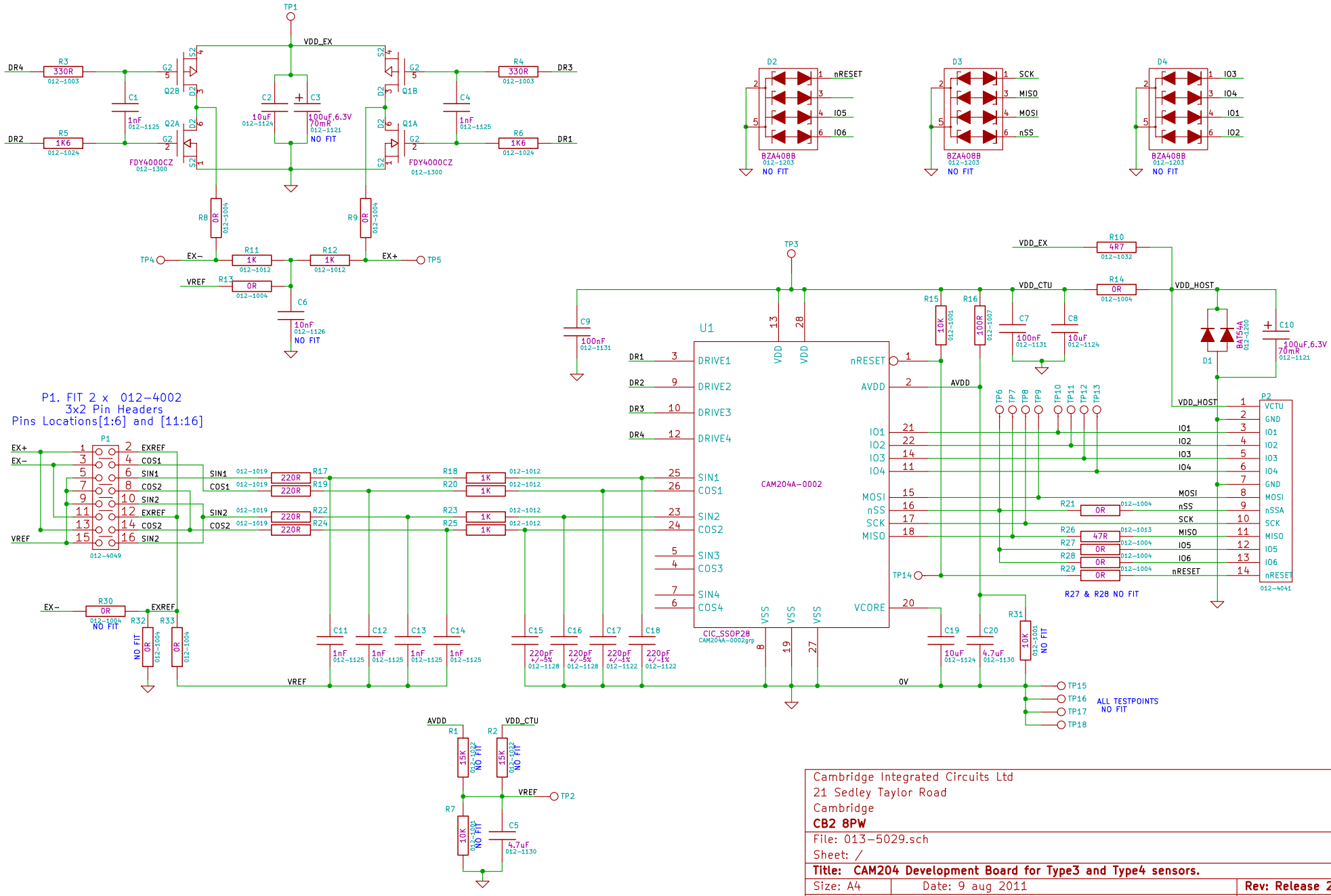


Figure 2 Component layout and dimensions

Figure 3 Type 3&4 CTU Development Board Schematic



2 Document History

Revision	Date	Reason
0001	16 March 2012	First draft

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