

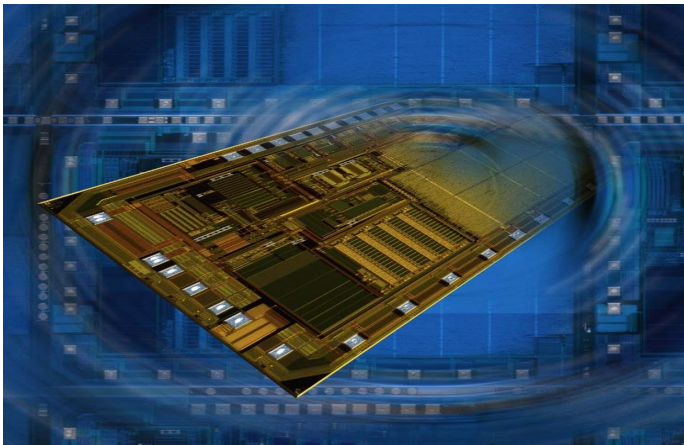
# Automotive Electronics

## Product Information

### CC770 - CAN Controller



**BOSCH**  
Invented for life



#### Customer benefits:

- ▶ Suitable replacement for Intel's AN82527 in many applications

#### Features

- ▶ Supports CAN Protocol Version 2.0 Part A, B
- ▶ Programmable global mask
- ▶ (standard and extended message identifier)
- ▶ 15 message objects of 8-byte data length
- ▶ (14 Tx/Rx buffers / 1 Rx buffer)
- ▶ Flexible CPU interface (8-Bit multiplexed / 16-Bit multiplexed / 8-Bit non-multiplexed (synchronous/asynchronous) / serial interface)
- ▶ Programmable bit rate
- ▶ Programmable clock output
- ▶ Flexible interrupt structure
- ▶ Flexible status interface
- ▶ Two 8-bit bidirectional I/O ports
- ▶ Available in PLCC44 package and LQFP44 package (ROHS-conform)

The CC770E serial communications controller is a highly integrated device that performs serial communication according to the CAN protocol. It performs all serial communication functions such as transmission and reception of messages, message filtering, transmit search, and interrupt search with minimal interaction from the host microcontroller, or CPU.

The CC770E supports the standard and extended message frames in CAN Specification 2.0 Part A and Part B. It has the capability to transmit, receive, and perform message filtering on extended message frames.

The CC770E features a powerful CPU interface that offers flexibility to directly interface to many different CPUs. It can be configured to interface with CPUs using an 8-bit multiplexed, 16-bit multiplexed or 8-bit non-multiplexed address/data bus for Intel and Motorola architectures. A flexible serial interface (SPI) is also available when a parallel CPU interface is not required.

The CC770E provides storage for 15 message objects of 8-byte data length. Each message object can be configured as either transmit or receive except for the last message object. The last message object is a receive-only buffer with a special mask design to allow select groups of different message identifiers to be received.

The CC770 also implements a global masking feature for message filtering. This feature allows the user to globally mask any identifier bits of the incoming message. The programmable global mask can be used for both standard and extended messages.

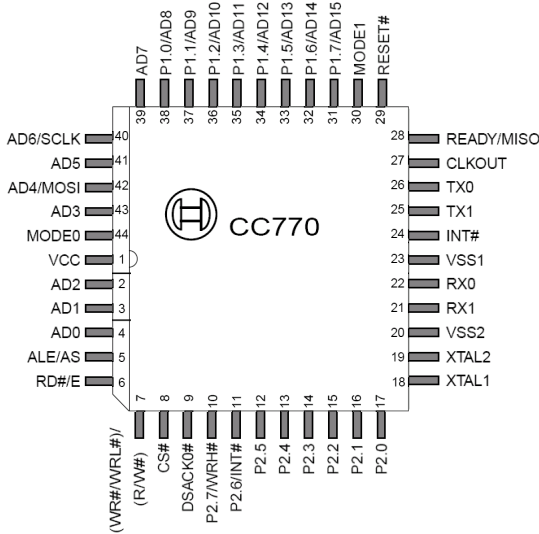
The CC770 is designed for the automotive temperature range (-40°C to +125°C) and offers pin compatibility with Intel's AN82527.

**PIN configuration**

**PLCC44**

Body size: 16.6 x 16.6 mm<sup>2</sup>

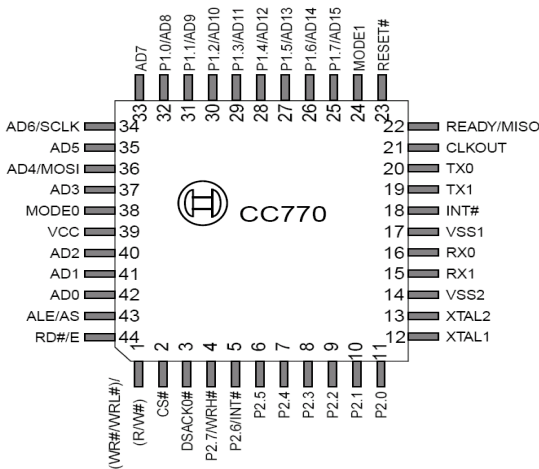
Pitch: 1.27 mm



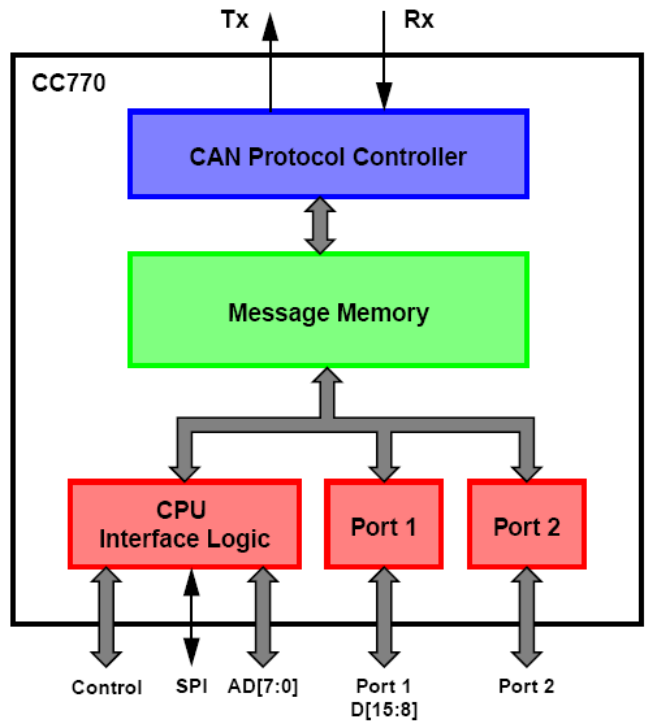
**LQFP44**

Body size: 10 x 10 mm<sup>2</sup>

Pitch: 0.80 mm



**Block diagram**



**CAN-Protocol Controller**

CAN Protocol Controller

**Message Memory**

Objects and identifier masks and contains Rx/Tx shift register

**CPU Interface Logic**

Flexible CPU interface

- 8-Bit multiplexed
- 16-Bit multiplexed
- 8-Bit non-multiplexed (synchronous/asynchronous)
- Serial interface (SPI)

**Port 1 / Port 2**

General purpose ports

**Robert Bosch GmbH**  
Sales Semiconductors

Postbox 13 42  
72703 Reutlingen  
Germany  
Tel.: +49 7121 35-2179  
Fax: +49 7121 35-2170

**Robert Bosch LLC**  
Component Sales

15000 Haggerty Road  
Plymouth, MI 48170  
USA  
Tel.: +1 734-979-3000

**Bosch Corporation**

Automotive Electronics Sales Dept., Sales Gr.2

3-6-7, Shibuya, Shibuya-ku  
Tokyo 150-8360  
Japan  
Tel.: +81 -3-5485-6962  
Fax: +81 -3-5485-4186

**E-Mail: bosch.semiconductors@de.bosch.com**

**E-Mail: bosch.semiconductors@us.bosch.com**

**E-Mail: bosch.semiconductors@jp.bosch.com**

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