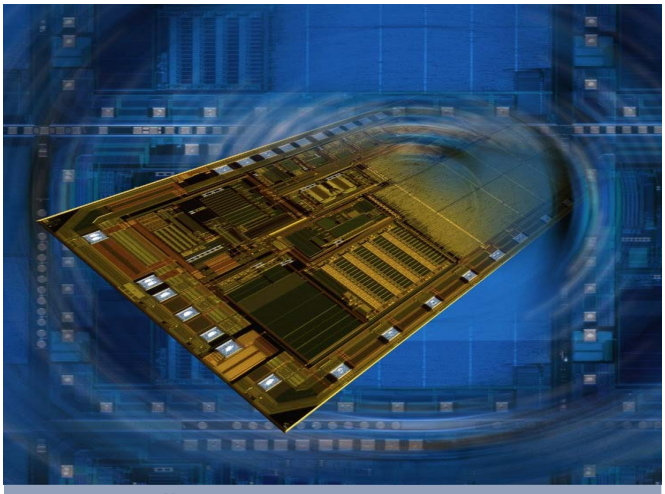
Automotive Electronics

Product Information
CAN Controller – CC770

BOSCH
Invented for life



CAN Controller

Customer benefits:

- Function and pin out compatibility to Intel's 82527

The CC770 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 CC770 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 CC770 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-multi-plexed 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 CC770 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 function and pin out compatibility with Intel's 82527.

Features

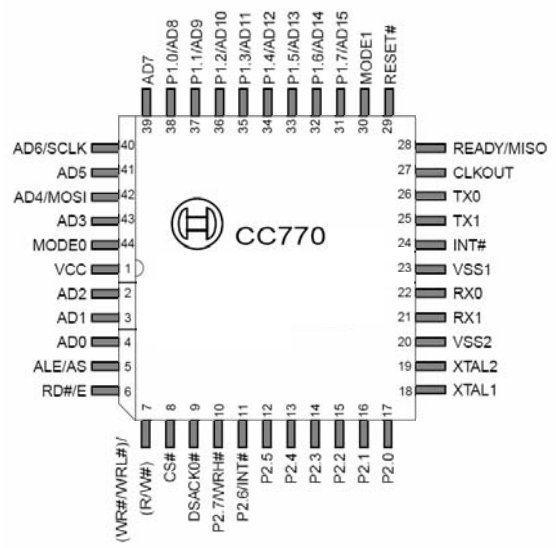
- Supports CAN Protocol Version 2.0 Part A, B
- Programmable global mask (standard and extended message identifier)
- 15 message objects of 8-byte data length (14 Tx/Rx buffers / 1 Rx buffer)
- Flexible CPU interface (8-Bit multiplexed / 16-Bit multiplexed / 8-Bit non-multiplexed (synchronous/asynchronous)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

Samples: 04/2006
SOP: 01/2007

PIN configuration

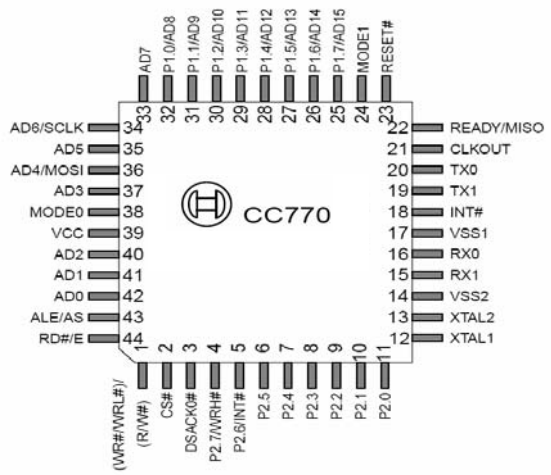
PLCC44

Body size: 16.6 x 16.6 mm²
Pitch: 1.27 mm

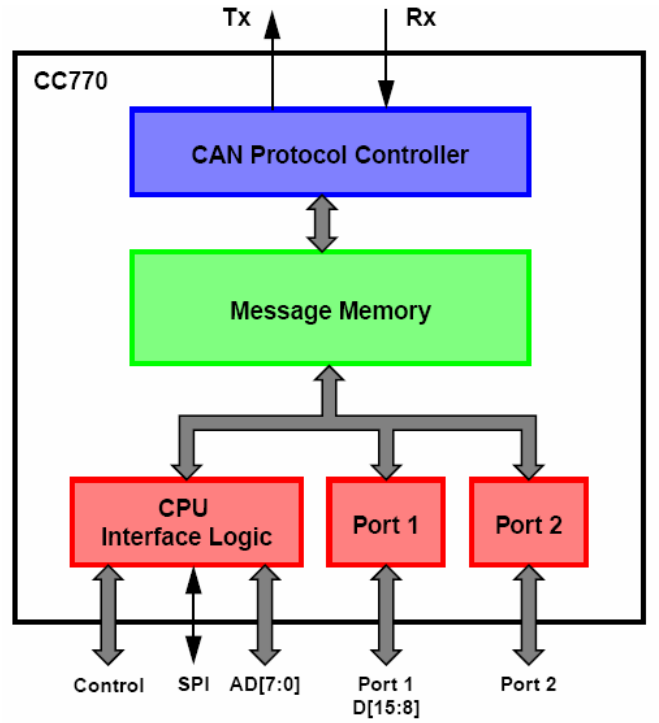


LQFP44

Body size: 10 x 10 mm²
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

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