

CAN Multi-function Board

Overview

The CAN multi-function board is provided for software evaluation and support in early stages of development. This board contains a microcontroller incorporating CAN bus monitor software for simple evaluation and can display logged data such as CAN bus communication messages on the LCD. The board is also equipped with a connector for mounting a target microcontroller the user wants to evaluate. This feature enables the user to evaluate software using Toshiba CAN microcontrollers (products, OTPs, emulators) by using the supplied conversion board.

The board also includes a CAN transceiver, enabling the evaluation of CAN communication software of a target microcontroller even if connection to an external CAN bus cannot be made. The user can of course evaluate software by connecting to an external CAN bus as well.

Features

1) Trigger operation

The CAN multi-function board allows the following four types of triggers to activate actions such as logging on/off and message transmission:

- Receipt of a specified message
- Transmission of a specified message
- Key input
- External pulse (external interrupt)

2) Message logging function

Data traveling on the CAN bus can be recorded in large-capacity SRAM incorporated in this board. Recorded data logs are backed up with lithium batteries and can be viewed on the LCD at any time. It is also possible to transfer logged data to a PC and view it on the PC screen. Logging can be started or ended by a specified trigger, enabling the user to log only a necessary portion of data. The user can also filter messages by specifying a particular ID.

3) Message trace function

Messages with specified IDs can be displayed on the LCD in real time. Up to eight types of messages can be specified. (*1) It is also possible to produce a beeping sound when specified data is received.

(*1) Only one message can be viewed on the LCD at a time.

4) Message transmit function

Messages specified by the user can be transmitted on the CAN bus. Up to four types of messages can be specified. The user can also specify periodic transmissions (unit: 1 ms) or a single transmission.

The message transmit function is provided with the random mode in which data and period are generated randomly and the burst mode in which specified messages are sent out consecutively placing the bus under heavy load. These features allow various types of testing.

These settings can be changed even while the bus is being monitored.

Supported Target Microcontrollers

32-bit : TMP92Cx53F, TMP94FD53F, TMP92xx54F/AF

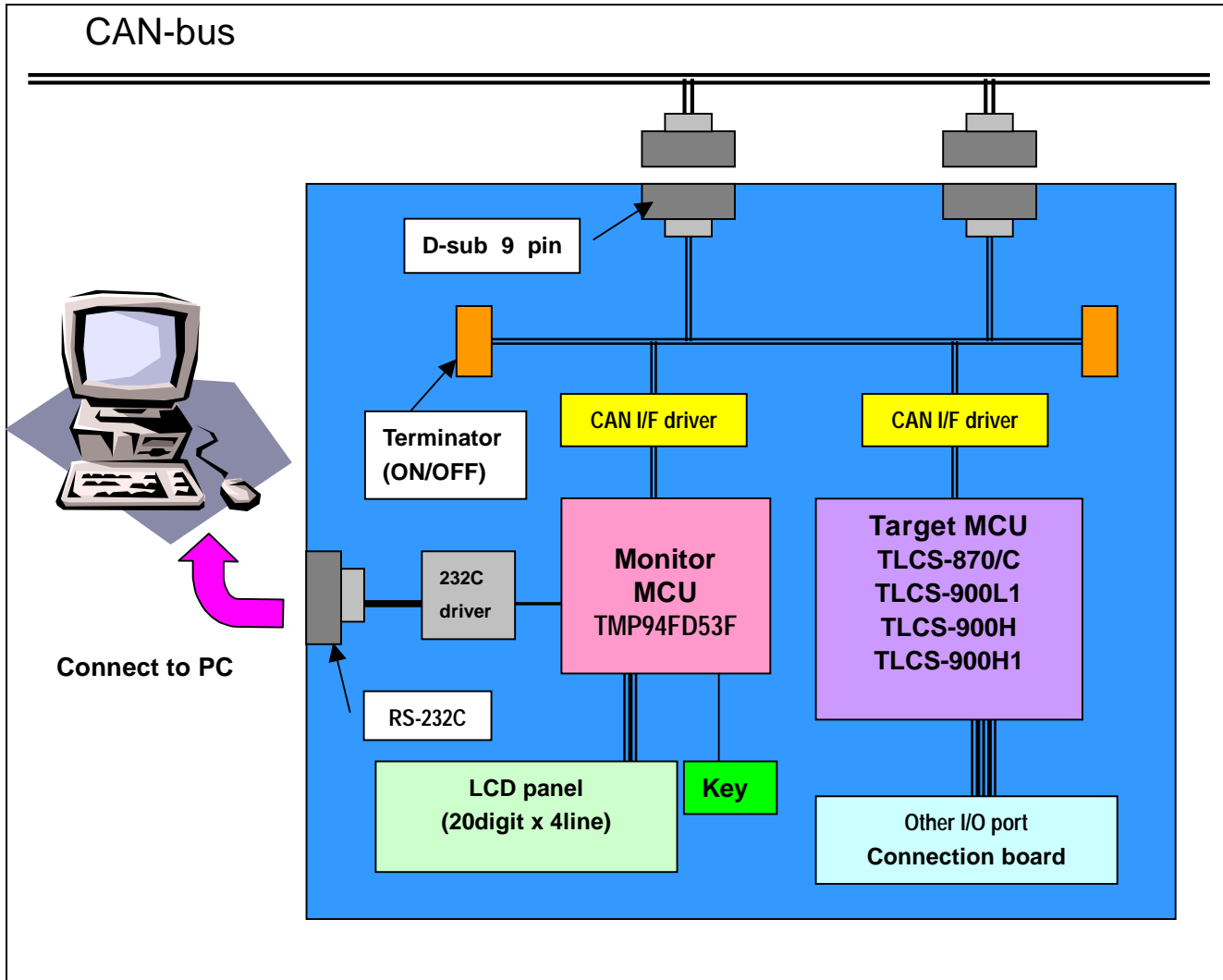
16-bit : TMP95FW54AF, TMP91xx80F, TMP91xx82F

8-bit : TMP86xx87U

Monitor Microcontroller

32-bit : TMP94FD53F (Software in this microcontroller cannot be changed by the user.)

Block Diagram



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