

Hardware

Figure 1 depicts the functional block diagram of the MEB90812 evaluation board. The hardware is a single board computer with the embedded software and the following hardware features:

- One central office trunk interface (COIC)
- Two analog line interfaces (SLIC) for analog telephone sets (POTS)
- Four digital line interfaces (DNIC) for digital sets
- One HDLC protocol controller
- Three DTMF receivers
- One RS-232 port, a 68302 processor, and memory for communications between a personal computer and on board devices
- One RS-422 port and an H-MVIP header

The MEB90812 evaluation board can be partitioned into three sections: IDX, peripherals, and the microprocessor and its peripherals. The evaluation board provides a platform for the user to examine and exercise the features of the IDX with peripherals such as analog sets, digital sets, central office, and an HDLC controller. The IDX provides the digital cross point switching between the peripherals on the local ST-BUS streams with a data rate at 2.048 Mb/s. The IDX also provides the integration of several telephony functions that are required in a digital key telephone system.

The microprocessor on the board performs the tasks of communications between a personal computer and the on-board devices. System expansion with additional MEB90812 boards is easily achieved by cascading up to four boards via the H-MVIP header. With an expanded system, data and voice channels can be transferred from one evaluation board to another over the H-MVIP bus at a rate of 2.048, 4.096, or 8.192 Mb/s with the switching capability of the IDX on each evaluation board. A single personal computer can be used to control the devices on all four boards.

Software

Operation of the evaluation board is performed via a graphically intuitive user interface (windows console) with the following features:

- Register view and modification window
- Monitor window to examine the content of any registers and memory locations of the IDX as well as other devices on the board at a specific time interval
- Various windows to examine and view the IDX's telephony functions. The related windows are as follows:
 - Connections
 - Conferences
 - Timing
 - Tone Generation
 - DBRT Receive
 - DBRT Transmit
 - Energy Detect
 - FSK Transmitter and Ringer
 - Pre-defined Tests
 - Macro editor
 - POTS and Central Office

Primitive level configuration allows access to the various board device registers. Functional level configuration allows the setting up of connections and combines primitive-level register settings to demonstrate a function. The console also facilitates such housekeeping chores as communications setup and macro editing. The Pre-defined Tests windows provide test configurations to exercise the functionality of the IDX and other devices on the evaluation board.

MEB90812 Evaluation Kit Contents

The MEB90812 kit consists of the following items:

- MEB90812 evaluation board
- Windows console software
- User's manual
- Power supply (optional)

Warranty Terms

As per Section 6.0, Warranty and Limitation of Liability, in Terms and Conditions of Sales.

Notes:



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