

DEVELOPMENT-KIT

FOR MITSUBISHI M377xx-FAMILY OF 16-BIT-SINGLE-CHIP-MICROCOMPUTERS

(M37702, M37704, M37710, M37732, M37750, M37751 GROUP)

PACKAGE CONTENTS:

CPU-board
download-cable (RS-232)
monitor-ROM (additional monitor-ROM for IAR C-spy on disk)
„LUCILLE“ development-environment-software for PC-AT
fast PD-macro-cross-assembler
english user's-manual

OPTIONS:

- M37702/-04/-10/-32/-50/-51 chip, 8/16/20/25 MHz
- socket for EPROM-version-LCC (Yamaichi IC61-0804-046)
(25MHz, socket for crystal resonator, incl. jumper for processor-mode)
- socket for chip-QFP (Yamaichi IC149-080-121-S5)
(25MHz, socket for crystal resonator, incl. jumper für processor-mode)
- RS232 or RS485 (via special interface-cable) connection to PC

TECHNICAL DATA OF M377xx-CHIP-FAMILY:

16-bit CPU with 0 - 25 MHz clock-frequency, static design
16-Mbyte address-space
fastest Instruction: 160 ns at 25 MHz
up to 2048 byte internal RAM
up to 60 Kb internal ROM
37 or 68 (single-chip-mode) programmable I/O-pins
16 internal + 3 external interrupts
2 USARTS (Universal Synchronous/Asynchronous Receiver/Transmitter),
up to 5Mbps synchronous data-transmission at 25 MHz
8 x 16-bit universal timers
12-bit programmable watchdog-timer
8 x 8-bit A/D-converter

ADDITIONAL FEATURES OF M37704:
motor-control

ADDITIONAL FEATURES OF M37732:
real-time-ports i.e. for motor control

ADDITIONAL FEATURES OF M37710:
real-time-ports i.e. for motor control
8 x 10-bit A/D-converter
2 x 8-bit D/A-converter

TECHNICAL DATA OF CPU-BOARD:

clock-frequency 8, 16, 20 or 25 MHz, crystal resonators can be exchanged on some board-versions
5 V voltage-controller and -supervisor
reset-button
power-on-reset, power-down-reset
I/O-connector for 37 I/O-pins
pull-down-resistor-arrays for I/O-protection
bus-connector for optional external memory-expansion

COMMUNICATION:

RS-232 interface
RS-485 interface (optional)

MEMORY:

32 Kb EPROM on-board with monitor-software
32 Kb User-SRAM on-board
external memory-expansion up to 16 Mbyte

MONITOR-ROM:

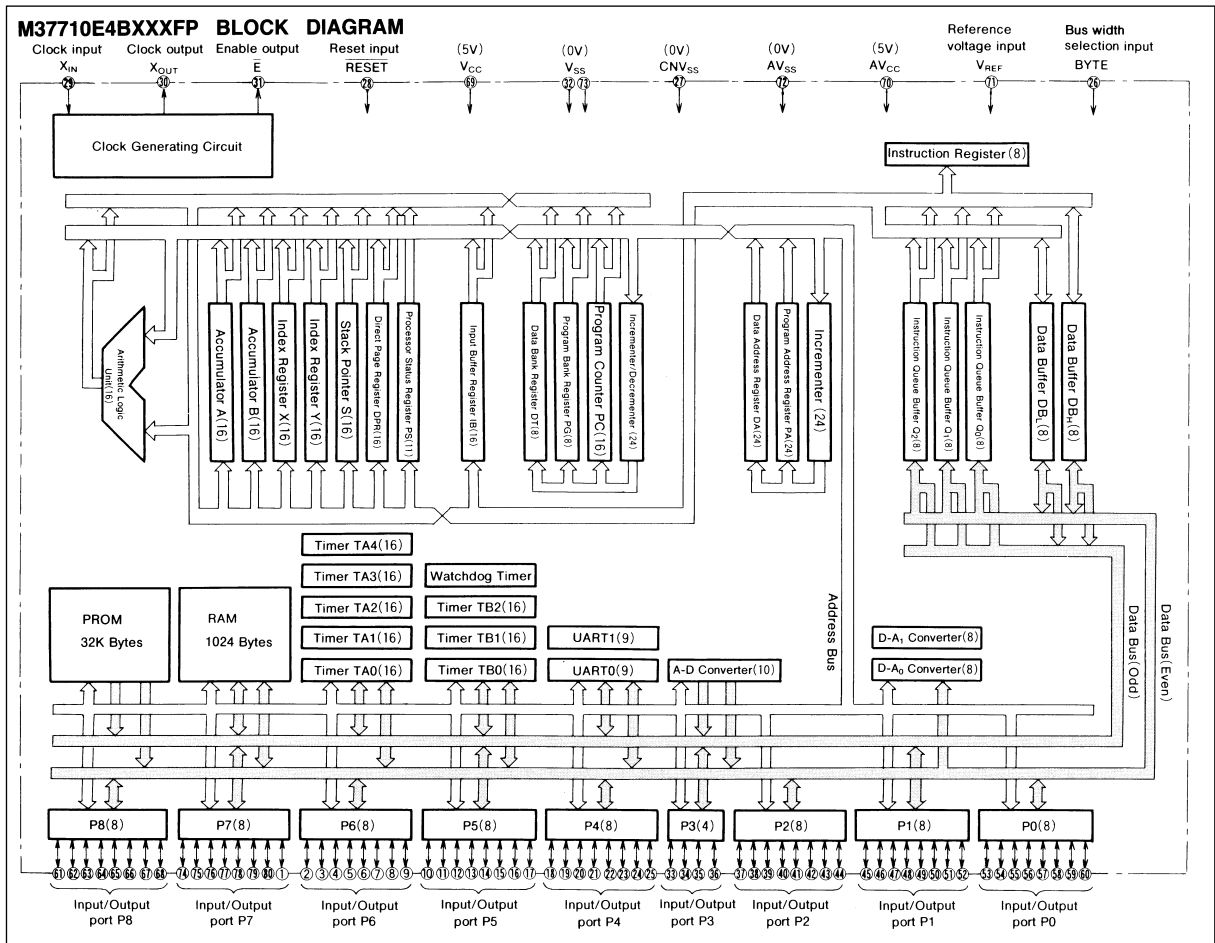
features highspeed-(up)/download of user-software via internal USART1
controls user-software-debugging via breakpoints (10 temporary + 10 permanent breaks)
monitors memory- and register-contents
single-step, multiple-step function (1 to 60000 steps)
special watchdog-monitor-functions enable precise examination of watchdog-behaviour
supports complete 16Mb address-space
can be operated via ASCII-terminal
high-performance operation with the „LUCILLE“ development-environment-software

DEVELOPMENT-ENVIRONMENT-SOFTWARE „LUCILLE“:

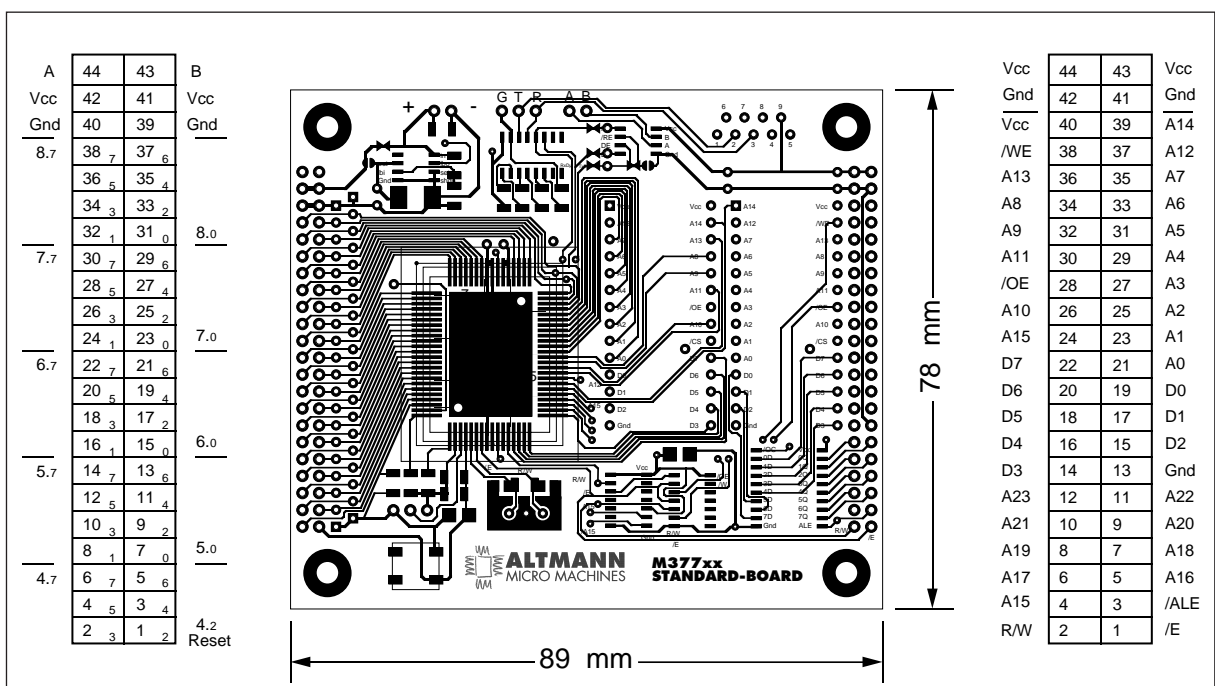
integrated development-environment-software for PC-AT
easy and comfortable operation through user-interface (turbo vision)
comfortable multi-window text-editor with „copy & paste“
integrated ASCII-terminal function
calls external compiler/cross-assembler
automatic configuration of the connected CPU-board
supports RS-232-communication with CPU-board
fast download of user-software up to 38 KBps
shortkeys for all important functions

INTERFACE-CABLE:

connects CPU-board with PC RS-232 interface
special adapter-cable for RS-485 communication available



M37710-chip blockdiagram



CPU-board with pin-configuration