

# MB86933H DEVELOPMENT KIT

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## INTRODUCTION

Fujitsu introduces a full-featured development kit for the SPARClite™ RISC processor. The kit includes necessary hardware and software to allow a user to evaluate SPARClite's performance. This can be done by the following procedure:

1. Compile a critical benchmark or representative piece of code from an application.
2. Download code to 933H evaluation board.
3. Execute code on 933H evaluation board.

The GNU-C cross compiler offered with the software is PC/DOS hosted. It is optimized for SPARClite and can produce executable code for the entire SPARClite family of products. It will also be possible for the user to debug the test code with the GNU GDB. This tool is resident in the PC Windows™ environment and provides a user friendly Windows interface. This tool offers feature rich debugging commands such as single stepping, next, software and hardware breakpointing. It also displays the registers, flags, assembly, and C with assembly interlaced. Downloaded code can be debugged on the evaluation board itself, using the Win GDB Debugger.

A variety of tools and libraries are available to the user. In addition to functioning as an evaluation tool, this kit will also be a stepping stone to software development.

There are several third party tools which will work with this kit such as an emulator, RTOS's, and other tool chains. To further assist the user in their development phase, a support agreement from Cygnus Support can be purchased separately.

## SYSTEM REQUIREMENTS

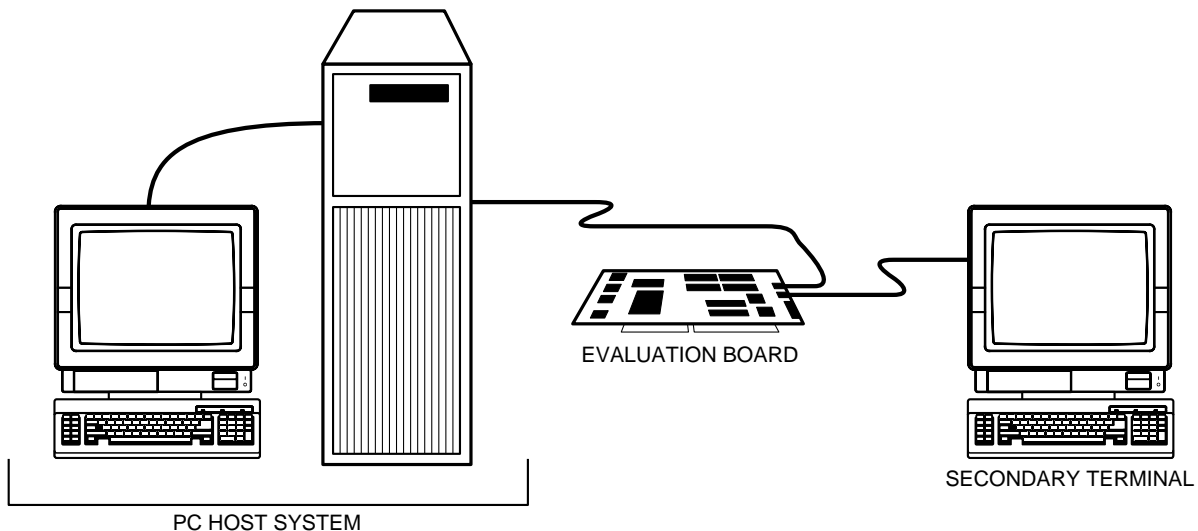
- MS DOS System (386 or Better)
- Minimum 4 MB RAM
- Minimum 17 MB Hard Disk Space
- Power Supply
- Secondary ASCII Terminal

## DEVELOPMENT KIT CONTENTS

- MB86933H SPARClite 20 MHz Processor
- 1 MB DRAM Memory (Expandable to 8 MB)
- Boot ROM
- 2 Serial Ports with Cables
- 1 Ethernet Port
- Basic Software and Installation Guide
- Complete GNU-C Development Environment
- GNU Support May be Purchased Separately Through Cygnus Support
- Third Party Tools Catalog



## DEVELOPMENT SYSTEM ENVIRONMENT



## MB86933H SPARClite 32-BIT RISC EMBEDDED PROCESSOR

### FEATURES:

- 20 MHz (50ns/cycle) operating frequency
- SPARC® V8 high-performance RISC architecture
- 1 KByte, direct mapped instruction cache
- Flexible locking mechanism for instruction cache
- 6-window, 104-word register file
- Fast interrupt response time
- 16 address spaces, 256 MBytes each
- User and supervisor modes
- Data write buffer and instruction prefetch buffer
- On-chip programmable chip selects and wait-state generators
- Supports 8-, 16-, and 32-bit wide external memory
- On-chip DRAM controller for glueless connection to DRAM
- On-chip interrupt controller
- On-chip clock generator circuit
- JTAG test interface
- Single vector trapping
- 0.8 micron gate, 3-level metal CMOS technology
- 160-pin QFP MB86933-compatible pinout

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Windows is a trademark of Microsoft Corporation.

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