MULTI-FUNCTION BOARD

USER'S GUIDE

FCC B COMPLIANCE LABEL

This device complies with Part 15 of the FCC
Rules. Operation is subject to the following two
conditions: (1) this device may not cause harm-
ful interference, and (2) this device must accept
any interference received, including inter-
ference that may cause undesired operation.

FCC ID: HS7EMU-IO

CLASS B REGULATIONS NOTICE

U. S. A. **FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT**

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Please note:

The use of a non-shielded interface cable with this equipment is prohibited.

CANADA **CANADIAN DEPARTMENT OF COMMUNICATIONS RADIO INTERFERENCE REGULATIONS CLASS B COMPLIANCE NOTICE**

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Introduction

This Multi-function Board provides the following functions:

- Floppy disk controller

- IDE hard disk interface

- VGA controller

- One parallel port (PIO) and two serial ports (SIO)

Floppy Disk Controller and IDE Interface

The floppy disk controller supports two floppy disk drives. A 34-way ribbon cable is used to connect the Multi-function Board from J3 to the drive.

The IDE (Integrated Drive Electronics) interface supports one IDE drive. An IDE drive is a hard disk drive embedded with the controller electronics. A 40-way ribbon cable is used to connect the Multi-function Board from J2 to the IDE hard disk.

PIO and SIO

The two industry-standard formats used for communication between two devices are called Centronics parallel and RS-232 serial (parallel and serial for short).
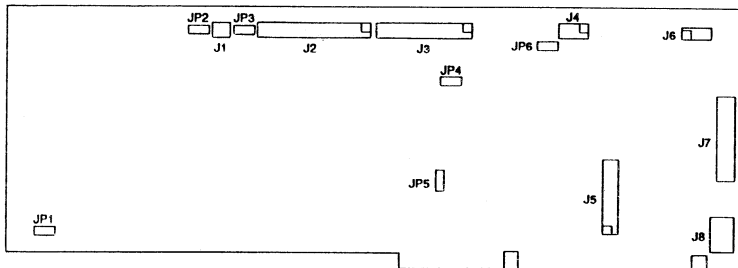
The parallel port (PIO) is a 25-pin port for connecting a parallel peripheral such as a parallel printer.

The serial ports (SIO#1 and SIO#2) are two 9-pin ports for connecting a serial peripheral such as a serial printer, modem, or mouse.

VGA Controller

The video controller, PVGA1B, is a single 50-MHz chip with 512KB video DRAM, and a 16-bit data bus for fast video DRAM update. It is fully compatible with IBM PS/2 VGA standard, and supports analog video output.

Jumper and Connector Definitions

Jumper	Pin Definition
JP1	1, 2: Unused *2, 3 Open: 16-bit video ROM 2, 3 Close: 8-bit video ROM
JP2 JP3	*2, 3: Hard disk IRQ14 *Open: Hard disk diagnostic
JP4	1, 2: Disable VGA *2, 3: Enable VGA
JP5	1, 2: Ext. clock as Ext-clock *2, 3: 36MHz as Ext-clock
JP6	*1, 2: AT PIO mode 2, 3: PS/2 PIO mode

* indicates default setting.

Connector	Function
J1	Fast Lock
J2	IDE hard disk interface
J3	Floppy disk interface
J4	Serial port (SIO#1)
J5	Feature (VGA 8514A) interface
J6	Serial port (SIO#2)
J7	DB-25S parallel port (PIO)
J8	VGA interface