

SIDE[®] - 2615

**Enhanced Multi-IO
Four High Speed 16550 UART
Two IEEE 1284 Parallel Port**

ISA-BUS ADAPTOR

User's Manual

Revision 1.1
Doc: SIDE-2615manual11
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FCC Compliance Statement

FCC ID: LK4IW-2615

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 rule. These limits are designed to provide reasonable protection against harmful interference in residential installations. 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 particular installation.

If this equipment does cause interference to radio or television equipment 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

Move the equipment away from the receiver

Plug the equipment into an outlet on a circuit different from that to which the receiver is powered

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions

CAUTION: Only equipment certified to comply with Class B (computer input/output device, terminals, printers, etc.) should be attached to this equipment, and must have shielded interface cables.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the user's authority to operate such equipment.

Each host adaptor is equipped with an FCC compliance label which shows only the FCC identification number. The full text of the associated label follows:

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

Features

IDE Port

- COMPATIBLE with IBM PC/XT and PC/AT embedded hard disk drive
- Twin 16 bit ISA IDE channels
- Enable/ Disable select on each IDE channel
- Support selectable Primary/ Secondary
- INTEGRATED Buffer Control Logic
- Support IRQ 10, 15 for Secondary IDE

Floppy Port

- Support both 3 1/2" and 5 1/4" floppy disk drives (360K/ 720K/ 1.2M/ 1.44M/ 2.88MB) and Tape Drive
- Enable/ Disable select

Serial Port

- Four (4) high speed 16550 UART Serial port
- NS16C550 compatible
- Selectable address 3F8h, 2F8h, 3E8h, 2E8h
- Programmable Baud Rate Generator
- Address changeable
- Support Multi-Selectable IRQ (IRQ3,4,5,7,9,10,11,12)
- Programmable baud rate up to 115.2K baud
- MIDI capable
- 16 Byte FIFOs
- DB9 and DB25 Connectors

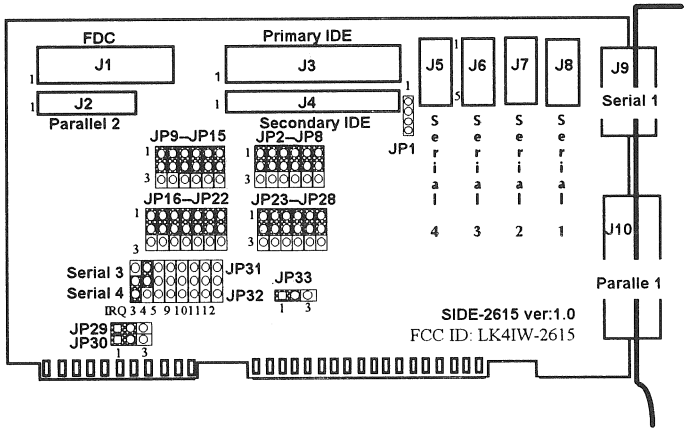
Parallel Port

- Two (2) compliant with IEEE-1284 bi-directional parallel interface
- Selectable address 378h, 278h, 3BCh
- DMA capable- Channel 1 or 3
- Able to drive 30' using IEEE 1284 cables
- IRQ LPT Driver included
- Selectable IRQ for IRQ5, IRQ7, IRQ12, IRQ15

- ☑ **Standard mode**--Compatible with IBM PC/AT Parallel Port (**SPP**)
- ☑ **Enhanced mode**--Enhanced Parallel Port compatible (**EPP**)
- ☑ **High Speed mode**--Extended Capabilities Port Compatible (**ECP**)
- ☑ Fast Centronics autostrobe
- ☑ Incorporates ChiProtect Circuit for protection against damage due to printer power-on

Hardware Installation

Placement



Jumpers & Connectors

JP1: LED for IDE port

JP1 is a 4 pins connector. The pin 1 & pin 2 is for primary IDE port, pin 3 & 4 is for secondary IDE port LED.

- | |
|------------------------|
| Pin 1: LED anode (+) |
| Pin 2: LED cathode (-) |
| Pin 3: LED cathode (-) |
| Pin 4: LED anode (+) |

JP2: Primary IDE control

JP2 can Enable/ Disable this primary IDE port. For example you have IDE controller conflict, you can Disable this Primary IDE port by putting the jumper to address 2-3.

JP2	HDD Port	Note
1-2	Enable	*Default
2-3	Disable	

JP3: Secondary IDE control

JP3 can Enable/ Disable this secondary IDE port. You also can Disable this port by putting the jumper to address 2-3.

JP3	HDD Port	Note
1-2	Enable	*Default
2-3	Disable	

JP4: Floppy port control

JP4	Floppy Port	Note
1-2	Enable	*Default
2-3	Disable	

JP5, JP6: Serial 1 Address select

JP5	JP6	Serial 1 Address	Note
1-2	1-2	3F8h	*Default
1-2	2-3	2F8h	
2-3	1-2	3E8h	
2-3	2-3	Disable	

JP7, JP8: Serial 2 Port Address select

JP7	JP8	Serial 2 Address	Note
1-2	1-2	2F8h	*Default
1-2	2-3	3F8h	
2-3	1-2	2E8h	
2-3	2-3	Disable	

JP9, JP10: Serial 3 Port Address select

JP9	JP10	Serial 3 Address	Note
1-2	1-2	3E8h	*Default
1-2	2-3	Disable	
2-3	1-2	3F8h	
2-3	2-3	2F8h	

JP11, JP12: Serial 4 Port Address select

JP11	JP12	Serial 4 Address	Note
1-2	1-2	2E8h	*Default
1-2	2-3	Disable	
2-3	1-2	2F8h	
2-3	2-3	3F8h	

JP13, JP14: Parallel 1 Address select

JP13	JP14	Parallel 1 Port Address	Note
1-2	1-2	378h	*Default
1-2	2-3	278h	
2-3	1-2	Disable	
2-3	2-3	3BCh	

JP15, JP16: Parallel 1 Mode select

JP15	JP16	Parallel 1 port Mode	Note
1-2	1-2	ECP & EPP	*Default
1-2	2-3	EPP/ Bi-Directional	
2-3	1-2	ECP	
2-3	2-3	Printer Mode	

JP17: Parallel 1 IRQ Channel select

JP17	IRQ Channel	Note
1-2	IRQ7	*Default
2-3	IRQ5	

JP18, JP19: Parallel 2 Address select

JP18	JP19	Parallel 2 Port Address	Note
1-2	1-2	278h	*Default
1-2	2-3	378h	
2-3	1-2	3BCh	
2-3	2-3	Disable	

JP20, JP21: Parallel 2 Mode select

JP20	JP21	Parallel 2 port Mode	Note
1-2	1-2	ECP & EPP	*Default
1-2	2-3	EPP/ Bi-Directional	
2-3	1-2	ECP	
2-3	2-3	Printer Mode	

JP22: Parallel 2 IRQ Channel select

JP17	IRQ Channel	Note
1-2	IRQ5	*Default
2-3	IRQ7	

JP23: Parallel 1 EPP Mode IOCHRDY signal

JP23	IOCHRDY	Note
1-2	on	*Default
2-3	off	

JP24, JP25: Parallel 1 ECP Mode DMA Channel select (Option)

JP24	JP25	DMA Channel	Note
1-2	1-2	DRQ1,DACK1	*Default
2-3	2-3	DRQ0,DACK0	
off	off	none	DRQ disabled

JP26: Parallel 2 EPP Mode IOCHRDY signal

JP26	IOCHRDY	Note
1-2	on	*Default
2-3	off	

JP27, JP28: Parallel 2 ECP Mode DMA Channel select (Option)

JP27	JP28	DMA Channel	Note
1-2	1-2	DRQ3,DACK3	*Default
2-3	2-3	DRQ0,DACK0	
off	off	none	DRQ disabled

JP29: Serial 1 IRQ select

JP29	IRQ	Note
1-2	IRQ4	*Default
2-3	IRQ3	

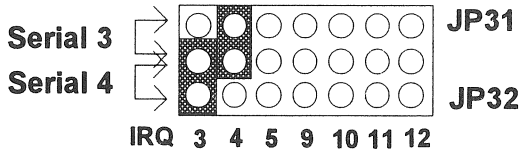
JP30: Serial 2 IRQ select

JP30	IRQ	Note
1-2	IRQ3	*Default
2-3	IRQ4	

JP31, JP32: Serial 3 & Serial 4 IRQ select

Reference to the following figure. The JP31 and JP32 were consisted by a 3 (line) X 7 (pin) series pin. The upper 2 lines is for Serial 3 to determine the IRQ address and lower 2 lines is for Serial 4, totally you have 7 different IRQ for selections.

(Default : Serial 3 = IRQ4, Serial 4 = IRQ3)



J1: Floppy port connector

J1 is a 34 pins internal Floppy Disk drive connector. Use 34 pins flat cable to connect between this adaptor's Floppy port and the Floppy devices. Be sure the cable's colored side should align to pin #1 of this connector. This cable can chain the 1.2 MByte (5 1/4") and 1.44MByte (3 1/2") together.

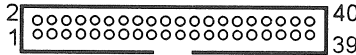


J2: Parallel 2 connector

J2 is a 2 x 13 double row 26 pins internal internal secondary printer connector. Use 26 pins IDC flat cable that convert to a standard 25 pin A type printer connector. This connector provides you the secondary printer port.

J3: Primary IDE port connector

J3 is a 40 pins internal IDE Disk drive connector. Use a 40 pins flat cable to connect between this adaptor's primary IDE port and the IDE devices. Be sure the cable's colored side should align to pin #1 of this connector. Normally you can use this port as a boot-up hard disk, like c:.



J4: Secondary IDE port connector

J4 is a 40 pins internal IDE Disk drive connector. Use a 40 pins flat cable to connect between this adaptor's secondary IDE port and the IDE devices. Be sure the cable's colored side should align to pin #1 of this connector. Normally this port you can use like a back-up channel which you have a IDE CD-ROM, second IDE hard disk drive...etc.

J8/J9: Serial 1 port connector

Both the J8 and J9 is for Serial 1port (This J8 & J9 is a pin to pin connected for different assembly requirement, you can only use one of this port, either J8 or J9), connect this serial port by a 9 pin serial cable to this serial device or a 10 pins IDC flat cable to connect between the J8 and serial device. The default for this serial port is IRQ3 & use the address 3F8h.



J7: Serial 2 port connector

Both the J7 is for Serial 2 port, connect this serial port by a 9 pin serial cable to this serial device or a 10 pins IDC flat cable to connect between the J7 and serial device. The default for this serial port is IRQ4 & use the address 2F8h.

J6: Serial 3 port connector

Both the J6 is for Serial 3 port, connect this serial port by a 9 pin serial cable to this serial device or a 10 pins IDC flat cable to connect between the J6 and serial device. The default for this serial port is IRQ4 & use the address 3E8h.

J5: Serial 4 port connector

Both the J5 is for Serial 4 port, connect this serial port by a 9 pin serial cable to this serial device or a 10 pins IDC flat cable to connect between the J5 and serial device. The default for this serial port is IRQ3 & use the address 2E8h.

J10: Parallel 1 connector

J10 is a standard 25 pins type A female Parallel connector.

Printer and IEEE 1284 cable

The SIDE Series adaptor are all compliant with the IEEE 1284 level II electrical interface specification.

The IEEE 1284 compliant cables have better features on the following:

- 17 Twisted pairs of conductors
- Full foil shield
- Wire braid
- Controlled impedance -- 62 ohm
- Limited crosstalk

With these feature will guarantee the IEEE 1284 cable perform at much higher bandwidth rates that the fast Centronics, EPP and ECP modes perform at.

If you are using the ordinary parallel cables running at the EPP or ECP mode that this controller provided, you may experience that the data errors.

Hewlett Packard LaserJet 5P and 5PM is supporting the IEEE 1284 type C connector and SIDE 2606 controller also offer the host printer interface with type C connector.

The High Speed Printer Driver (Optional)

The FASTLPT.SYS device driver provides a high speed centronics mode for printing. The driver utilizes the fast Centronics FIFO mode available on the all SIDE Series I/O adaptor and delivering data to the printer at rates up to 500KB per second.