Lava Parallel-ECP/EPP
Installation Manual

Rev. B00
Windows Hardware and Driver Installation

1. Before opening the casing of your computer, make sure that all power is off.

2. Locate an unused ISA slot and insert the Parallel-ECP/EPP card into it. Ensure that the card is well seated.

3. Screw the metal bracket of the Parallel-ECP/EPP card to your PC’s casing and replace the machine’s cover.

4. Connect your parallel (printer) cable to the port on the Parallel-ECP/EPP card and turn the PC on.
Parallel Configuration

NOTE: The Lava Parallel-ECP/EPP is not a plug and play card.

Standard LPT Assignments

The Parallel ECP/EPP fully supports "standard" LPT settings represented by addresses 03BCh, 0378h, & 0278h. The system will check those hexadecimal address at boot-time and assign them incrementally to be LPT 1, LPT 2, or LPT 3.

If you already have an LPT 1 on your system, using 0378h, then configure the Parallel ECP/EPP for address 0278h. It will be recognized as LPT 2.

If you already have an LPT 1 and an LPT 2, using 0378h and 0278h, respectively, configure the Parallel ECP/EPP for address 03BCh. It will be recognized as LPT 1 and the other ports will be recognized as LPT 2 and LPT 3, respectively.

Note: 03BCh uses a polled interrupt, i.e. no IRQ jumper is required. 0378h typically uses IRQ 7, and 0278h typically uses IRQ 5.
Non-Standard LPT Assignments in Windows

1. When adding an extra printer port, double-click on the Add New Hardware icon in the Windows Control Panel. We recommend against using the autodetect feature. Rather, answer "NO" to the first question ("Do you want Windows to search for your new hardware?").

2. Choose "Ports (COM & LPT)." Select the type of port you wish to add (either "Printer Port," or "ECP Printer Port"). Complete the installation procedure. When Windows asks that you restart the computer, choose "NO."

3. Start the Windows Device Manager (found by double-clicking on the System icon in Control Panel). Choose "Ports (COM & LPT)," then double-click on whichever LPT you just added (numbered 1 through 6). Choose the Resources page for that port.

4. If Windows failed to automatically detect the required Port address, you may alter it by choosing the appropriate Basic Configuration. This may only be accessed by un-checking the box next to "Use Automatic Settings."

5. Choose BASIC CONFIGURATION as follows:

**STANDARD PRINTER PORT (SPP):**

- 0 Allows for STANDARD ADDRESSES & polled interrupts (Microsoft default)
- 1 Allows for STANDARD ADDRESSES & interrupt-driven printing (faster)
- 2 Allows for non-STANDARD ADDRESSES & polled interrupts
- 3 Allows for non-STANDARD ADDRESSES & interrupt-driven printing
ENHANCED CAPABILITIES PORT (ECP):

0  Allows for STANDARD ADDRESSES & polled interrupts, no DMA channels
1  Allows for STANDARD ADDRESSES & interrupt-driven printing, no DMA channels
2  Allows for STANDARD ADDRESSES & interrupt-driven printing, DMA channel selectable
3  Allows for non-STANDARD ADDRESSES & polled interrupts, no DMA channels
4  Allows for non-STANDARD ADDRESSES & interrupt-driven printing, DMA channel selectable

The beginning and ending hexadecimal address must be configured as follows:

03BC - 03BF 0238 - 023F
0378 - 037F 02B8 - 02BF
0278 - 027F 0338 - 033F

Note: If you elect to enter the data, without scrolling through the list, the spaces that appear on either side of the hyphen are critical.

6. You may now restart Windows.
**Hardware Set-Up**

**Parallel Port Addressing**
- Specifies 03BC (hex) Port Address
- Specifies 0378 (hex) Port Address
- Specifies 0278 (hex) Port Address

**Parallel Port IRQ Setup**
Remove jumper if using POLLED interrupt request
- Specifies IRQ 7
- Specifies IRQ 10
- Specifies IRQ 11
- Specifies IRQ 12
- Specifies IRQ 4
- Specifies IRQ 5
- Specifies IRQ 2
- Specifies IRQ 3

**DMA Configuration**
- DMA Request/Acknowledge
- 1
- 3
- None

Note: When using 03BC (hex) address, 03BC ENABLE/DISABLE jumper must be ENABLED. When using all other addresses, 03BC ENABLE/DISABLE jumper must be DISABLED.

Note: When using Enhanced Capabilities Port (ECP) mode, DMA channels must be set up according to mode specified by peripheral device driver. Check the documentation accompanying your peripheral to see what mode(s) it supports. Both jumpers should be moved together!

Note: When using 03BC (hex) address, 03BC ENABLE/DISABLE jumper must be ENABLED. When using all other addresses, 03BC ENABLE/DISABLE jumper must be DISABLED.
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This device complies with part 15 of the FCC Rules. Operation is subject to the following 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.

Lava Computer MFG Inc.