# LavaPort-Quad Quick Installation Guide





Rev. B01



## **Windows Installation**

- 1. With the power turned off, insert the LavaPort-Quad card into any free PCI slot in your PC. Make sure the card is well seated. Insert the bracket with Ports 3 and 4 into a free slot. If you must detach the cables from the card to do so, be sure to re-install the cables back onto the card with the red wire corresponding to the "1" on the board. Turn your PC on and start Windows.
- 2. Windows will automatically detect the LavaPort-Quad as a new PCI Serial Controller and ask you to insert the LAVA Installation CD. The installation files are located in the root of this CD.
- After the necessary files have been copied, Windows will complete the full installation of the LavaPort-Quad. During this process, four ports will be created under Control Panel | System | Device Manager | Ports.
- 4. The LavaPort-Quad hardware appears in Device Manager as part of the Ports tree. Please note that any changes to the Resources (I/O Address & IRQ) used by any one of the four ports on the LAVA LavaPort-Quad must be made through the Resources page of the appropriate LavaPort-Quad Ports page.





- Click on Ports and select one of the ports listed under the heading LavaPort-Quad.
- 6. Click Properties. The following screen will appear:

avaPort- General	Quad Po	at-C (CO)	15) Prop	Flow Contr	ol Driver	? Resources
Į	LavaPo	t-Quad Po	rt-C (COM	5)		
Device Manufa Hardwa	type: acturer: are version	Ports (CD Lava Cor Not avail	M & LPT) nputer MF able	i Gilno.		
This	ce status - s device is	working pr	operly.			
Devic	se usage Disable in	this herdwa	are profile			
×.	<u>E</u> xists in a	l hardware	prohies		Οκ	Cancel

7. Click the Resources tab. A screen similar to the following will appear:

eneral	654 Settings	FIFO Control   Flow Control   Driver	Resources
Ż	LavaPort-Qua	id Part-C (CDM5)	
You canr change ti parent de Parent de	not modify the r he device's res svice. svice: LavaPor	resources for this device directly. To sources, change the resources of its rt-Quad C/D	
Resource	e type	Setting	
Intern Input	upt Request /Output Range	DC00 - DCFF	
Intern Input	upt Request 40 utput Range g device list:	05 0000-DCFF	d
Conflictin	upt Request /Output Range g device list: icts.	05 0 DC00 - DCFF	-
Conflictin	upt Request YOutput Range g device list icts.	U5 0 DC00 - DCFF	×

3

8. Click the 654 Settings tab. A screen similar to the following will appear, where port baud rate, data bits, parity, and stop bits can be set:

.avaPort-Quad Port-C (COM5) Properties
General 654 Settings FIFO Control Flow Control Driver Resources
Lava Computer MFG. Inc.
Bits per second: 230400
Data bite: 8
Parity: None
Stop bits: 1
Bestore Defaults
To access Help on any function, click the right mouse button while the mouse pointer is within the appropriate function.
OK Cancel

# 4 <u>Setting LavaPort FIFO Control in Windows</u>

9. To change buffer settings, click the "FIFO Control" tab. A screen similar to the following will appear, where transmit and receive buffer values can be set:

ieneral   654 Settings	FIFU CO	ntrol   Flow	Control D	river   Resou	lices
Lava Computer MF	G. Inc.				
<u>R</u> eceive Buffer.	[	10	_ <u>j</u>		
Iransmit Buffer.	Ļ	16	30	60 	
Transmit <u>B</u> lock:		- io			
Transmit Block Av	+- C- stual Value	·3 ·2	-1 10 4	+1 +2	
				<u>D</u> efaults	
To access Help while the mouse	on any fun pointer is w	ction, click t vithin the ap	he right mo propriate fu	use button nction.	

Each of the LavaPort-Quad's four ports incorporates a 64-byte FIFO (first-in-first-out) buffer.

The FIFO control tabs set the buffer "trigger" levels. When the buffer is filled to its trigger level with the selected number of bytes, the CPU will be interrupted and asked to either reload the buffer (for transmission), or retrieve data from the buffer (for reception).

Most efficient data transmission occurs when the CPU is interrupted infrequently. For each interrupt, the CPU can then service the buffer with larger data blocks: during transmission, it can place a large burst of data into the buffer, and during reception it can retrieve a large block from the buffer and then continue multi-tasking.

Ideally therefore, Receive triggers should be set as high as possible and Transmit triggers as low as possible.

However, if the Transmit trigger levels are set too low, or Receive triggers too high, and the CPU is busy when an interrupt is called by the LavaPort, a short period of inactivity may occur between the port and the modem. This will reduce effective transmission/reception speeds.

Optimum buffer settings are dependent on your modem speed, your CPU speed, and the amount of multi-tasking that occurs while online. For a fast modem and fast CPU performing few multi-tasking functions, set transmit triggers low and receive triggers high. If multi-tasking while online, set transmit triggers higher and receive triggers lower.

#### 6 Setting LavaPort Flow Control in Windows

10. To change flow control settings, click the "Flow Control" tab. A screen similar to the following will appear, where flow

control values can be set:

Flow Control refers to the type of signaling that is used between the modem and the LavaPort.

If you are connecting the LavaPort to a modem or ISDN terminal adapter, use the default setting of Hardware (RTS/CTS) flow control.

Software Flow Control (Xon/Xoff) is used only for connecting the LavaPort to a non-modem serial device (e.g. Using a null-modem cable to connect to another Com Port).

eneral   654 Settings   FIFO Control	Flow Control Driver Resources
Lave Computer MFG. Inc. Cure Box Control Cure Box Control Cure Box Control Cure Box Control Cure Box Control Advanced box	<< NOTE - Use of Hardware (RTS/CTS) Flow Control is highly recommended
	Defaults
To access Help on any function.	click the right mouse button

Note: Instructions for installing the LavaPort-Quad under DOS or Windows 3.x, NT4, Win95/98/Me may be found on your LavaPort-Quad installation CD.



### LAVA Technical Support

9:00 am to 5:30 pm Monday to Friday (Eastern Time)

Tel:+416 674-5942 Fax:+416 674-8262

E-mail: tech@lavalink.com Internet: www.lavalink.com



# LAVA Computer MFG Inc.



-(C

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.

CE