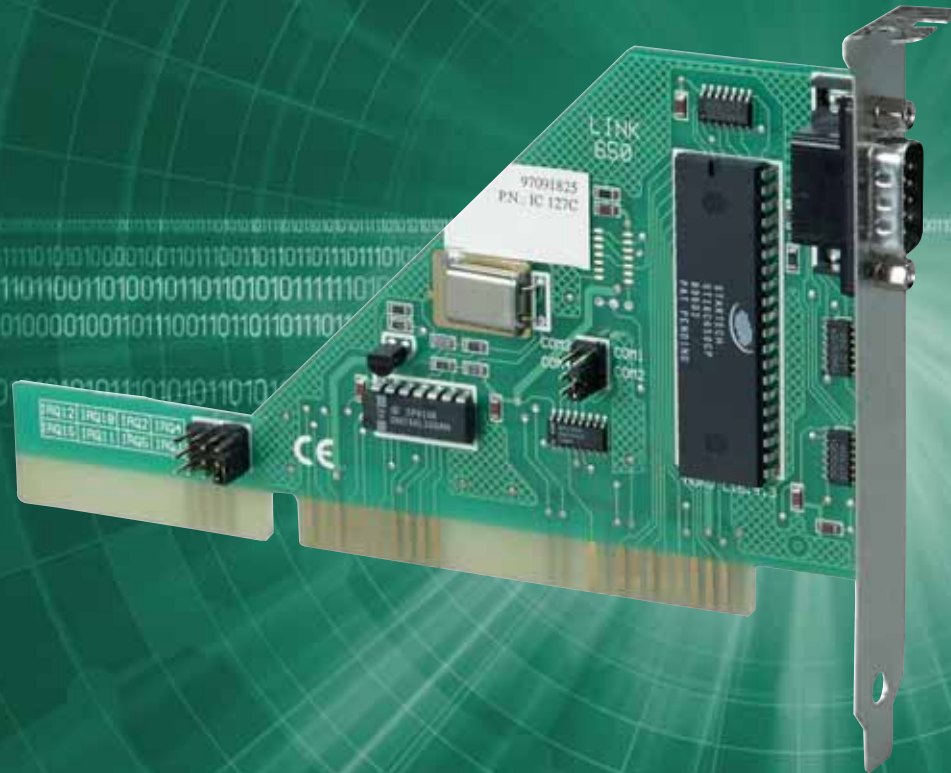


PC Plus Adapters



Short a port or two? Add these cards and start running your super-fast peripherals!

FEATURES

- Fast 16650 UART chips. Integrated 32-byte FIFO buffer enables faster throughput.
- Serial models are 100% compatible with V.90 external modems and ISDN terminal adapters.
- Serial cards run at 460.8 kbps. The IC129C and IC146C parallel cards have a top rate of 2.5 MBps. And the IC126C parallel card has a top data rate of 7.2 MBps!
- The IC129C supports ECP and EPP.

OVERVIEW

These six adapters feature the 16650 UART chip for fast performance. A roomy 32-KB buffer virtually eliminates lost data and lags from retries and resends. These adapters remove communication roadblocks using technology built to handle throughput.

PC Plus HS Parallel PCI Adapter (IC126C)

Free up scarce PCI slots while adding a high-speed parallel port. This high-speed card achieves throughput of up to 7.2 MBps—two to three times faster than standard parallel throughput.

PC Plus RS-232 Serial ISA Adapter (IC127C)

This card is compatible with V.34 external modems and ISDN terminal adapters. It's configurable as COM 1 through COM 4 using an IRQ of 2/3/4/5/10/11/12/15. Includes drivers for Windows® 95/98 and Windows NT®.

PC Plus Dual Serial PCI Adapter (IC128C-R3)

This PCI card has two high-speed serial ports and is 100% compatible with all 56K external modems and ISDN terminal adapters. It includes drivers for Windows 95/98 and Windows NT.

PC Plus Enhanced Parallel ISA Adapter (IC129C)

Send data as fast as your new parallel printer can print it! This card has an ultra-fast Enhanced Parallel Port (EPP) with a maximum transfer rate of 2.5 MBps!

It supports both Enhanced Capabilities Port (ECP) and EPP standards. Configure it as LPT1 through LPT6 using IRQs 2/3/4/5/7/ 10/11/12, DMA1/3. The adapter supports hexadecimal addresses 03BC, 0378, 0278, 0238, 0288, and 0338. It's

backward compatible with 4-bit and 8-bit (bidirectional) parallel ports and requires no special drivers.

RS-232 HS Serial PCI Card (IC145C)

This plug-and-play card gives you one super-fast 460.8-kbps comm port for connecting your modems and other serial equipment. It slides into the PCI slot and shares IRQs, so you can use it even if you have no IRQs left.

You don't have to worry about compatibility; the card works with all 56K external modems and external ISDN terminal adapters.

Dual Parallel PCI Card (IC146C)

Add two accelerated parallel printer ports to your PCI-equipped PC. This card gives you two EPPs that run up to three times faster than standard ports. You save on IRQs, too, because both ports share one. The card handles simultaneous data throughput and is compatible with any parallel device, including legacy devices.

THE BENEFITS OF PCI BUSES

A Peripheral Component Interconnect (PCI) bus enhances both speed and throughput. A PCI local bus is a high-performance bus that provides a processor-independent data path between the CPU and high-speed peripherals. PCI is a robust interconnect interface designed specifically to accommodate multiple high-performance peripherals for graphics, full-motion video, SCSI, and LANs.

Technically Speaking

If you're not getting the performance you expect from a high-speed modem or ISDN terminal adapter, it may be the fault of your PC's serial port. Serial ports on older PCs just can't handle the speeds demanded by today's high-speed equipment.

The speed of a serial port is dependent on the type of UART (Universal Asynchronous Receiver Transmitter) chip it uses. Older Pentium® PCs usually have serial ports based on the 16550 UART chip which are limited to 115.2 kbps—less than the 128 kbps supported by most ISDN terminal adapters. And because of their limited 16K buffer, they're prone to frequent buffer overflows and retransmission of entire blocks of data. Because of these factors, the highest actual speed 16550 chips can achieve is in the neighborhood of 80 kbps. (And most 486 PCs have I/O chips that are even slower than the 16550 chips!)

16650 speed.

16550 UARTs can't keep up with 33.6- and 56-kbps modems, and they can't even touch 128-kbps ISDN speed.

For that, you need a faster serial port—a serial port based on the 16650 UART.

Unlike the 16550 UART, the 16650 UART supports data-transfer rates up to 460.8 kbps (including 115.2 and 230.4 kbps).

Double the buffer.

The robust 32K buffer—twice the size of the 16550 16K buffer—helps to ensure that high data rates can be maintained without speed-dampening overflows.

Instead of the CPU having to verify the buffer status each time it loads a byte into the UART, the 16650 UART enables the CPU to send and receive data bursts directly from the port without error.

The FIFO buffer in the 16650 UART can even be custom-configured for the most efficient operation. Transmit and receive triggers can be set up to interrupt the CPU only when the buffer has filled to a predetermined level—leaving the CPU free to perform other important tasks.

Technically Speaking

Continued...

Flow control.

Unlike a 16550 UART, which is a “dumb” device, the 16650 UART is capable of detecting flow-control signals without intervention from the CPU.

In fact, the only thing the CPU ever sees from the 16650 UART is a request to load the buffer or to retrieve data. No transmission retry is ever required. Overrun errors are virtually impossible.

EPP and ECP.

The requirements of high-speed peripheral devices such as printers have led to the development of enhanced parallel standards known as EPP and ECP.

EPP, which stands for Enhanced Parallel Port, increases parallel port throughput to the same speed as the ISA bus.

TECH SPECS

Card Type — IC127C, IC129C: ISA;
IC126C, IC128C-R3, IC145C-IC146C: PCI

Speed — IC126C: 7.2 MBps;
IC127C, IC128C-R3, IC145C: 460.8 kbps;
IC129C, IC146C: 2.5 MBps

Operating Systems Supported — Windows® 95/98, Windows NT®
(call Tech Support about Windows 2000)

CE Approval — IC127C, IC128C-R3, IC129C

Connectors — IC126C, IC129C: (1) DB25;
IC127C, IC145C: (1) DB9;
IC128C-R3: (2) DB9;
IC146C: (2) DB25

Power — From the PC bus

Size — ¾ card

EPP ports are also 8-bit bidirectional, making them ideal for high-speed peripherals such as parallel port modems.

ECC, or Enhanced Capabilities Port, is a refinement of EPP. Although ECP ports operate at the same speeds as EPP, their design gives you even faster data transfer rates. ECP ports have DMA (Direct Memory Access) capability, so data can be channeled directly to memory, bypassing the CPU—an important feature given the overhead demands of modern multitasking operating systems.

The IC129A adapter, for example, is compatible with EPP and ECP and is also backward compatible with 4- and 8-bit parallel standards.

Item	Code
PC Plus Adapters	
HS Parallel PCI	IC126C
RS-232 Serial ISA	IC127C
Dual Serial PCI	IC128C-R3
Enhanced Parallel ISA	IC129C
RS-232 HS Serial PCI	IC145C
Dual Parallel PCI	IC146C
For serial modem connections...	
AT® Modem Cable, Premium, 9-Conductor, DB9 Female/DB25 Male	EVMBMC
For parallel printer connections...	
Enhanced Parallel Port Cable, DB25 Male/Centronics® Male	EQN202
For the RS-232 HS Serial PCI...	
AT Modem Cable, Standard, 9-Conductor, DB9 Female/DB25 Male	BC00301
For the Dual Parallel PCI...	
Parallel Printer Cable, Centronics Male/DB25 Male	EYN600



IC127C