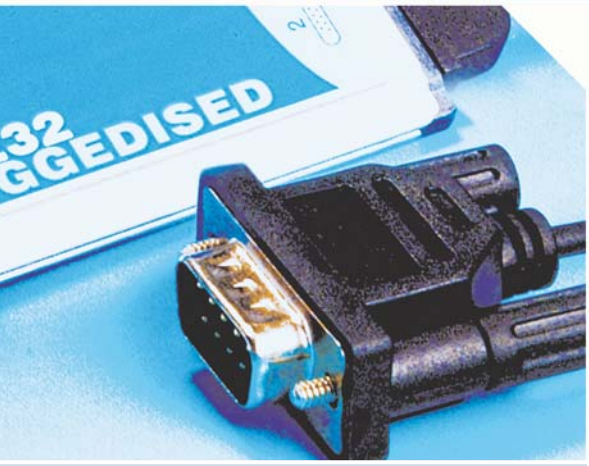
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PM-020 & PM-143
PCMCIA 1 PORT VELOCITY RS232

SERIAL CARDS ENGINEERED TO EXCEED EXPECTATIONS



Features

- 1 Port RS232
- PCMCIA TYPE II
- 128 Byte FIFO with user definable trigger level
- Up to 921,600 baud
- Standard and Ruggedised Options
- Drivers for all popular operating systems
- Sample Programs, Test & Terminal software - all with source code
- Lifetime Support and Lifetime Warranty

Options



Standard: PM-020
Detachable connector



Ruggedised: PM-143
Built in connector

For 2 Port see: PM-120 and PM-132

Description

A PCMCIA type II card providing one RS232 serial port. Velocity megabaud data transfer rates and the 128 byte deep FIFOS, coupled with 1Mbit/s line drivers deliver uncompromising performance on your laptop PC. Being mobile no longer limits your options.

Standard and ruggedised card options to suit your needs.

Now with Brainboxes Lifetime Warranty and Lifetime Support!

Software

Microsoft signed drivers (easy installation & robust operation) for:

- Windows Vista 32 bit & 64 bit Editions
- Windows Server 2003 32 bit & 64 bit Editions
- Windows XP 32 bit & 64 bit Editions
- Windows 2000.

64 Bit Drivers

Fully tested drivers also included for:

- Windows Me, Windows 98 & 95, Windows NT
- Windows CE

As well as: full product documentation, a thorough troubleshooting guide and terminal software. Detailed sample source code for all popular programming languages.

Need support for other operating systems? Please telephone or email.



LIFETIME WARRANTY | LIFETIME SUPPORT

Designed for Microsoft Windows XP | Windows Vista BASIC | Designed for Microsoft Windows Server 2003

CE | FC FEDERAL COMMUNICATIONS COMMISSION USA | UL

ORDER

Description	Code
PCMCIA 1 PORT VELOCITY RS232	PM-020
RUGGEDISED PCMCIA 1 PORT VELOCITY RS232	PM-143

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PM-020
PM-143



PCMCIA 1 PORT VELOCITY RS232

Product Code	UC-257	
Serial Port		
Pin 1 DCD Pin 2 RXD Pin 3 TXD Pin 4 DTR Pin 5 GND Pin 6 DSR Pin 7 RTS Pin 8 CTS Pin 9 RI RS232 Pinout (9 pin Male) 1 2 3 4 5 6 7 8 9	Ports Connector UART type FIFO size Powered Output Transmitted Signal Strength Operating Distance	1 Port RS232 DB9 (9 Pin Male) - PM-132 connector is built in and ruggedised 950 UART inside Brainboxes BB16CF950+ 128 Byte with user definable trigger level No (for powered output see Universal Powered range (UP)) +/- 12 Volts open circuit RS232 Standard 100ft (30metres) RS232 Standard
Serial Port Settings		
	Baud Rate (bits per second) Data Bits Parity Stop Bits Flow Control IRQs Connection Schemes	up to 921,600 5,6,7 or 8 Odd, Even, None, Mark or Space 1, 1.5 or 2 CTS/RTS DTR/DSR Plug and Play - Shared interrupts for all ports Point to Point
General		
	PCB Layers Power Consumption Weight Size	4 210mA @ 5V 20mA @ 12V 0.067Kg (PM-020) , 0.049Kg (PM-143) PCMCIA TYPE II
Interface		
	BUS OS Compatibility PCMCIA Compliance	PCMCIA Windows Vista/XP/Server 2003 64 bit & 32 bit editions Windows 95/ 98/ 2000 Windows CE* PC Card Standard-February 1995
Microsoft Approvals		Windows Vista 32 bit & 64 bit editions Windows Server 2003 Editions, Windows XP
Approvals & Accreditations	CE FC UL PCMCIA	UL, EMC: CE, FCC, PCMCIA Affiliate Member
Box Contents		Installation CD including manual, Microsoft signed drivers, utilities and sample programs with source code PCMCIA 1 PORT VELOCITY RS232 Fully wired Moulded Cable (PM-143: built into card) Installation Guide
OEM option		Available for bulk buy OEM
Product Support		Lifetime Email and Phone Support from fully qualified, friendly staff 40 hours a week
Warranty		Lifetime
Made In	MADE IN EU Elektra 05 European Electronics Industry Awards WINNER Manufacturer of the Year	Manufactured in the UK by Brainboxes Winner 2005 European Electronics Industry Awards "Manufacturer of the Year"
Customisable		Brainboxes operate a "Perfect Fit Custom Design" policy for volume users More Info: sales@brainboxes.com

**This product works in Windows CE up to 115,200 baud*

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BRAINBOXES PCMCIA

Product Features Explained

PC Card

PC cards allow all the functionality of Brainboxes serial cards to be brought to your laptop. All Brainboxes PC cards are Type II cards and are compatible with 3.3V and 5V PCMCIA slots.
More info on 'Universal' products: www.brainboxes.com/content/newsresources/mainnews/article_4_283.aspx

Microsoft Logo Approval

The majority of Brainboxes products, including this one, have been approved by Microsoft as a fully tested and compatible product with popular Microsoft Operating Systems. For the full list of Brainboxes approved products see the **Microsoft website:** http://windowsservercatalog.com/marketplace/

PCMCIA Compliant

All Brainboxes PC cards are fully "PC Card Standard-February 1995" compliant, in accordance with the PCMCIA, (Personal Computer Memory Card International Association) the Special Interest Group for PC card design and manufacture.

Large FIFO

FIFO means First In First Out, a FIFO is memory space on the Brainboxes card. A larger FIFO allows more memory space for buffering data, so calls to the computer processor are less frequent. This significantly increases data throughput and improves CPU availability for other applications.
More info: www.brainboxes.com/content/globalcontent/SerialFAQsAnswers/WhatisaFIFO.aspx

4 Layer PCB

Printed Circuit Board with 4 layers of circuitry complies with the Brainboxes best practice guideline and ensures a more reliable card. 1 layer is for power and 1 for ground which leads to greater EMC shielding for the signals. This ultimately gives greater signal integrity.

Surface Mount Components

All components on a Brainboxes PC card are placed by a surface mount machine. The surface mount machine allows for highly accurate and fast production of Brainboxes cards. Orders can be met quickly, reliably and with outstanding quality.

Capacitors

All Brainboxes PC Cards have capacitors connected to all the power pins on the PC connector, near to the connector, and at points where signals switch layers. This ensures that the electrical power rails on the Brainboxes card stay at the right voltage, regardless of the power demands placed on them. This helps data signals keep their integrity.

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BRAINBOXES PCMCIA

Brainboxes' Service

"Brainboxes offers free lifetime support for ALL customers."

We aim to provide industry leading support for our customers. Our highly trained and helpful support engineers sit and work closely with the product designers, developers, and testers to ensure an in-depth knowledge of the products. Support can be found by emailing support@brainboxes.com or calling: +44 (0)151 220 2500 during UK office hours.
Support website: www.brainboxes.com/support/index.asp

"Brainboxes' passionately believes in the quality of its manufacturing process and will reflect this by offering a Lifetime Warranty on ALL of its serial card range."

Brainboxes is pleased to be able to extend a new Lifetime Warranty for all serial cards products. We have introduced this based on our exceptional manufacturing and design quality and the company ethos of kaizen.

Brainboxes' Kaizen

"Brainboxes constantly strives to achieve higher standards for the benefit of customers."

'Kaizen' is a Japanese term meaning 'continuous improvement'. Kaizen has been implemented throughout Brainboxes, resulting in significant improvements to our products and our customer service, as illustrated by the development of our own custom ASIC "LYNX" and our new lifetime warranty. As part of this ongoing process, in 2004 we embarked on 'Lean' and '6 Sigma' programs which are successfully increasing productivity and efficiency in all areas of the company.
More Info: www.brainboxes.com/content/aboutus/BrainboxesKeyBenefits.aspx

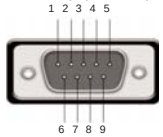
RS422/485 Standards

RS422 allows one transmitter and up to 10 receivers with data transmission rates up to 10 Megabits per second, for distances up to 40 feet and up to 100 Kilobits per second, for distances up to 4000 feet (1219 metres).

RS485, based on the RS422 standard, allows up to 32 driver/receivers pairs on a party line data bus. This can be configured into half duplex and full duplex mode. Whilst only one of these should be transmitting data at any time, the rest can all simultaneously listen to the data.

Pin 1	TXD-
Pin 2	TXD+
Pin 3	RTS-
Pin 4	RTS+
Pin 5	GND
Pin 6	RXD-
Pin 7	RXD+
Pin 8	CTS-
Pin 9	CTS+

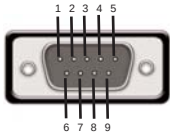
RS422/485
Pinout (9 pin Male)



RS232 Standard

Pin 1	DCD
Pin 2	RXD
Pin 3	TXD
Pin 4	DTR
Pin 5	GND
Pin 6	DSR
Pin 7	RTS
Pin 8	CTS
Pin 9	RI

RS232 Pinout (9 pin Male)



RS232 is the best known industry standard providing asynchronous serial communication using ± 12 Volt logic levels over distances up to 100 feet (30 metres). RS232 can be configured to suit all needs from 3 wire communication (using transmit, receive and ground lines only), to more complex hardware and software handshaking.

Pin 2	TXD
Pin 3	RXD
Pin 4	RTS
Pin 5	CTS
Pin 6	DSR
Pin 7	GND
Pin 8	DCD
Pin 20	DTR
Pin 22	RI

RS232 Pinout (25 pin Male)

