

RapidComms

Ultra High Speed Data Ports for Servers and Personal Computers



RapidComms is an ultra high speed buffered communication adapter specially designed by NanoGlobes Ltd (NGL), for current and future high performance computers. It is designed to fit into standard PCI, PCI 3.3Volt and PCI-X slots. It does rely on the PCI Bus 3.3 Volts supply to function and to deliver its outstanding reliability and performance.

User's investment in RapidComms has been protected by the use of an efficient 32-bit, 33MHz PCI Bus Controller fully compliant to PCI Local Bus specification 3.0 and PCI Power Management Specification 1.1. This ensures that the adapter will function in any new or old computers supporting these standards.

The availability of 128-byte deep internal FIFO for each transmitter and receiver ports allows simultaneous data throughput of 15Mbps (bits per second) on all ports. The maximum asynchronous speed on each port has been set to a more practical value of 460,800bps or about 46 KBytes of data per second by NanoGlobes supplied software drivers.

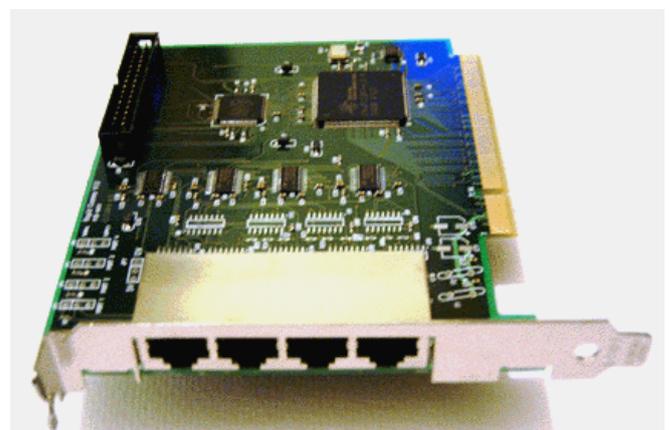
RapidComms is manufactured in 4 and 8 ports RS232 or RS485/RS422 versions. Each port on the adapter is terminated by a shielded RJ45 connector. The 4 ports adapter has four RJ45 fitted on the adapter card at the end bracket side. The 8 port version has 4 ports on the adapter card and 4 ports plus the required RS232 or RS485/RS422 drivers on a small expansion card with its own RJ45 connectors and bracket. It is possible to have 8 ports with four RS232 and Four RS485/RS422.

Pursuing trouble and maintenance free, as well as, long working life for RapidComms adapters has been one of the goals of our design team. Apart from designing an adapter which only uses 3.3Volts supply to reduce heat and extend components working life, the best and most reliable RS232 and

RS485/422 integrated circuit drivers has been specified and used. As a result, each signal on each port of the RapidComms adapters has been ESD (Electro Static Discharge) protected to $\pm 15KV$ Human Body Model, $\pm 15KV$ Air Discharge and $\pm 8KV$ Contact Discharge. This means there is less chance of any of the ports being damaged by accidental short circuit of external cables or data line spikes.

Compatibility with old industry standards has been maintained by RapidComms UARTs being fully software compatible with 16C550-type devices.

RapidComms are supplied with WINDOWS and LINUX software drivers ready to be use. Up to 4 adapters can be fitted within one computer giving maximum of 32 ports. For Software Drivers update please visit NanoGlobes web site.



Our aim at NanoGlobes has been to design a superior communication sub-system that can be fitted and forgotten. RapidComms comes very close to that aim.

Quality and Reliability are not Fashion, They are Fundamentals

RapidComms Specification															
Controller	Half length, 5 layers, Plug and Play, Universal PCI communication sub-system compliant to PCI Local Bus specification 3.0 and PCI Power Management Specification 1.1. Up to four controllers can be plugged into PCI, PCI 3.3 Volts and PCI-X slots. RapidComms uses 3.3 Volts supply from the PCI bus.														
Type and Number of Ports	<p>RS232: 4 or 8 RS232 ports conforming to true EIA/TIA-232-F Standards and Interoperable with EIA/TIA-232 and EIA/TIA-562.</p> <p>RS485/RS422: 4 or 8 True full duplex RS485/RS422, short-circuit current limited.</p> <p>Each port on the RapidComms controller features enhanced electrostatic discharge (ESD) protection. All transmitter outputs and receiver inputs are protected to ±15kV using IEC 1000-4-2 Air-Gap Discharge, ±8kV using IEC 1000-4-2 Contact Discharge, and ±15kV using the Human Body Model.</p>														
Connectors Type and Modem Signals	<p>4 or 8 Shielded RJ45 connectors providing following signals:</p> <p>RS232: TX, RX, DTR, DSR, CTS, RTS and DCD</p> <p>RS485/RS422: TX+, TX-, RX+, RX-, CTS+,CTS-,DTR+, DTR-</p>														
Data Rate and Format	<p>75 to 460,800 bits per second software selectable.</p> <p>9-bit data framing in addition to 5, 6, 7 and 8 bits.</p> <p>1, 1.5 and 2 Stop bits.</p> <p>Odd, Even or No Parity.</p>														
Working Temp	-40 C to 105 C														
Dimension	L 130mm , H 110mm,														
Model Numbers	<table border="0"> <tr> <td>RapidComms 4 Port RS232</td> <td>Model 1114</td> </tr> <tr> <td>RapidComms 8 Port RS232</td> <td>Model 1118</td> </tr> <tr> <td>RapidComms 4 Port RS485/RS422</td> <td>Model 1124</td> </tr> <tr> <td>RapidComms 8 Port RS485/RS422</td> <td>Model 1128</td> </tr> <tr> <td>RapidComms 8 Port 4 X RS485/RS422 + 4 X RS232</td> <td>Model 1138</td> </tr> <tr> <td>Option: 5 or 12 Volts power routing to Pin 1 of the RJ45 connectors on the first 4 ports.</td> <td>Model 1114P</td> </tr> <tr> <td></td> <td>Model 1124P</td> </tr> </table>	RapidComms 4 Port RS232	Model 1114	RapidComms 8 Port RS232	Model 1118	RapidComms 4 Port RS485/RS422	Model 1124	RapidComms 8 Port RS485/RS422	Model 1128	RapidComms 8 Port 4 X RS485/RS422 + 4 X RS232	Model 1138	Option: 5 or 12 Volts power routing to Pin 1 of the RJ45 connectors on the first 4 ports.	Model 1114P		Model 1124P
RapidComms 4 Port RS232	Model 1114														
RapidComms 8 Port RS232	Model 1118														
RapidComms 4 Port RS485/RS422	Model 1124														
RapidComms 8 Port RS485/RS422	Model 1128														
RapidComms 8 Port 4 X RS485/RS422 + 4 X RS232	Model 1138														
Option: 5 or 12 Volts power routing to Pin 1 of the RJ45 connectors on the first 4 ports.	Model 1114P														
	Model 1124P														

Available Options:

RapidComms 4 port versions can be factory fitted with a set of jumpers which facilitate 5 or 12 Volts supply from the PCI bus to be routed to PIN 1 of the RJ45 connector on a per port bases. This optional facility permits external peripherals which are connected and obtaining their data through the RJ45 port, also obtain their power from that port. This facility is mainly desirable when RapidComms controller is used for controlling point of sales or data logging equipments.



NanoGlobes Ltd

www.NanoGlobes.com

info@NanoGlobes.com