

## RAYON's Add On Card Product Line

RAYON's add on card product line can support ISA, PCI, UPCI and PCIe bus.

In ISA bus product line A402 and A4000 card can support four RS232 serial ports. A4000 card will support four DB9 male connectors. A402 card will use DB37 connector with cable to support four DB9 connectors (A400 cable) or DB25 connectors (P485 cable). But we can use A402 card with RS4232-4 box to support four GROUND isolated RS232, RS422 and RS485 settable serial ports. You can set the interface type for each serial port in RS4232-4 box to meet your application environment. A480 card can support eight RS232 serial ports. But you can use A480 card with RS4232-8 box to support eight GROUND isolated RS422 and RS485 settable serial ports. A2485 card can support two GROUND isolated RS422 and RS485 settable serial port. A2020 card can support two RS232 serial ports and two GROUND isolated RS422/RS485 settable serial ports. A2000 card can support two RS232 serial ports with internal header.

Model	RS232	RS422/RS485	Isolated RS422/RS485	Total
A2000	2	x	x	2
A2485	x	x	2	2
A4000	4	x	x	4
A402	4	x	option1	4
A480	8	x	option2	8

In PCI bus product line we can support 2, 4, 8 and up to 64 serial ports. We can support RS232, RS422 and RS485 interface to meet your requirement. We can support GROUND isolated or non-ground isolated product for security requirement. We can have two ports model card to support dedicated RS232 only (AP102 card) or RS422/RS485 only (AP132 card) for economic user. We can support two ports model card to support RS232/RS422/RS485 settable (AP112 card) for flexible requirement user. For all two ports model card we have GROUND Isolated feature card for safety consideration user. We can have four ports model card to support dedicated RS232 only (P5984 card) or RS422/RS485 only (P5985 card) for economic user. We can support four ports model card to support RS232/RS422/RS485 settable (P5914 card) for flexible requirement user. P514 card can support 3 RS232 ports and one GROUND isolated RS422/RS485 port for industrial user. It is cost effective solution for local RS232 connection and safety consideration for long distance RS422/RS485 connection. P518 card can support 7 RS232 ports and one GROUND isolated RS422/RS485 port for industrial user. It is cost effective solution for local RS232 connection and safety consideration for long

distance RS422/RS485 connection. P990 card is port expandable solution. We can have 8 serial ports in application environment initially and expand up to 64 serial ports later.

Model	RS232	RS422/485	isolated RS232	isolated RS422/485	Total
AP102	2	×	x	x	2
AP132	x	2	x	x	2
AP112	2	2	x	x	2
AP102I	x	x	2	x	2
AP132I	x	x	x	2	2
AP112I	x	x	2	2	2
P5984	4	×	option1	option1	4
P5985	×	4	×	×	4
P5914	2	2	×	×	4
P514	3	×	x	1	4
P518	7	×	x	1	8
P990	64	64	×	×	64

In UPCI product line we can support 5V PCI slot and 3.3V PCI slot. You can have different serial port number to choose. You can have RS232, RS422 and RS485 interface to meet your requirement. You can have GROUND isolated and non-ground isolated product for security consideration. You can have 5V power supply necessary product line to work in 5V power supply only environment. You can have local processor built-in product line to meet low overhead requirement.

IOP3927F card is built-in 133MHz MIPS CPU and 16MByte local buffer. So we can reduce the overhead in main CPU. To work with NF316 box IOP3927F card can support up to 64 RS232, RS422, RS485 settable serial ports. It is optimum solution for serial port connection application environment. You can set each serial port to be RS232, RS422 and RS485 interface by DIP switch anytime. So you can have RS232 interface for local connection. You can have RS422 interface for remote full duplex connection. You can have RS485 interface for multi-drop half duplex connection. You never need to worry about the serial port not meet your target connection.

Model	RS232	RS422/485	isolated RS232	isolated RS422/485	Total
UP422I	×	×	x	2	2
P584U	4	×	option1	option1	4
P485U	×	4	×	×	4
P114U	4	4	x	x	4
UP485I	×	×	x	4	4

P588U	8	×	option2	option2	8
P8485U	×	8	×	×	8
P118U	8	8	×	×	8
UP588I	x	x	8	x	8
UP8485I	x	x	x	8	8
UP118I	x	x	8	8	8
P640NU	64	64	×	×	64
UP3032I	x	×	32	32	32
IOP3927F	64	64	×	×	64

For cost consideration you can use P640NU card with NF316 box to work. It is suitable for small data size environment. You don't need to handle very large quantity data size. But you need many serial ports to handle device connection. One P640NU card can support up to 64 serial ports with RS232, RS422 and RS485 settable interface to meet your requirement. You can also use P640NU card with IF308 box to work. It is suitable for safety consideration. One P640NU card can support up to 32 serial ports with GROUND isolated RS232, RS422 and RS485 settable interface to meet your requirement.

Model	RS232	RS422/485	isolated RS232	isolated RS422/485	Total
A102	2	×	x	x	2
A132	x	2	x	x	2
A112	2	2	x	x	2
A102I	x	x	2	x	2
A132I	x	x	x	2	2
A112I	x	x	2	2	2
A104	4	×	option1	option1	4
A134	x	4	x	x	4
A114	4	4	x	x	4
A124I	2	x	x	2	4
A134I	x	x	x	4	4
A168	8	x	x	x	8
A138	x	8	x	x	8
A118	8	8	x	x	8
Epe358	8	×	option2	option2	8

In PCIe product line we can have different models to support 2,4, 8 serial ports. We can have two ports model card to support dedicated RS232 only (A102 card) or RS422/RS485 only (A132 card) for economic user. We can support two ports model card to support RS232/RS422/RS485 settable (A112 card) for flexible requirement user.

For all two ports model card we have GROUND Isolated feature card for safety consideration user. We can have four ports model card to support dedicated RS232 only (A104 card) or RS422/RS485 only (A134 card) for economic user. We can support four ports model card to support RS232/RS422/RS485 settable (A114 card) for flexible requirement user. A134I card can support four GROUND isolated RS422/RS485 serial port for industrial environment. A124I card can support 2 RS232 ports and two GROUND isolated RS422/RS485 port for industrial user. It is cost effective solution for local RS232 connection and safety consideration for long distance RS422/RS485 connection. You can use A104 card with RS4232-4 box to support four GROUND isolated RS232, RS422 and RS485 settable serial ports. We can have eight ports model card to support dedicated RS232 only (A168 or Epe358 card) or RS422/RS485 only (A138 card) for economic user. We can support eight ports model card to support RS232/RS422/RS485 settable (A118 card) for flexible requirement user. You can use A168 or Epe358 card with RS4232-8 box to support eight GROUND isolated RS422/RS485 serial ports.

In standard PC we can have 5V, +12V, -12V power supply in PCI slot. So we have RS232 interface chip to use 5V,+12V,-12V power supply. In some PC product they may not offer -12V power to PCI slot. In this condition our standard PCI type add on card can not work properly. Our P5x88U card product line can work in 5V power supply only environment. P5x88U card product line can support eight serial ports with different interface type combination to meet user's application environment. For example you may use RS232 for original application environment. Then you may need to use RS422 for remote connection. Or you may use RS485 for multi-drop connection. If you used RS232 only product, then you need to add other product to meet such requirement. Now you can use P5488U card to support four RS232 serial ports and four RS232, RS422 and RS485 settable serial ports. It is no problem to meet eight RS232 connections initially. Then you can set one serial port to RS422 for remote connection later. Or you can set one serial port to RS485 for multiple RS485 devices connection.

Model	RS232	RS422/485	isolated RS232	isolated RS422/485	Total
P5984	4	x	×	×	4
P5914	4	4	×	×	4
P5488U	8	4	×	×	8
P5588U	8	×	option2	option2	8
P118	8	8	×	×	8

\*option1: RS4232-4 box can support four GROUND isolated RS232,RS422,RS485 ports.

\*option2: RS4232-8 box can support eight GROUND isolated RS422,RS485 ports.

\*option3: TWIN485 box can support two GROUND isolated RS422,RS485 ports.