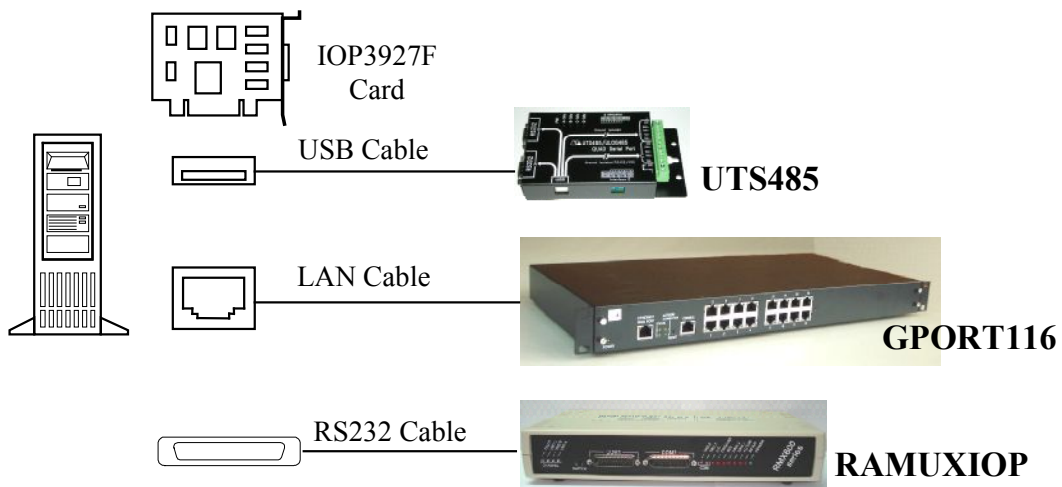# Total Solution for Serial Port Expander
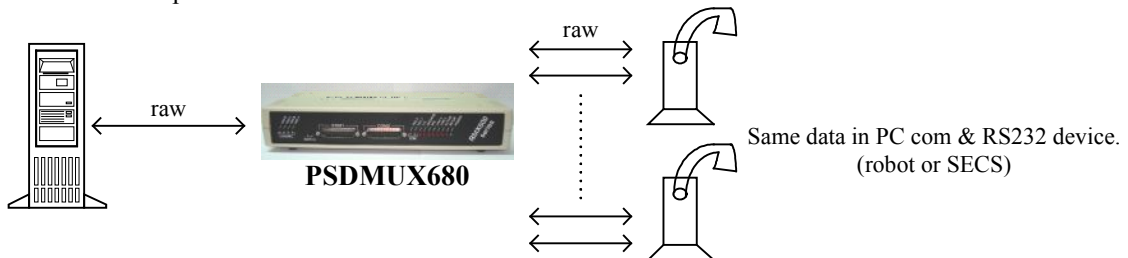
1. In one PC you may have following environment to add extra COM port.

a) You may have PCI slot to install add-on card. (**PCIIOP** solution)
   IOP3927 card can support upto 64 COM ports.

b) You may have USB connector to install USB device. (**USBIOP** solution)
   UTS485 box can support 4 COM ports with 2 RS232 interface and 2
   Ground isolated RS422/RS485 interface.

c) You may have LAN connector to install IP device. (**GPORTIOP** solution)
   GPORT116 box can support 16 COM ports in one IP connection.

d) You may have COM port connector only. (**RAMUXIOP** solution)
   RAMUXIOP box can support upto 64 COM ports via one RS232 connection.

IOP3927F Card

USB Cable — **UTS485**
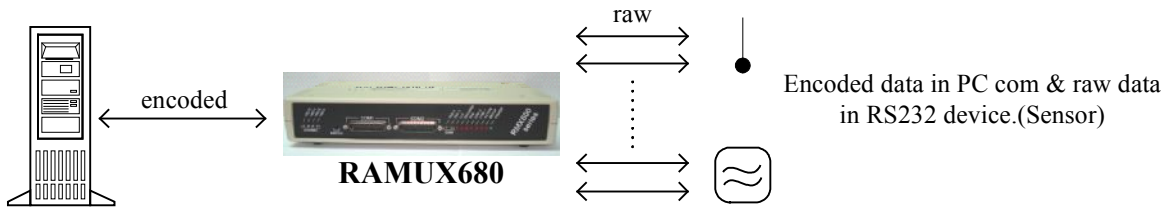
LAN Cable — **GPORT116**

RS232 Cable — **RAMUXIOP**

2. In one PC you may have following solution to control multiple RS232 device and just use one COM port.

a) **PSDMUX680** box can send your data to 9 RS232 devices. If you used two
   (three) layer structure, then it will be 81 (729) RS232 devices.
   Any software for RS485 protocol can be used in PSDMUX680 structure.
   So you can have RS232 structure to use RS485 architecture. ===> In
   this solution PSDMUX680 just repeat data between PC COM port nad
   RS232 device. Generally you have software in PC to communicate
   with same protocol RS232 device.

raw — **PSDMUX680** — raw

Same data in PC com & RS232 device.
(robot or SECS)

b) **RAMUX680** box can assign target address (TA) to every RS232 data. So user can access any RS232 device via TA assigned in PC COM port. One RAMUX680 box can support 8 RS232 devices and one daisy-chained port. We can assigned upto 64 RS232 devices. ===> In this solution RAMUX680 will encode and decode raw data from RS232 device to PC COM port. The PC application need to handle TA encode/decode. Generally we may have DLL library for user to handle encoded message between PC COM port and RAMUX680 box.

raw

RAMUX680

encoded

Encoded data in PC com & raw data in RS232 device.(Sensor)

c) **RAMUXIOP** box can add extra 8 virtual COM port in PC. So user can access any RS232 device as standard COM port in PC. ====> In this solution we need virtual COM driver in PC (support WIN2000,XP,2003, Vista). Every serial port in RAMUXIOP will be used as standard COM port in PC. This is special version of RAMUX680. Because our virtual COM driver in WIN2000/XP/2003/Vista handle encoded message between PC COM port and RAMUXIOP box.

raw

RAMUXIOP

encoded

Encoded data in PC com & raw data in RS232 device.(Sensor) Special Virtual COM Driver offered in WIN2000/XP/2003/Vista