New milestone in IOP3927 card

1. overcome the limitation in 5V PCI slot:

More and more PC server offer high speed PCI slot and our P640/P960 card can not be used in such system. This is due to our P640/P960 card can only support 5V PCI slot. But such PC server just offer 3.3V PCI slot. So our 5V PCI card can not be inserted in such system. But we also can not insert new 3.3V PCI card in current 5V PCI slot. So we have different structure for 3.3V PCI card and 5V PCI card. There are different cut area in golden finger of PCI card. So we can not insert 5V PCI card to 3.3V PCI slot (the stop area in slot do not match cut area in PCI card). And 3.3V PCI card can not insert to 5V PCI slot. So it is good for user to have 3.3V & 5V universal PCI. We can use in current 5V PCI system and next generation's 3.3V PCI system. Our IOP3927 card can support 3.3V & 5V universal PCI.

2. over 100MHz speed in local CPU:

Most multi-serial card with local CPU just have speed lower than 50MHz. IOP3927 card can support 133MHz local CPU. Even though the main CPU in PC server is faster and faster. But the limitation for serial port process power is in local CPU of multi-serial card. When process power in local CPU is lower than main CPU too much. The overall system performance will be degraded too much. So we must have higher process power in local CPU to match with higher process power in main CPU. Then we can enhnace overall system performance. Because we increase the performance in local CPU can increase the efficiency for main CPU to access dual port RAM in each time tick. (Because the overhead for main CPU to enter time tick service routine is fixed. More data exchange in each time tick service routine means more data to share such overhead).

New milestone in IOP3927 card

3. over 1MByte in local buffer:

Most multi-serial card with local buffer is lower than 512KByte. IOP3927 card support 16MByte local buffer. More size in local buffer can support more data to be exchanged in dual port RAM. So each service routine in main CPU can have more data exchnaged. Then we can have higher overall system performance.

The other merit for more local buffer is to add more function in card. Our IOP3927U card can support user to develop their dedicated application software in card. We can move more and more function from main CPU to local CPU. So we can reduce the task in main CPU. The overall system performance will be increased. For system integrator or software house they can develop their dedicated feature in this card to protect their invest. For example, user may have special communication protocol in serial port. Originally user may have special software in main CPU to handle such protocol process. Now they can move such special protocol process in card. Then the task in main CPU is reduced and overall performance is increased. The software is embedded in dedicated IOP3927U card. They can sell their product in IOP3927U card. It is very easy for them to have software charge one by one. (We can have copyright in our software, but it is not easy for people to copy software. So we put in hardware).