Serial Property Page

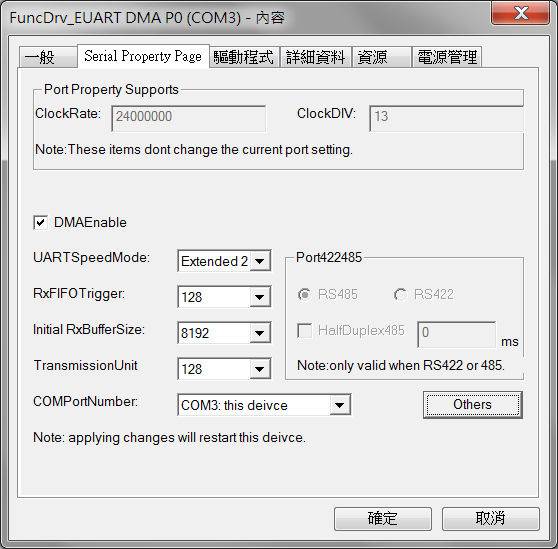
To view the Serial Property Page

1. Open Device Manager.

2. Double-click the type of device you want to view.

3. Right-click the device you want, and then click Properties.

4. click the SerialPropertyPage tab on the Device Properties.



[Port Property Supports]

This region shows ClockRate and ClockDIV of COM Port hardware settings. Some COM Port hardware allows user to specify its ClockRate and ClockDIV through UARTSpeedMode selection.

MaxBaudRate = ClockRate/ClockDIV.

So in this Figure, we can get MaxBaudRate is 1846153, the second BaudRate is 923076.

[UARTSpeedMode]

This selection allows Some COM Port hardware to configure its ClockRate and ClockDIV. There are five options – Standard, HighSpeed, Extended 1, Extended 2, Extended 3. The following table lists UARTSpeedMode and its ClockRate and ClockDIV.

|  |  |  |  |
| --- | --- | --- | --- |
|  | ClockRate | ClockDIV | MaxBaudRate |
| Standard | 1846153 | 16 | 115384 |
| HighSpeed | 24000000 | 16 | 1500000 |
| Extended 1 | 1846153 | 8 | 230769 |
| Extended 2 | 24000000 | 13 | 1846153 |
| Extended 3 | 50000000 | 1 | 50000000 |

[Rx FIFO Trigger]

User can set the interrupt trigger level of Rx FIFO through this selection. In general, the bigger trigger level is, the lower System Overhead is. The trigger is different between DMA disabled hardware and DMA enabled hardware. The following table shows possible level between them.

|  |  |
| --- | --- |
|  | Rx FIFO Trigger Level (hardware available) |
| DMA disabled(no DMA) hardware | 1 4 8 14 |
| DMA enabled hardware | 4 8 16 32 64 128 |

[Transmission Units]

The maximum units (bytes) will be transmitted by Driver for each transmission. In general, this value should be larger than Rx FIFO of Receiver’s COM Port, otherwise the overflow would easily happen on Receiver. In general case, this value can be set to 14 to match the Rx FIFO Trigger level of normal or traditional COM Port hardware. If Receiver’s COM Port has a DMA capability, user can set a value that is larger then 14. The following table lists the reasonable value of Transmission Units for our hardware.

|  |  |
| --- | --- |
|  | Tx Transmission Units (driver available) |
| DMA disabled(no DMA) hardware | 8 14 |
| DMA enabled hardware | 32 64 128 |

[Internal Rx Buffer]

This is Software Rx Buffer that is maintained by COM Port Driver. Before Application request Data from COM Port, COM Port Driver always keeps received Data into Internal Rx Buffer. In general, user does not specify this buffer size unless PC System is very slow.

[Port 422 485]

This is for 422 485 COM Port Type. User can set mode type to 422 or 485. Because 485 don’t have Flow Control, Driver allows user to set turn-around time for Half Duplex 485 to control request response time and data throughput. The default value is 50 ms.

[COM Port Number]

This is COM Port Name/Number. On Window System, each COM Port will be assigned a COM Port Number while installing COM Port Driver. But user can change this number. The following shows Information Tag of this selection.

[COM N: this device] means that this COM Number is used by this port.

[COM N: in use] means that this COM Number is assigned to other port.

This assigned port may or may not be turned on, so you can see Serial ports on Device Manager to check if it (COM N) is exists.

You can force system to assign this COM Number to your port, but be care that COM Number is not shared.

[COM N: ] means that this COM Number is not used.

[Others]

There are two settings. In general, user does not care them.

EnhancedThroughput, this option allows that throughputs of each port on a PCI Card are more balance. But CPU performance will drop down.

AdaptiveBaudRate, this option allows that Driver compute adaptive baudrate for serial settings of Application.