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Category	■FAQ □SOP	Related OS	N/A
Abstract	ADAM-6000 & 6200 How to detect the change of DI status		
Keyword	.NET class library, DI, P2P, change of status		
Related Product	ADAM-60XX, ADAM-62XX		

■ **Problem Description:**

A customer build their own application to acquire the data status from the I/O ports on ADAM-6050, every change of status is recorded by computer with SQL database. According to the customer's description, the device mounted on machine records 15-17 cycles but database only shows 13-14 cycles.

What's the possible reason for the missing cycle? Is there any way to improve the system structure so that SQL database may record the situation of change of status correctly?

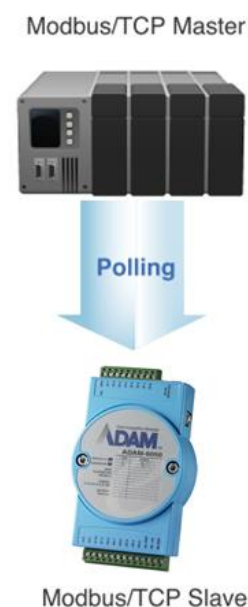
■ **Brief Solution- Step by Step:**

For the customer's application structure, the computer acts as a Modbus/TCP master to poll the I/O status from ADAM periodically. (The picture on the right-hand side.)

The problem of customer's structure is that when the DI status change between two polling intervals, the host will not know. For example, if the polling interval is set at 500ms, and the DI initially at logic0, change between 0 and 1 for five times during the 500ms interval and finally stay at 1. The controller may only get ONE change of status.

To solve the question, we will suggest the customer take the advantage of the P2P function of ADAM-6000 and ADAM-6200 series.

With "change of state" function, besides the periodical updated I/O status, the module will automatically send out the UDP packet to the host when detecting the DI status changing from 0 to 1 or 1 to 0.

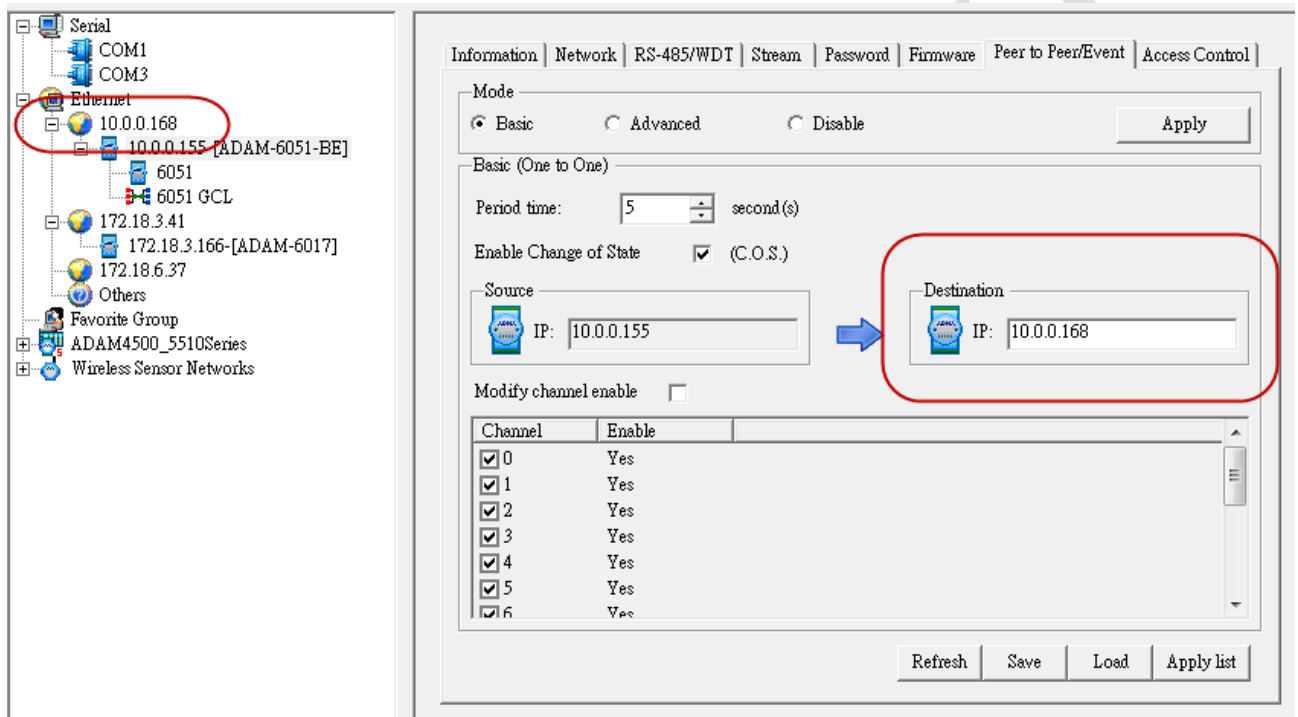


Here's the detail setting procedure:

1. Enable the P2P function in the utility.

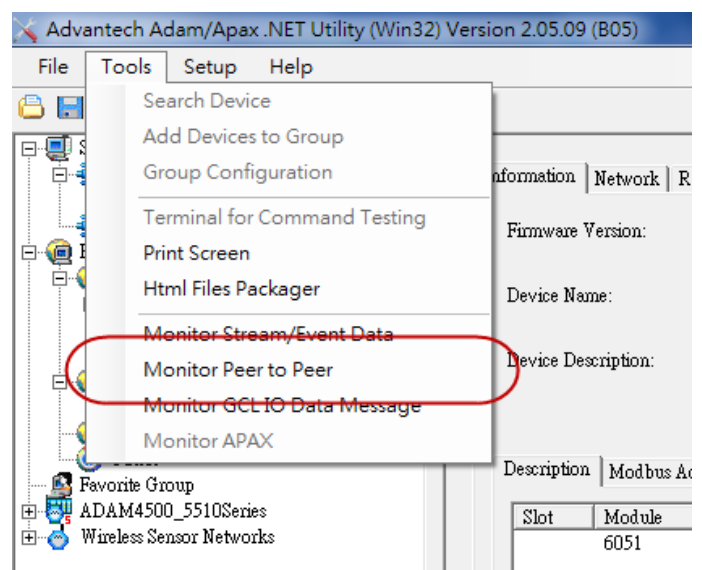
Please note that the ADAM module can't use BOTH GCL and P2P function at the same time, must disable the GCL function first to enable the P2P.

2. Select the channels and enter the IP of PC as the destination IP.

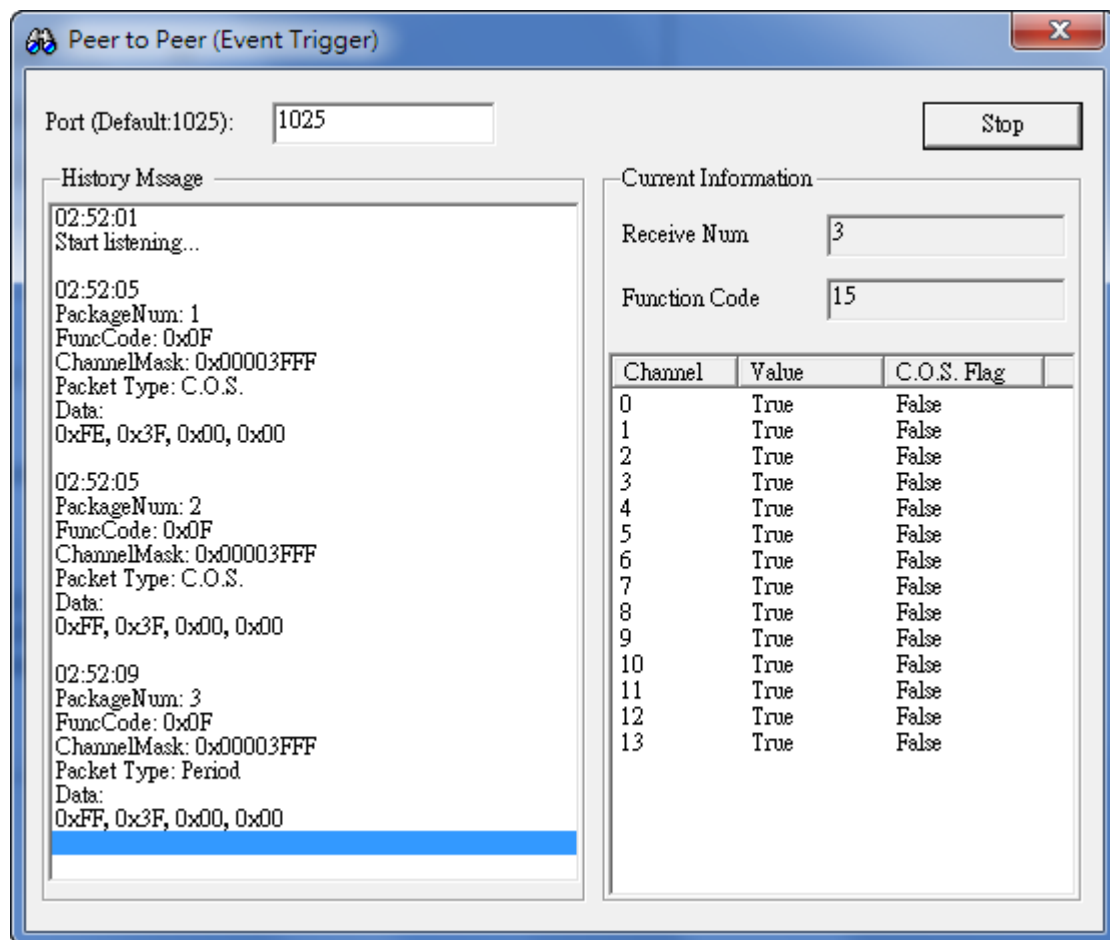


3. Test with utility.

User can use the "Monitor Peer to Peer" tool in the utility to test the result.



Like the following picture, user should be able to see two kinds of different packet; one is the period data that updated to the host while the other packet is updated during the DI change status.



User can also develop their API based on the library and sample code we provide.

The example program for P2P can be found in the following location once .NET class library is installed properly.

**C:\Program Files (x86)\Advantech\AdamApax.NET Class Library\Sample
Code\ADAM\Win32\CSharp\Others\P2P_UdpEvent**