ADVANTECH
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ADAM-6000 Series P2P & GCL FAQ

■ **Which ADAM-6000 modules support Peer-to-Peer (P2P) and GCL?**

Module	P2P	GCL
ADAM-6015-BE	Yes	Yes
ADAM-6017-BE	Yes	Yes
ADAM-6018-BE	Yes	Yes
ADAM-6024-AE	Only acts as receiver and generates AO signals	Only acts as receiver and generates AO signals
ADAM-6050-BE	Yes	Yes
ADAM-6051-BE	Yes	Yes
ADAM-6052-BE	Yes	Yes
ADAM-6060-BE	Yes	Yes
ADAM-6066-BE	Yes	Yes
ADAM-6050W-AE	Yes	No
ADAM-6051W-AE	Yes	No
ADAM-6060W-AE	Yes	No

■ **Are there different part numbers for P2P and GCL functionality separately?**

No. Take ADAM-6050-BE for example, since it supports both P2P and GCL, you just need to purchase one ADAM-6050-BE module and choose which functionality is enabled. (You cannot enable P2P and GCL at the same time though.)

■ **How can I have modules with P2P and GCL?**

To implement the new P2P and GCL feature, a new version of firmware is what you need. Advantech doesn't change the hardware design. If you have previous ADAM-6000 modules on hand, you can simply upgrade the firmware and your module will be equipped with P2P and GCL features.

Note 1:

If you want to download the new firmware with P2P and GCL function to your ADAM-6000 module, the version of ADAM.NET utility must be newer than 2.00.06.

Note 2:

If you want to use the web server on ADAM-6000 modules, remember download the web page files (.html and .jar files) after downloading the firmware itself. (.bin file)

■ **What software is needed to implement P2P and GCL on ADAM-6000 modules?**

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You just need to have the new version of firmware and ADAM.NET utility. You can download the new firmware to your ADAM-6000 module through the ADAM.NET utility. Then you can configure all related settings in the ADAM.NET utility.

■ **What is the pricing for the upgraded version of ADAM-6000 modules?**

Advantech doesn't change the pricing of ADAM-6000 modules when P2P and GCL functionality is included. So the price of an ADAM-6000 module with P2P and GCL is the same as before.

■ **Where can I find the new firmware and ADAM.NET utility?**

Advantech's support website: http://support.advantech.com.tw/support/default.aspx
Search for an ADAM-6000 module, and download the firmware and ADAM.NET utility from the ***BIOS*** and ***Utility*** tab.

■ **What version of firmware and ADAM.NET Utility will support P2P and GCL?**

To support P2P, your firmware should be newer than 3.01.
To support GCL, your firmware should be newer than 4.01.
For ADAM-6024, firmware should be newer than 3.01 to act as a receiver of P2P and GCL.
For the ADAM.NET utility, we recommend any version higher than 2.00.06.

■ **Is the new firmware compatible with previous hardware?**

Yes, you can download the new firmware to the previous hardware.

■ **Is there any documentation to describe how to use P2P and GLC?**

Detailed descriptions on how to configure P2P and GCL is in Chapter 5 and Chapter 7 of the ADAM-6000 Series User Manual. This manual can be downloaded from the Advantech support website. (http://support.advantech.com.tw/support/default.aspx)
You can search the ADAM-6000 module name, and download the ADAM-6000 Series User Manual from the ***Manual*** tab.

■ **Are there any examples of GCL configurations?**

There are several GCL application examples described in Chapter 7 of the ADAM-6000 Series User Manual. When you download the ADAM.NET utility from the Advantech support website (http://support.advantech.com.tw/support/default.aspx), related GCL example project files will be downloaded together.

■ **What is the response time for P2P and GCL?**

P2P: For wired modules, the execution time to transfer data from input to output module is less than 1.2 milliseconds. As for wireless modules, the execution time to transfer data from input to output module will be less than 30 milliseconds with Ad hoc mode.

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GCL: When users choose local output (input and output channel are on the same module), the processing time (including hardware input delay time, one logic rule execution time and hardware output delay time) is less than 1 millisecond. When users choose remote output (input and output channel are on different modules), the total time needed (including processing and communication time) is less than 3 milliseconds.

- **How many inputs and outputs can be configured for one logic rule of GCL?**
- **How many logic operators can be used?**

16 GCL logic rules are available on one ADAM-6000 module. For each logic rule, there are 3 input conditions, 3 outputs and 1 logic operator (AND, NAND, OR, NOR). You can combine different logic rules together. (It's called *Logic Cascade*) If you combined 16 GCL logic rules together on one ADAM-6000 module, there will be maximum 16 logic operators, 48 input conditions and 48 outputs available in this single combined logic rule. Logic rules on different ADAM-6000 modules can also be combined together.

- **Is there any internal counter, timer or auxiliary flags for GCL logic rules?**

Yes, there are 16 internal counters, 16 internal times and 16 auxiliary flags (similar to internal coils in PLC ladder diagram) on one ADAM-6000 module.