

## Dezentrale Mess- und Steuerungs- Module für industrielle Lösungen

Für Anwendungen im Bereich der industriellen, dezentralen Mess- & Steuerungs-  
Anwendungen gibt es 2 Funktionalitäten in der neuen Konfigurationssoftware  
„ADAM.net utility“ der **ADAM - 6000 Ethernet I/O Module**.

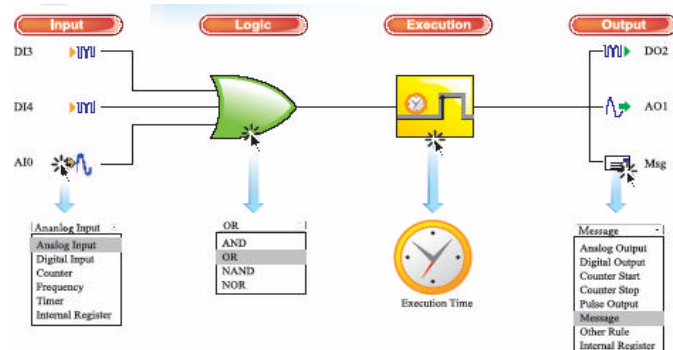
### 1. Peer to Peer - Funktionalität:

- ✗ Paarweise Anwendung der I/O Module
- ✗ Eingangsmodulwert zum Ausgangsmodul ohne PC
- ✗ Schnelle Übertragungszeit
- ✗ Simple Ethernet- und WLAN- Konfiguration
- ✗ Erweiterte Sicherheit und Zuverlässigkeit



### 2. Graphic Control Logic (GCL) - Funktionalität:

- ✗ Grafische Logik-Konfiguration
- ✗ Lokal oder Remote - Outputs
- ✗ Kaskadierung von Logikfunktionen
- ✗ Feedback Funktion
- ✗ Download ins Modul und RUN



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## Peer to Peer – Funktionalität



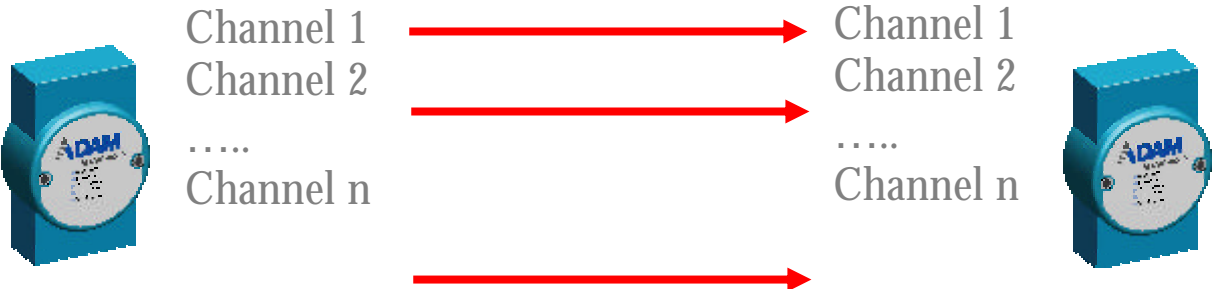
### **ADAM-6000 P2P – No Distance Limit**

- Automatically transfer data from Input to Output
  - No controller needed
  - No programming needed (All action is done by Utility)
- When the data is transferred from Input to Output
  - Periodically (user can configure the period)
  - Periodically + Change of State (Event driven)
- Two Mode
  - Basic Mode: One module ? One module
  - Advanced Mode: One module ? Multiple module

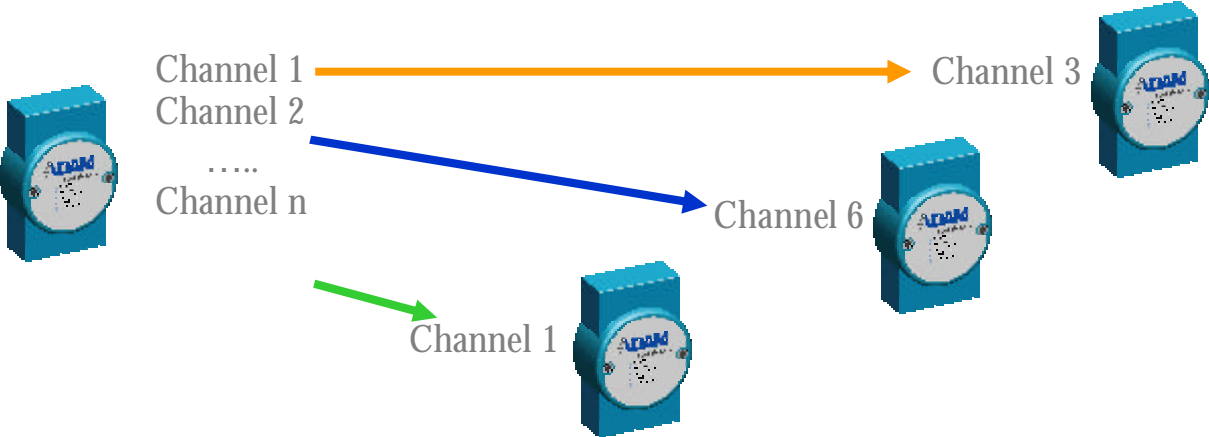
Support Module: ADAM-6015, 6017, 6018, 6050, 6051, 6052, 6060, 6066, (ADAM-6024 can only be the output module (receiver))

## ADAM-6000 P2P Mode

- Basic mode



- Advanced mode



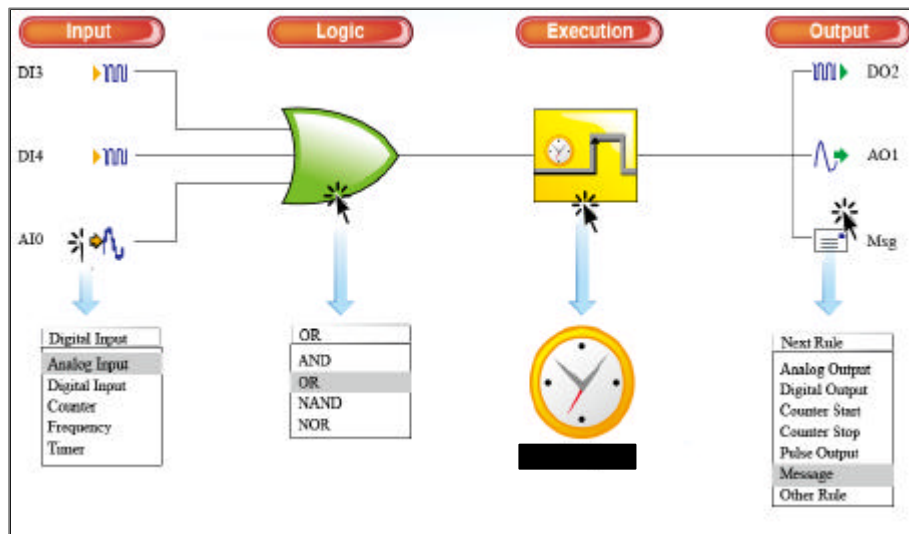
## Graphic Control Logic (GCL) – Funktionalität

- ADAM-6000 can play as a controller
- Configure logic rule in Utility
  - No programming is needed
  - Download configured logic to ADAM-6000 module

One Logic Rule

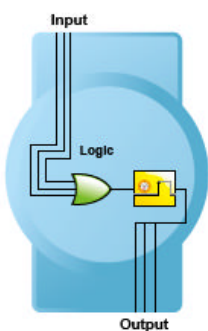


One Module has 16 logic rule

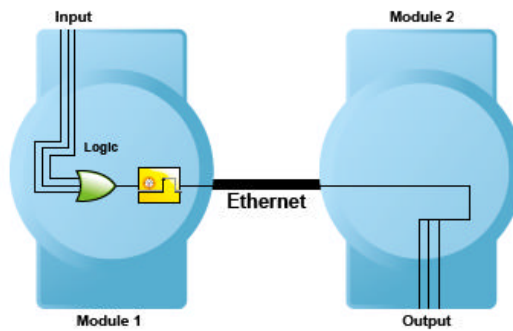


Support Module: ADAM-6015, 6017, 6018, 6050, 6051, 6052, 6060, 6066  
 ADAM-6024 can only be the analog output module (receiver)

- **One module can have 16 logic rules**
- **Output can be local or remote module**



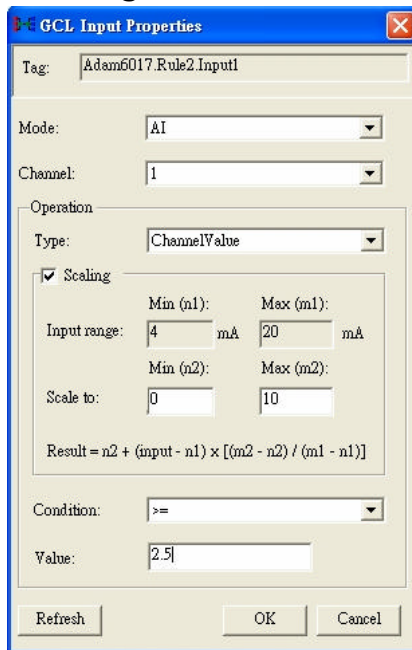
Local Output



Remote Output

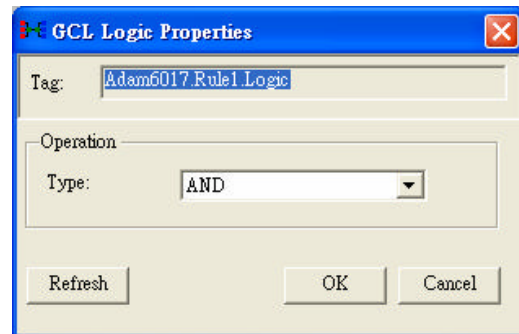
TCP/IP Port: 1025

## GCL Four Stages (I)



The screenshot shows the 'GCL Input Properties' dialog box. The 'Tag' field contains 'Adam6017.Rule2.Input1'. The 'Mode' is set to 'AI', 'Channel' to '1', and 'Operation Type' to 'ChannelValue'. The 'Scaling' checkbox is checked. The 'Input range' is set to '4 mA' to '20 mA', and 'Scale to' is set to '0' to '10'. A formula is displayed:  $Result = n2 + (input - n1) \times [(m2 - n2) / (m1 - n1)]$ . The 'Condition' is set to '>=' and the 'Value' is '2.5'. Buttons for 'Refresh', 'OK', and 'Cancel' are at the bottom.

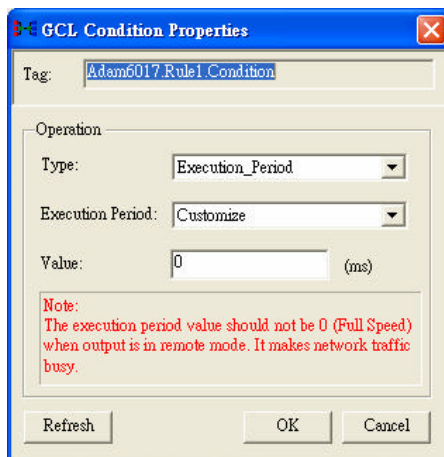
### 1. Input Condition



The screenshot shows the 'GCL Logic Properties' dialog box. The 'Tag' field contains 'Adam6017.Rule1.Logic'. The 'Operation Type' is set to 'AND'. Buttons for 'Refresh', 'OK', and 'Cancel' are at the bottom.

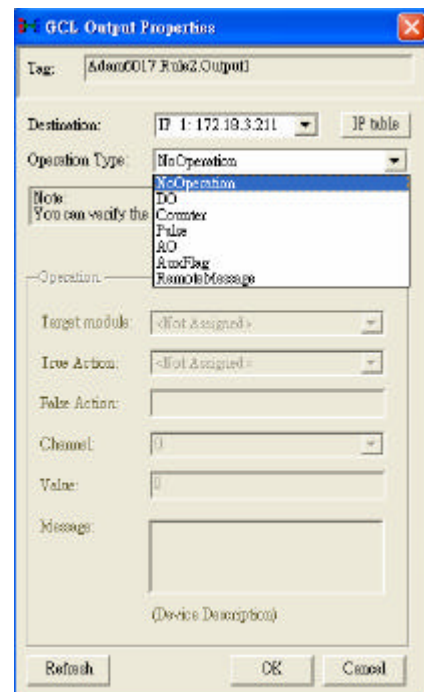
### 2. Logic

## GCL Four Stages (II)



The screenshot shows the 'GCL Condition Properties' dialog box. The 'Tag' field contains 'Adam6017.Rule1.Condition'. The 'Operation Type' is 'Execution\_Period', and 'Execution Period' is set to 'Customize'. The 'Value' is '0 (ms)'. A red note states: 'Note: The execution period value should not be 0 (Full Speed) when output is in remote mode. It makes network traffic busy.' Buttons for 'Refresh', 'OK', and 'Cancel' are at the bottom.

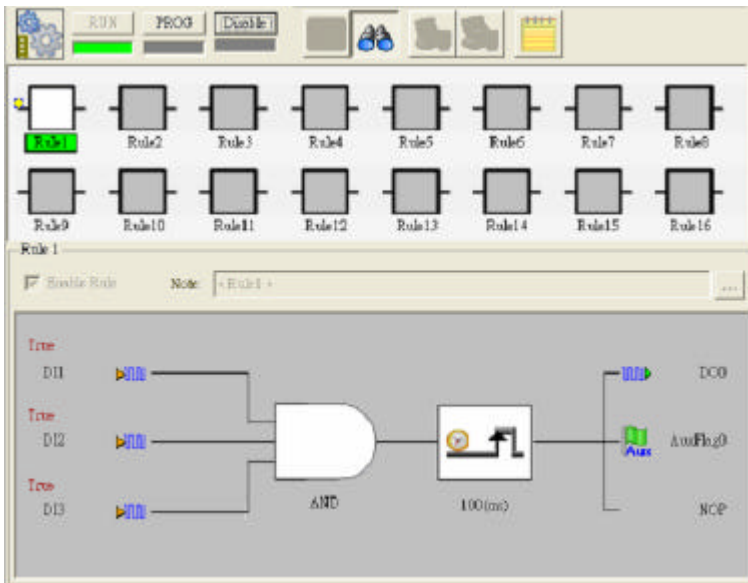
### 3. Execution



The screenshot shows the 'GCL Output Properties' dialog box. The 'Tag' field contains 'Adam6017.Rule2.Output1'. The 'Destination' is 'IP 1: 172.19.3.211' and 'IP table' is checked. The 'Operation Type' is 'NoOperation'. A list of operations is shown: 'NoOperation', 'DO', 'Counter', 'False', 'AO', 'Analog', and 'RemoteMessage'. The 'Target module' and 'True Action' are set to '<Not assigned>'. The 'Channel' is '0' and the 'Value' is '0'. A 'Message' field is empty. A '(Device Description)' field is at the bottom. Buttons for 'Refresh', 'OK', and 'Cancel' are at the bottom.

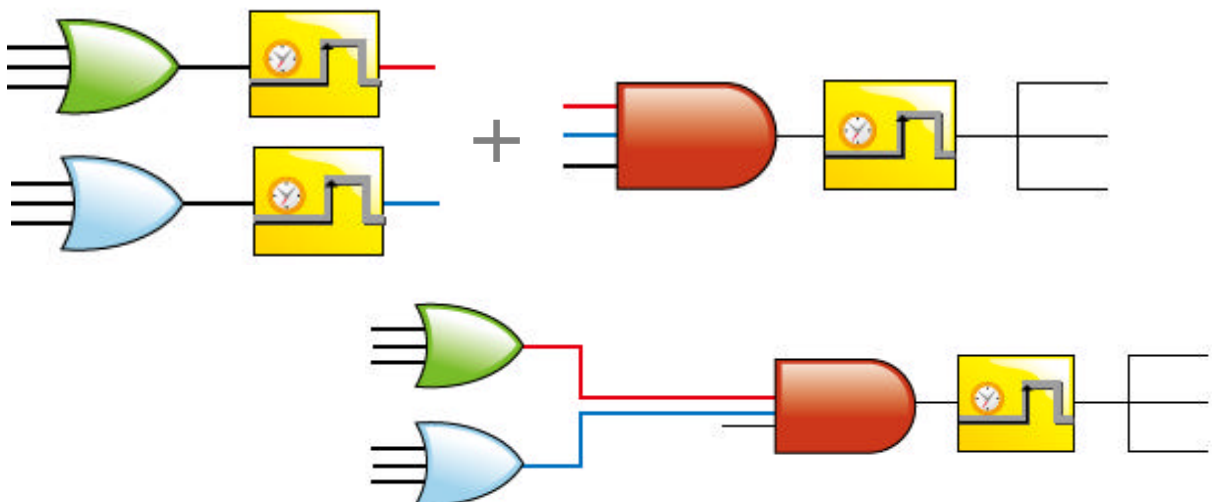
### 4. Output

## GCL: Easy to Configure, No Programming



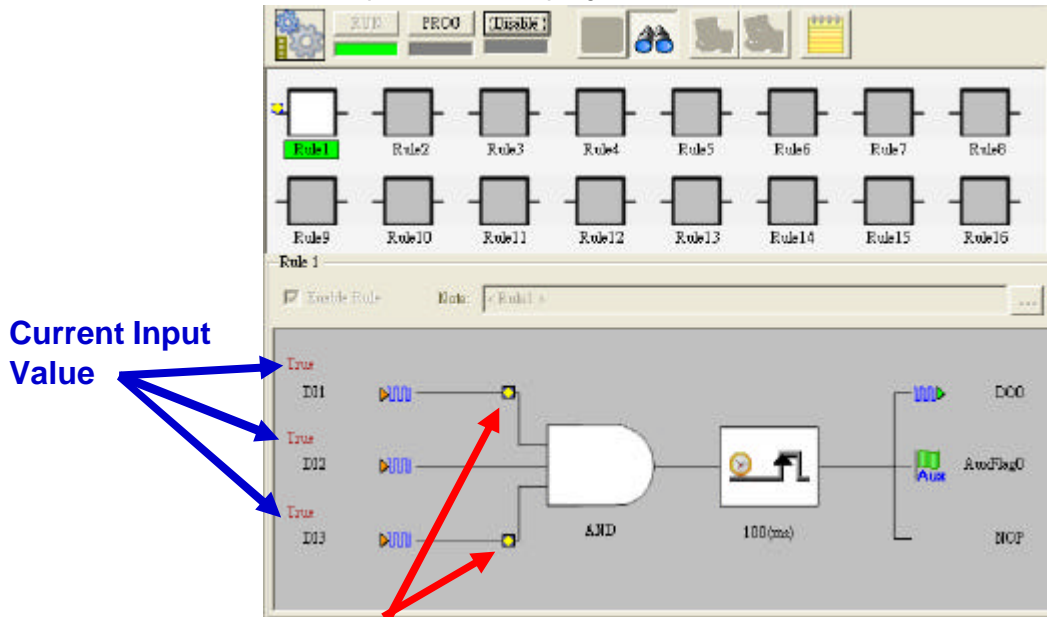
## ADAM-6000 GCL: Logic Cascade (I)

- One Module have 16 Internal Flag
- Logic Cascade:
  - Using Internal Flag, different logic rules can be combined together



## Online Status Monitoring

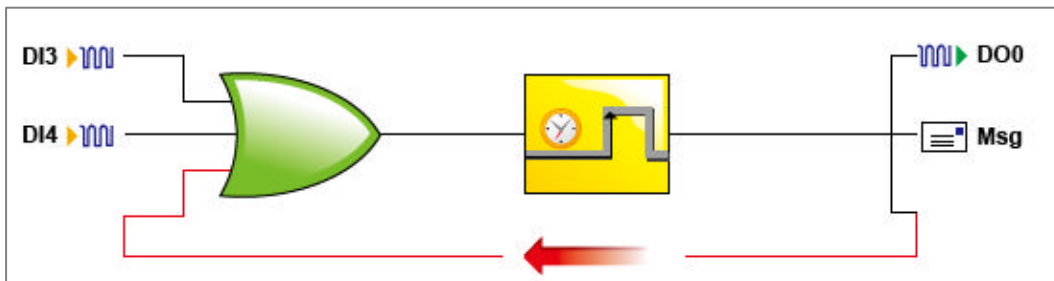
- During execution, the running status is displayed in Utility
- Real-time input value displayed



The yellow dot means the execution flow has reached this stage

## ADAM-6000 GCL

- Using Internal Flag to create Feedback



- Analog Input Scale Function

Operation

Type:

Scaling

Input range:	Min (n1): <input type="text" value="4"/> mA	Max (m1): <input type="text" value="20"/> mA
Scale to:	Min (n2): <input type="text" value="0"/>	Max (m2): <input type="text" value="10"/>

Result =  $n2 + (input - n1) \times [(m2 - n2) / (m1 - n1)]$

## ADAM-6000 GCL: Logic Cascade (II)

- Logic rules on different modules can be combined together
- No number limitation for logic cascade on different modules

