# ADVANTECH Enabling an Intelligent Planet

## Advantech AE Technical Share Document

Date	2015/11/13 SR# 1-2292729524						
Category	■FAQ □SOP	Related OS	N/A				
Abstract	ADAM-6000 and ADAM-6200, How to configure and test GCL remote message						
ADSITACI	function						
Keyword	ADAM-6000, ADAM-6200, GCL, Remote Message, Wireshark, Adam/Apax .NET						
	utility						
Related	ADAM 60XX and ADAM 6						
Product		5277					

## Problem Description:

For ADAM-6000 and ADAM-6200 series, it is advertised that they have the GCL function to send out the remote message to the host with a particular IP address. (*Figure 1*) What's the detail setting procedure in the GCL? How could I test in the host PC to receive these messages?



Figure 1

### **Enable the Remote Message in the GCL - Step by Step:**

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1. Find the ADAM module with the utility, click the GCL icon to enter the GCL interface, enter the program mode and enable a rule. (*Figure 2*)



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2. Configure the input, logic, condition/period accordingly with the proper setting. (Figure 3)



Figure 3

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3. Click the output of GCL and edit the IP table. (Figure 4)

He GCL Output Properties
Tag: Adam6052.Rule1.Output1
Destination: IP 1: 192.168.0.168  IP table Operation Type: NoOperation
Note: You can verify the destination device if it supports GCL .

Figure 4

4. Enter the IP of host PC in the IP table. (Figure 5)

Destination	IP Table			~					
IP 1:		68 <sub>.</sub> 0	. 168	$\mathcal{I}$	IP 9:	0.0	. 0	. 0	
IP 2:	0.0	. 0	. 0		IP 10:	0.0	. 0	. 0	
IP 3:	0.0	. 0	. 0		IP 11:	0.0	. 0	. 0	
IP 4:	0.0	. 0	. 0		IP 12:	0.0	. 0	. <sup>0</sup>	
IP 5:	0.0	. 0	. 0		IP 13:	0.0	. 0	. 0	
IP 6:	0.0	. 0	. 0		IP 14:	0.0	. 0	. 0	
IP 7:	0.0	. 0	. 0		IP 15:	0.0	. 0	. 0	
IP 8:	0.0	. 0	. 0						
	1						1		
Refresh						OK		Cancel	

Figure 5

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5. Select the operation type as "Remote Message" and enter the message to be sent. (*Figure* 6)

Tag: Adam6	052.Rule1.Output1		
Destination:	IP 1: 192.168.0.168 💌	IP table	
Operation Type	RemoteMessage	- )	
Note: You can verify t	he destination device if it suppo	rts GCL .	
, 		Verify	
—Operation ——			
Target module:	<not assigned=""></not>	-	
True Action:	Send message	<b>_</b>	
False Action:	Not send message		
Channel:	0	-	
Value:	0		
Message:	GCL test message		
	(Device Description)		
Refresh	ОК	Cancel	

Figure 6

7. Download the GCL project to the ADAM. (Figure 7)



Figure 7

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8. Click run button in the GCL interface to run the GCL rule. (Figure 8)

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Figure 8

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#### Monitor the GCL IO Data Message with Adam/Apax .NET utility - Step by Step:

1. Select the IP of Ethernet card that ADAM connected to. (Figure 9)

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2. Click Tools → Monitor GCL IO Data Message. (Figure 10)



Figure 10

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3. The port of GCL message is same as port for the data streaming function (Default port number is <u>5168.</u>)

User should be able to see the predefined message in the message box.

GCL IO Data and Message	×
Port (Default:5168): 5168	Stop
History Message 19:13:14 Start listening At 9:13:15 IP:52.0.168 192 SeqNum:35557 Rule:1 Output:1 At 9:13:15 IP:52.0.168 192 SeqNum:35559 Rule:1 Output:1 At 9:13:16 IP:52.0.168 192 SeqNum:35561 Rule:1 Output:1 At 9:13:16 IP:52.0.168 192 SeqNum:35562 Rule:1 Output:1 At 9:13:17 IP:52.0.168 192 SeqNum:35563 Rule:1 Output:1 At 9:13:18 IP:52.0.168 192 SeqNum:35563 Rule:1 Output:1 At 9:13:18 IP:52.0.168 192 SeqNum:35565 Rule:1 Output:1 At 9:13:19 IP:52.0.168 192 SeqNum:35565 Rule:1 Output:1 At 9:13:19 IP:52.0.168 192 SeqNum:35567 Rule:1 Output:1 At 9:13:19 IP:52.0.168 IP:52.0.168 IP:52.0.168 IP:52.0.168 IP:52.0.168 IP:5567 Rule:1 Output:1 At 9:13:19 IP:52.0.168 IP:5567 Rule:1 Output:1 At 9:13:19 IP:52.0.168 IP:5567 Rule:1 Output:1 At 9:13 IP:5567 Rule:1 Output:1 At 9	Data Information           IO Data           DI:           0x00000002           DO:           0x00000001           Cnt:           0x00000000, 0x00000000, 0x00000000, 0x00000000
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Figure 11

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### Other ways to test the function:

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1. Using sample code of .NET class library.

We have the C# and VB.net sample code for monitoring the GCL IO message in the following folder. (*Figure 12*)

媒體櫃 ▼ 共用對象 ▼ 燒錄 新増資料3	ŧ			
	修改日期	類型	大小	
🔒 bin	2014/12/4 下午 0	檔案資料夾		
🔒 obj	2014/12/4 下午 0	檔案資料夾		
Properties	2015/6/16 上午 1	檔案資料夾		
Form1.cs	2013/12/27下午	Visual C# Source	8 KB	
Form1.Designer.cs	2013/8/7 上午 10	Visual C# Source	8 KB	
Form1.resx	2013/3/21下午 0	.NET Managed R	6 KB	
GCL_IO_Message.csproj	2015/6/12 下午 0	Visual C# Project	4 KB	
GCL_IO_Message.sln	2013/3/21下午 0	Microsoft Visual	1 KB	
E 🗟 GCL_IO_Message.suo	2013/12/27 下午	Visual Studio Solutio	on User Options	
Program.cs	2013/7/23 下午 0	Visual C# Source	1 KB	

Figure 12

2. Use Wireshark to collect the Ethernet packet. (Figure 13)

User Datagram Protocol, Src Port: scte30 (5168), Dst Port: scte30 (5168)     Data (209 bytes)     Data: 47434c4d53470001000100000000000000000000000000000								
□ Data (209 bytes)         Data: 47434c4d53470001000100000000000000000000000000000		H User Datagram Protocol, Src Port: scte30 (5168), Dst Port: scte30 (5168)						
Data:       47434c4d53470001000100000000000000000000000000000	E Da	ata (209 bytes)						
[Length: 209]         00b0       00 00 00 00 00 00 00 00 00 00 00 00 00		Data: 47434c4d53470001000100000000000000000000000000000						
00b0       00       <		[Length: 209]						
	00b0 00c0 00d0 00e0 00f0 0100 0110	00       00 <td< td=""><td></td></td<>						

Figure 13