Advantech AE Technical Share Document

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Category	■FAQ □SOP	Related OS	N/A
Abstract	ADAM-60XX_How to configure SNMP function in ADAM		
Keyword	ADAM-60XX, SNMP, trap, ASCII command, CE version, DI/O		
Related Product	ADAM-6050, ADAM-6051, ADAM-6052, ADAM-6060, ADAM-6066		

■ **Problem Description:**

This document provides an introduction of SNMP, and how to configure SNMP function in ADAM-6000 series, DI/O module with CE hardware version.

■ **Answer:**

SNMP Introduction
ADAM-6000 supports SNMP v2c that helps user to manage ADAM-6000 on the network. Furthermore, ADAM-6000 also supports SNMP Trap v1c. After enabling the SNMP trap function, when I/O status changes, ADAM-6000 will actively notify management station of the change by way of SNMP message.

ADAM MIB File
Advantech offers ADAM MIB file which is designed based on standard SNMP format for ADAM modules and simplifies the integration with NMS (Network Management Software). By importing ADAM MIB file to NMS, ADAM-6000 can be monitored on the network easily

Note: The object Identity(node) CounterObj for counter is only supported for ADAM-6051 in counter mode.

SNMP Trap Configuration
There are two way to configure SNMP function in ADAM. One is using Adam/Apax.NET Utility, and the other one is using ASCII command.

Host IP: The management station IP where SNMP trap message send to
Deadband: Deadband is set to determine the minimum period between triggers of two traps. It can be set to prevent traps from triggering excessively by noise.
Specific type: Trap information contains specific type which can be used to identify the event location. The specific type is shown in below table

Specific Type	Channel	Description
1	0	
2	1	
3	2	
4	3	
5	4	Digital Input Change
6	5	
7	6	
8	7	
17	0	
18	1	
19	2	
20	3	
21	4	Digital Output Change
22	5	
23	6	
24	7	

Configuration by using ADAM.Net Utility

The host IP where SNMP trap message send to can be configured by ADAM.Net Utility V2.05.10 (B04) or higher version. Below are the brief steps by using Utility.

1. Select the host to receive trap notice and enter host IP address
2. Set trap deadband, the trap notice will only send one time within 100ms

Configuration by ASCII Command

Advantech also provide ASCII command for SNMP function configuration. The support commands are listed in below table.

Description	Command format	Example
Enable Trap	%01SETTRAP**c**R **(c: Host ID, 0~7)**	Situation: Enable host 1 SNMP trap notice Command:%01SETTRAP1R Response:>01
Disable Trap	%01SETTRAP**c**P **(c: Host ID, 0~7)**	Situation: Disable host 1 SNMP trap notice Command:%01SETTRAP1P Response:>01
Set the host IP	%01SETTRAPcaabbddee **(aabbddee: host IP in hexadecimal format, c:Host ID,0~7)**	Situation: Set Host 1 IP to 10.0.0.100 Command:%01SETTRAP10A000064 Response:>01
Set Trap dead band	%01SETTRAPST00000xxx **(xxx: ms in hexadecimal format)**	Situation: Set Trap dead band to 100 ms Command:%01SETTRAPST00000064 Response:>01
Get the IP of host	%01GETTRAP**c** **(c: Host ID, 0~7)**	Situation: Get IP address of host 1 Command:%01GETTRAP1 Response:!0A000064
Get trap dead band	%01GETTRAPST	Situation: Get Trap dead band (100ms) Command:%01GETTRAPST Response:!00000064
Get trap enable/disable flag	%01GETTRAP**c**STU **(c: Host ID, 0~7)**	Situation: Get Trap enable/disable status of host 1 Command:%01GETTRAP1STU Response:!00 / !01 (00=disable,01=enable)

**Monitor ADAM information by using 3rd party software**

After finishing SNMP function configuration, user can use 3rd party tool like MIB browser to get ADAM information by sending SNMP request.

Below is the brief step of how to use MIB browser to get ADAM information.

1. Download **MIB browser** and complete installation process
   (https://www.manageengine.com/products/mibbrowser-free-tool/mib-browser.html)

2. Configure MIB browser setting to correct SNMP version
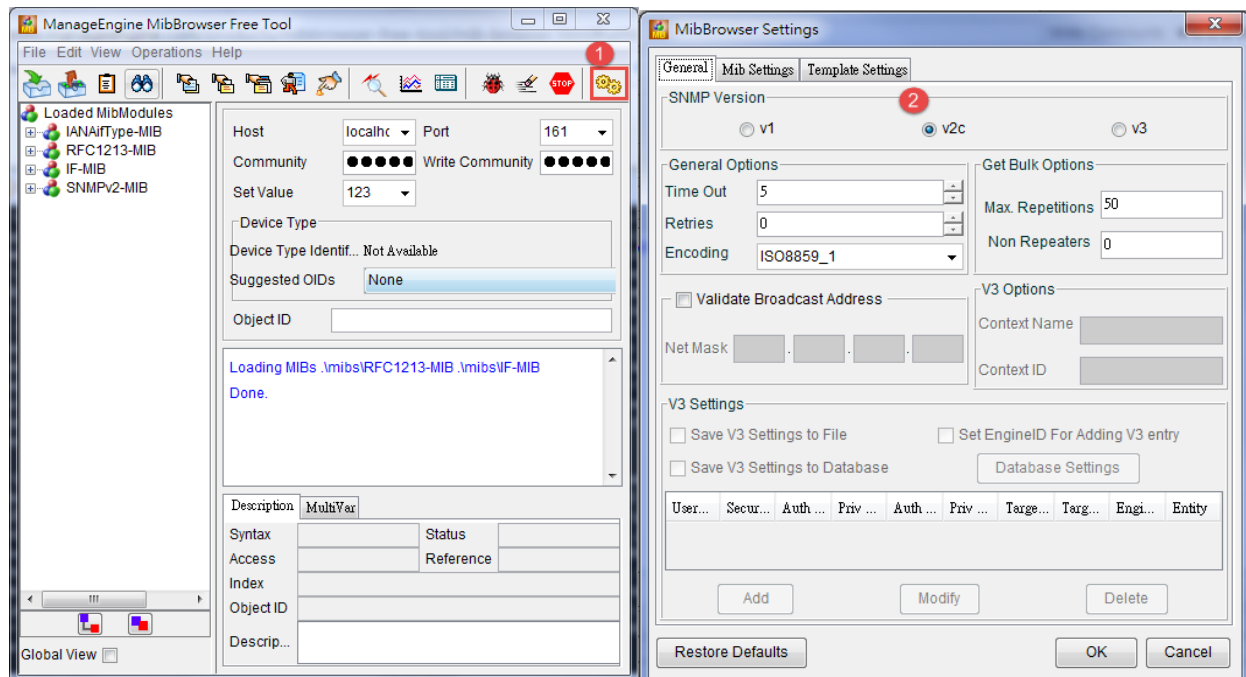
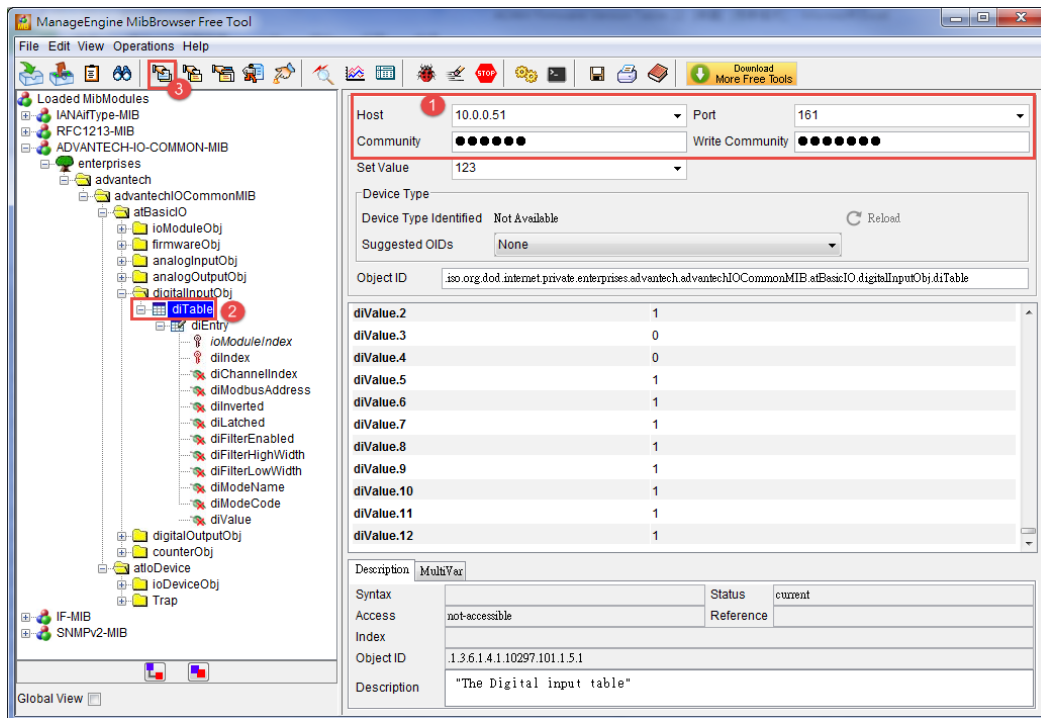3. Load MIB file "***advantech-IOcommon_V1.00 B01.mib***" into MIB browser
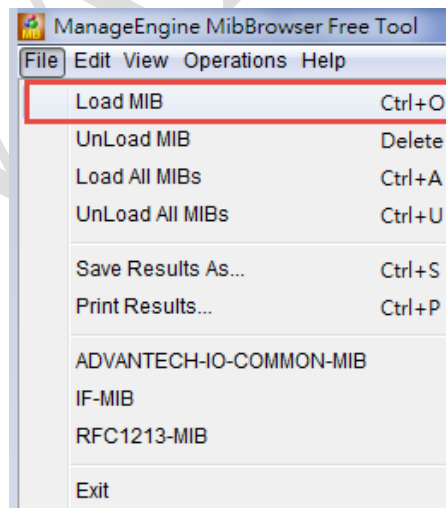
4. Fill in below fields to get ADAM information by sending a SNMP request and click "GET
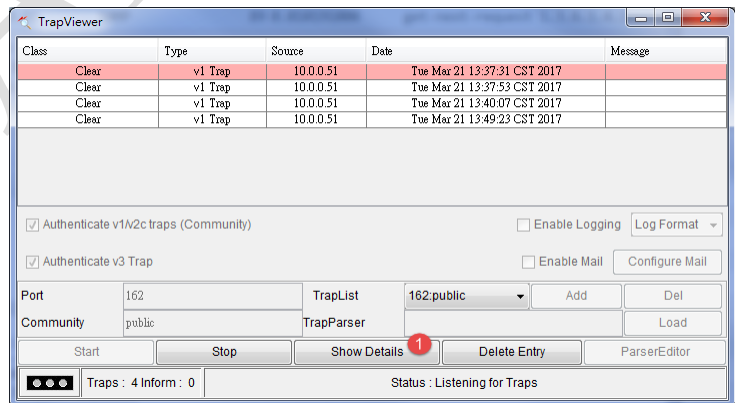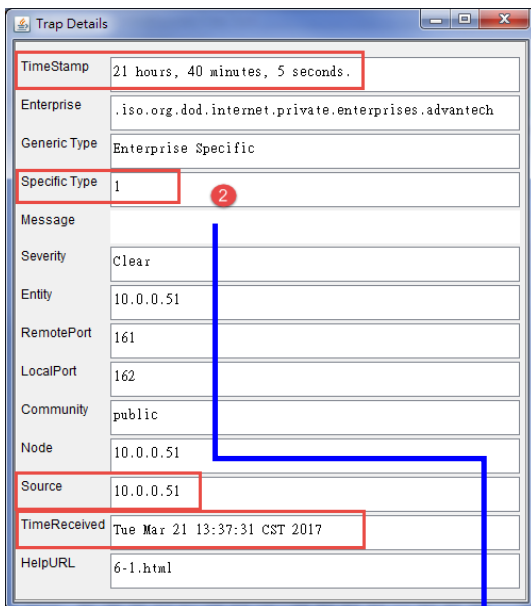   SNMP variable" icon [icon] to send SNMP request

   Host: Module IP   Port: 161 (send and receive)
   Community: public   Write community: private

5. Use trap Viewer to check trap message, below is an example when Logic status of DI channel 0 is changed.

Specific	Ch	Description
1	0	
2	1	
3	2	
4	3	
5	4	DI Change
6	5	
7	6	
8	7	