NOVASTAR COEX Series Controller Control System Instructions

Contents

NOVASTAR COEX Series Controller Control System

Product Information

Specifications

- Product Type: LED display controller Software
- Applicable Models:
  - Single-card controllers: MX40 Pro, MX30, MX20, KU20
  - Card-based controllers: MX6000 Pro, CX40 Pro
- Version: V1.4.0

FAQ

Q: What is SNMP?

A: SNMP (Simple Network Management Protocol) is a protocol used for network management and monitoring.

Q: How do I know if my device supports SNMP?

A: Refer to the product manual or contact customer support to confirm SNMP support for your device.

Applicable Products

Product Type	Model	Version
LED display controller	Single-card controllers: MX40 Pro, MX30, MX20, KU20 Card-based controllers: MX6000 Pro, CX40 Pro	V1.4.0
Software	VMP	V1.4.0

Function Scope

The following operations can be performed through SNMP:

- Controller information obtaining
- Screen information obtaining
- Cabinet information obtaining
- Controller status obtaining and reporting

- Input source status obtaining and reporting
- Ethernet port status obtaining and reporting
- Receiving card status obtaining and reporting
- SNMP reporting target server (ip/port number 162)
- SNMP reporting period (range: 1-60, unit: minute)

Operating Procedure

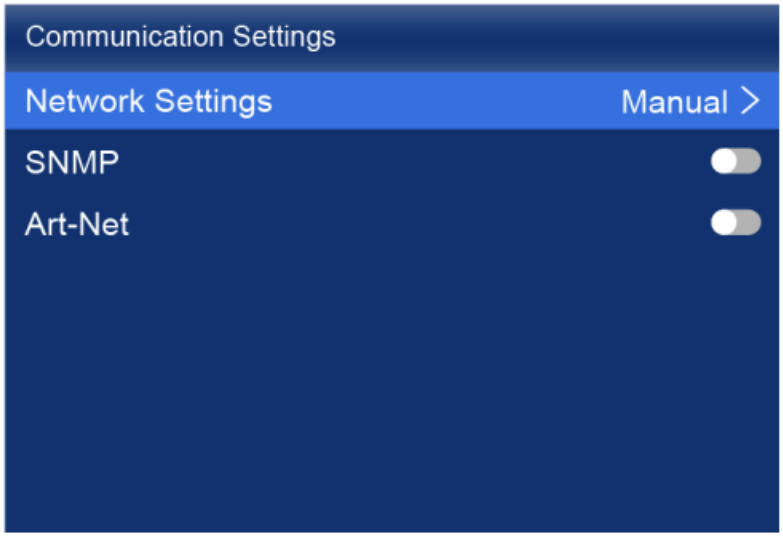
Each function corresponds to an OID, which is used to distinguish different monitoring items. When testing through the MIB software, enter the corresponding OID to get the corresponding monitoring item, enter the reporting OID to receive the trap information, and enter the reporting time OID to set the trap period. Specific operations are as follows:

Enable SNMP via Controllers

Single-card Controllers
Single-card controllers include MX40 Pro, MX30, MX20, KU20

- Step 1 On the main menu screen, choose Communication Settings > Network Settings.

Figure 3-1 Network settings

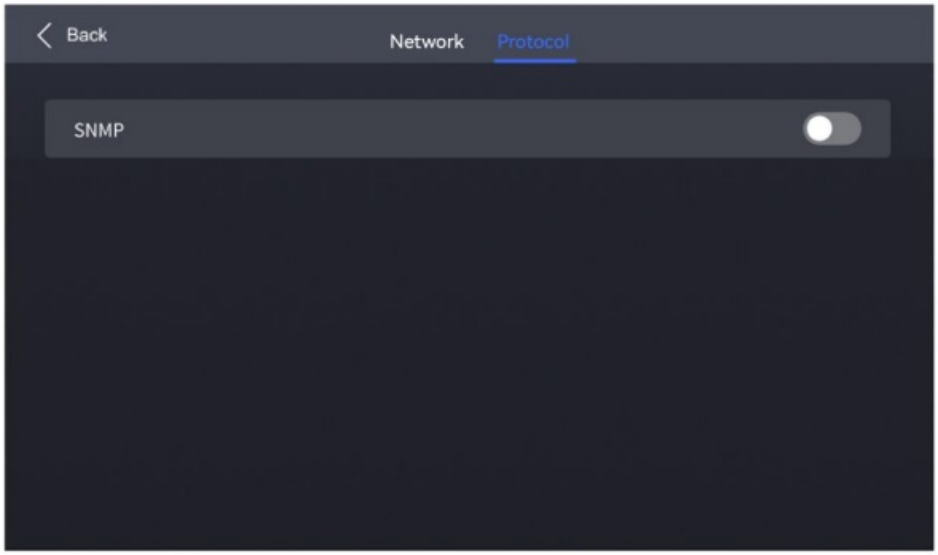


- Step 2 Toggle on or off SNMP.
  - : Enable SNMP.
  - : Disable SNMP.

Card-based Controllers
Card-based controllers include MX6000 Pro and MX2000 Pro.

- Step 1 Select Communication > Protocol from the main menu to access the settings interface.

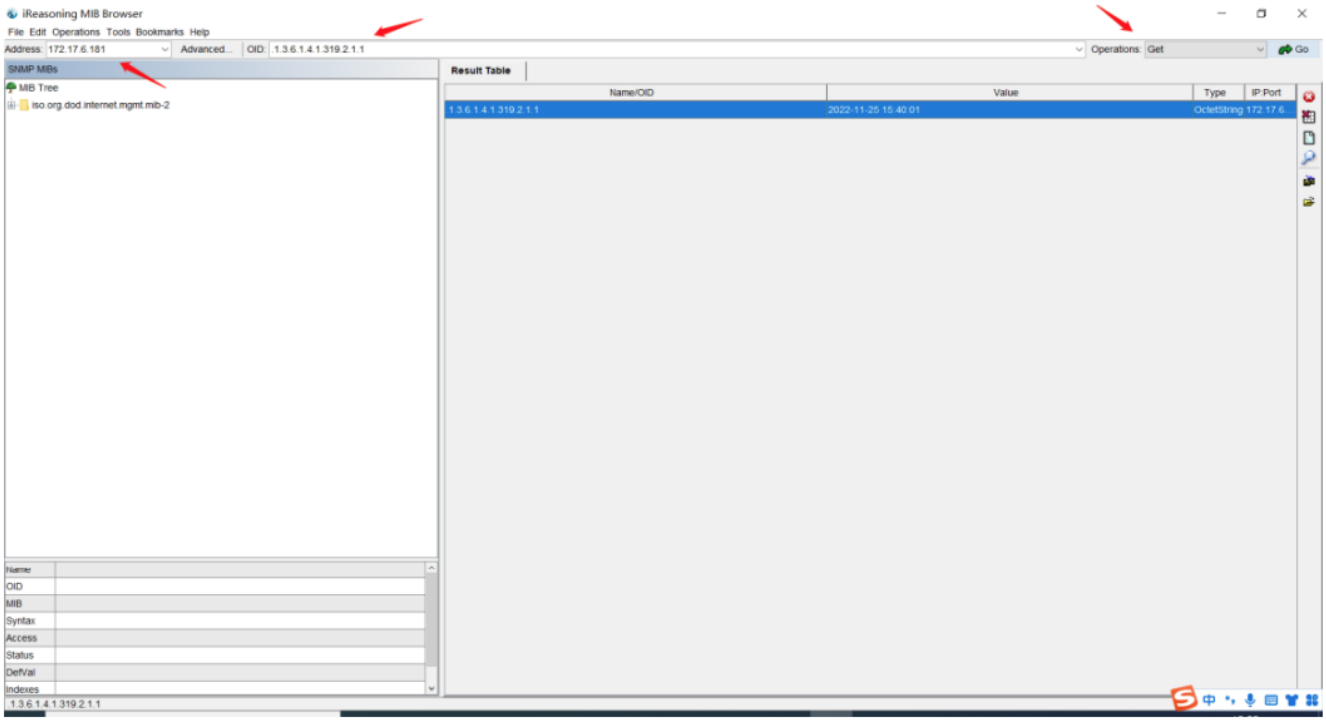
Figure 3-2 Protocol



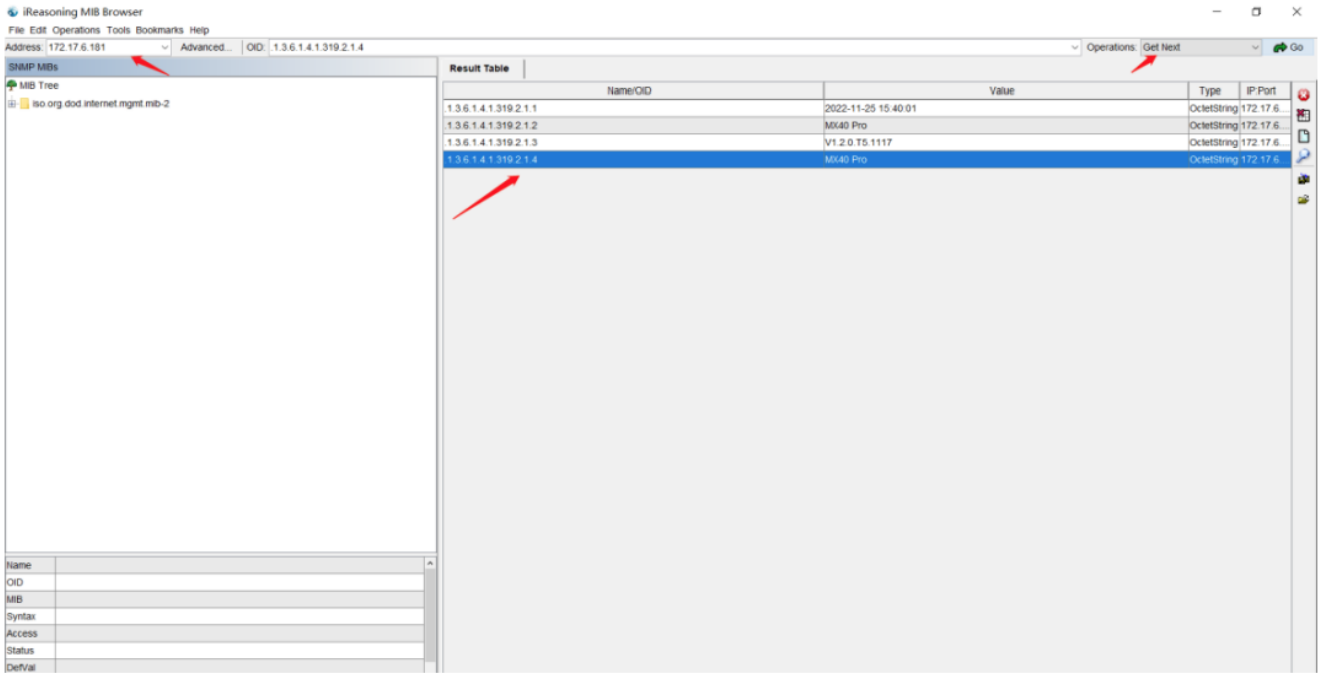
- Step 2 Toggle on or off SNMP.
  - : Enable SNMP.
  - : Disable SNMP.

Retrieve Monitoring Information via a Get Request

- Step 1 Open the MIB Browser to enter the software interface.
- Step 2 By following the arrows in the figure below in order, fill in the correct device IP address and the OID corresponding to the monitoring item information in the picture, select Get in the Operations drop-down list, and finally click the Go button to complete the operation of getting the monitoring item information by Get.
- Step 3 The execution results are displayed in the Result Table area, and the information contains the OID address, the results of the monitored items returned, the data type and the device IP, as shown in the figure.

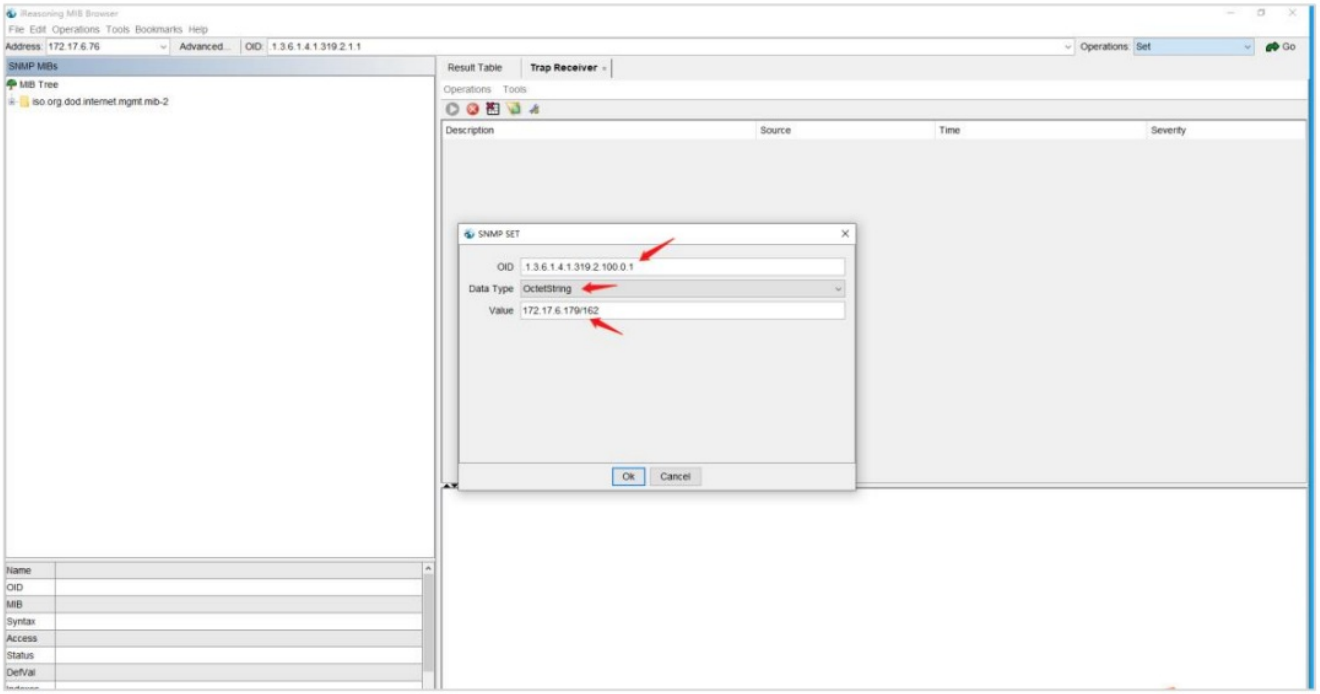


- Step 4 The rest of the monitoring information can be obtained directly by selecting the Get Next option in the Operations drop-down list and clicking the Go button, as shown in the figure below.

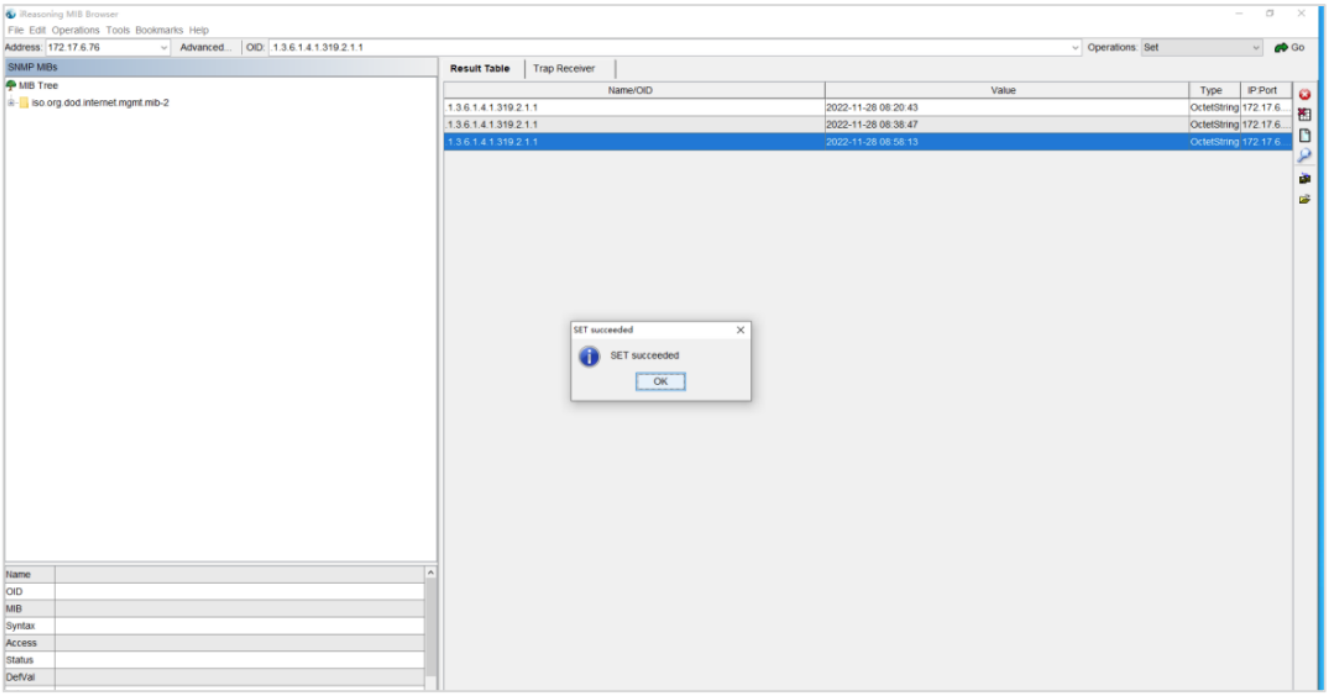


Get Trap Reporting Information

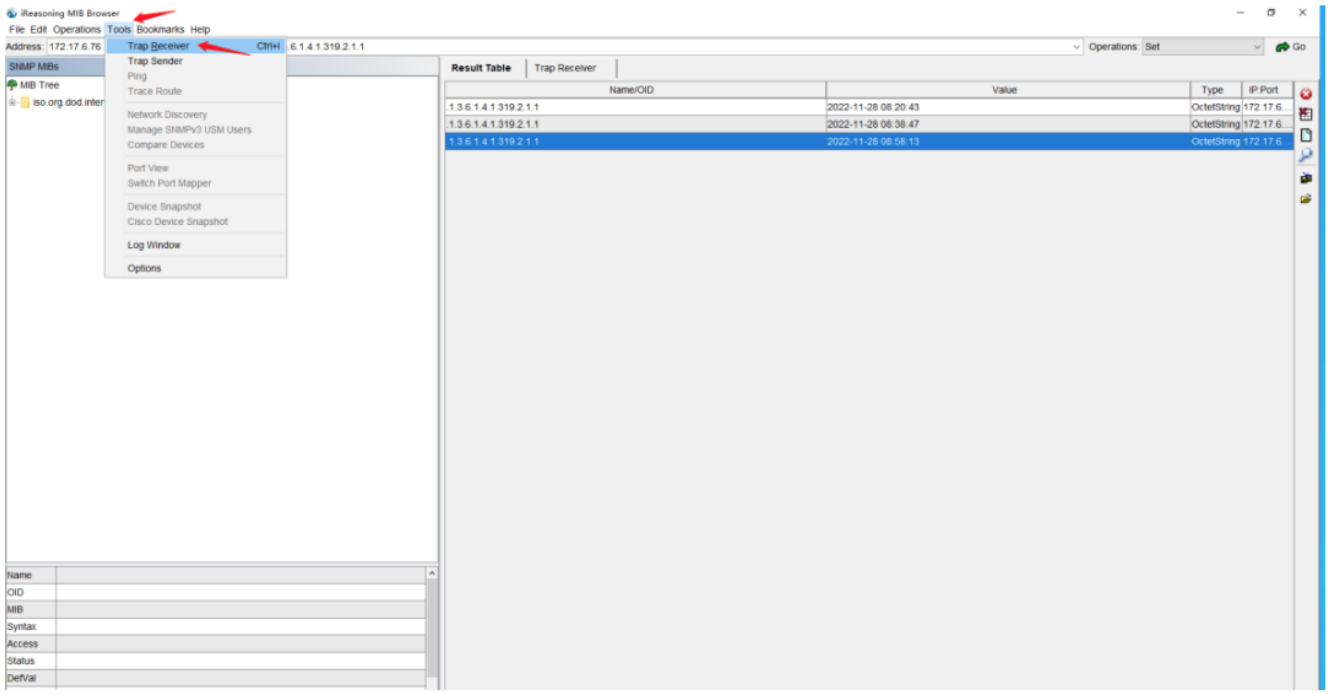
- Step 1 Open the MIB Browser to enter the software interface.
- Step 2 Fill in the correct device IP address and the OID corresponding to the monitoring item information at the top of the page, select Set in the Operations drop-down list and click the Go button.
- Step 3 In the OID input box of the pop-up SNMP SET edit area, fill in .1.3.6.1.4.1.319.2.100.0.1, select the corresponding type OctetString of the parameter to be sent in the Data Type drop-down list, and fill in the parameter value 172.17.6.179/162 (local IP/162) in the Value input box.



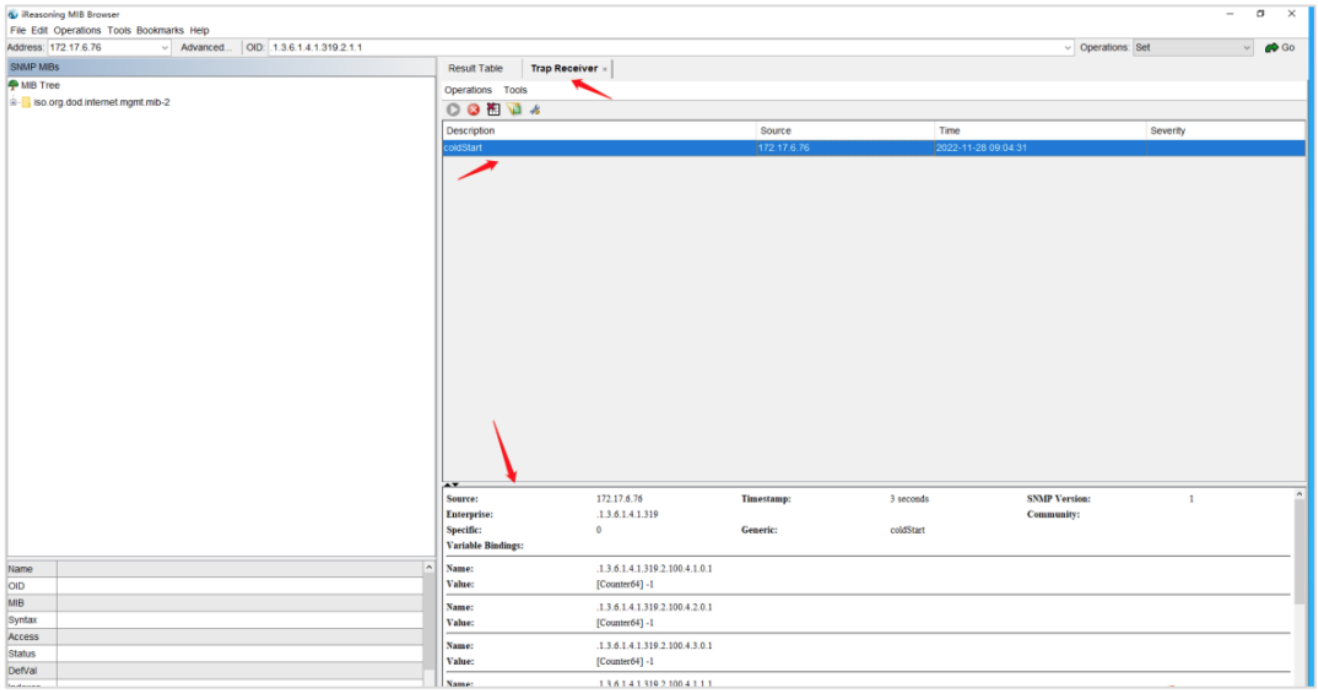
- Step 4 Click the OK button to complete the SNMP Trap server setup operation.



- Step 5 Click on the Tools option in the menu bar of the software and select the Trap Receiver option in the dropdown menu that opens to complete the operation of getting information of monitoring items by Trap.

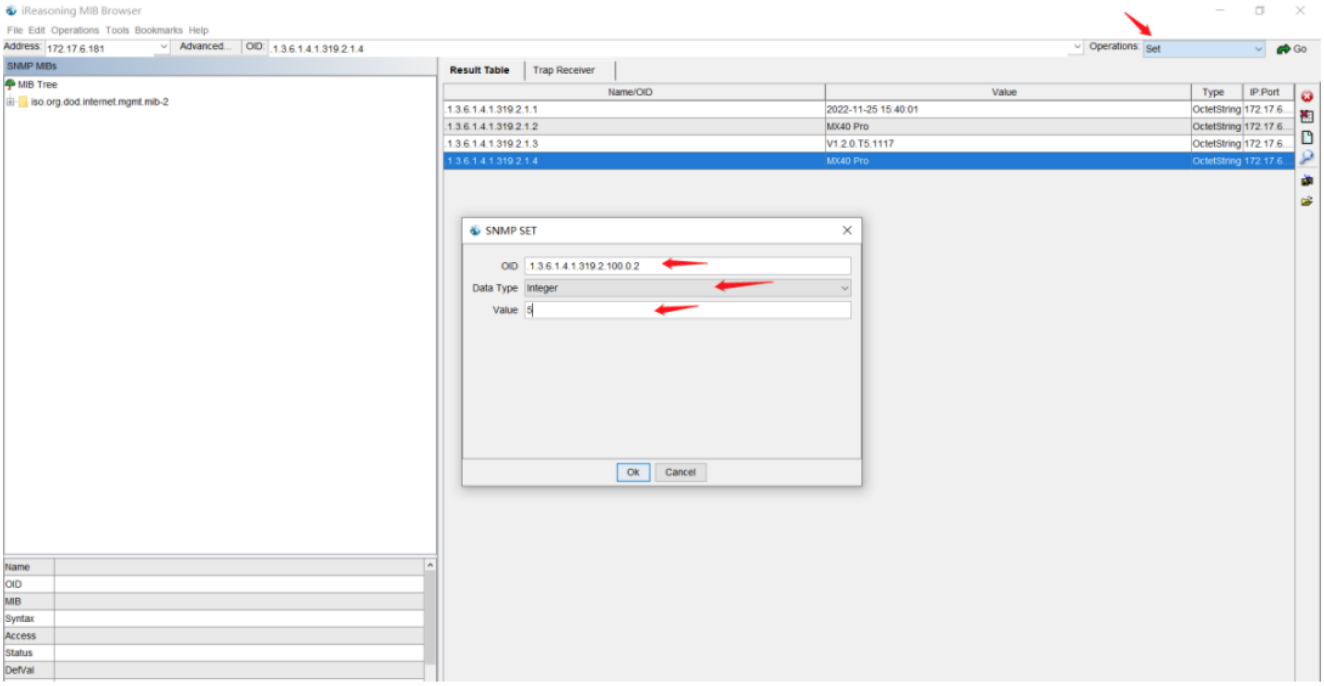


- Step 6 The execution results are displayed in the Trap Receiver area, as shown in the figure. Detailed information can be viewed in the details display area below by clicking on the specific entry in the Description.



Perform the Operation of Reporting Target Settings

- Step 1 Open the MIB Browser to enter the software interface.
  Step 2 Fill in the correct device IP address and the OID corresponding to the monitoring item information at the top of the page, select Set in the Operations drop-down list and Click the Go button.
- Step 3 Fill in the correct OID in the OID input box of the pop-up SNMP SET edit area, select the corresponding type of the parameter to be sent in the Data Type drop-down list, and fill in the parameter value in the Value input box. After that, click the OK button to complete the report target setting operation.

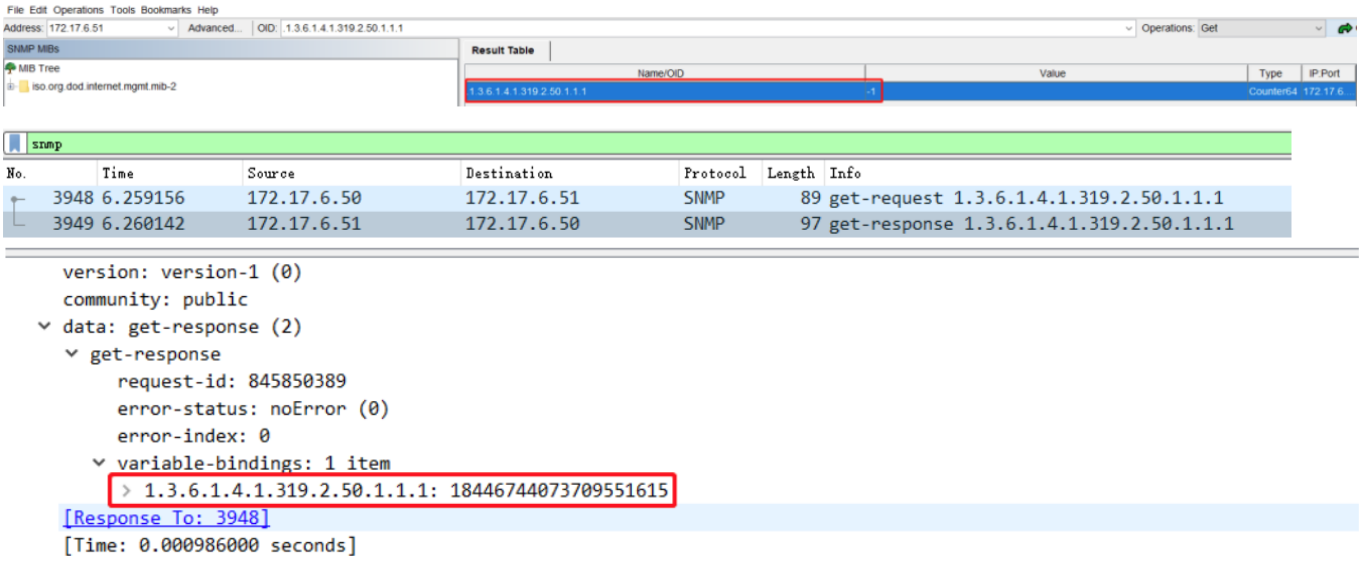


Examples

Demonstration software: MIB software (software disadvantage: not supporting the display of uint64 type data)

Get example

When testing the connection status of receiving cards 1-64 under Ethernet port 1, the value obtained is -1. The MIB software will treat the highest bit as a symbolic bit and all get or trap data in int64 type will be in this situation. At this time, use wireshark to capture packet for test:

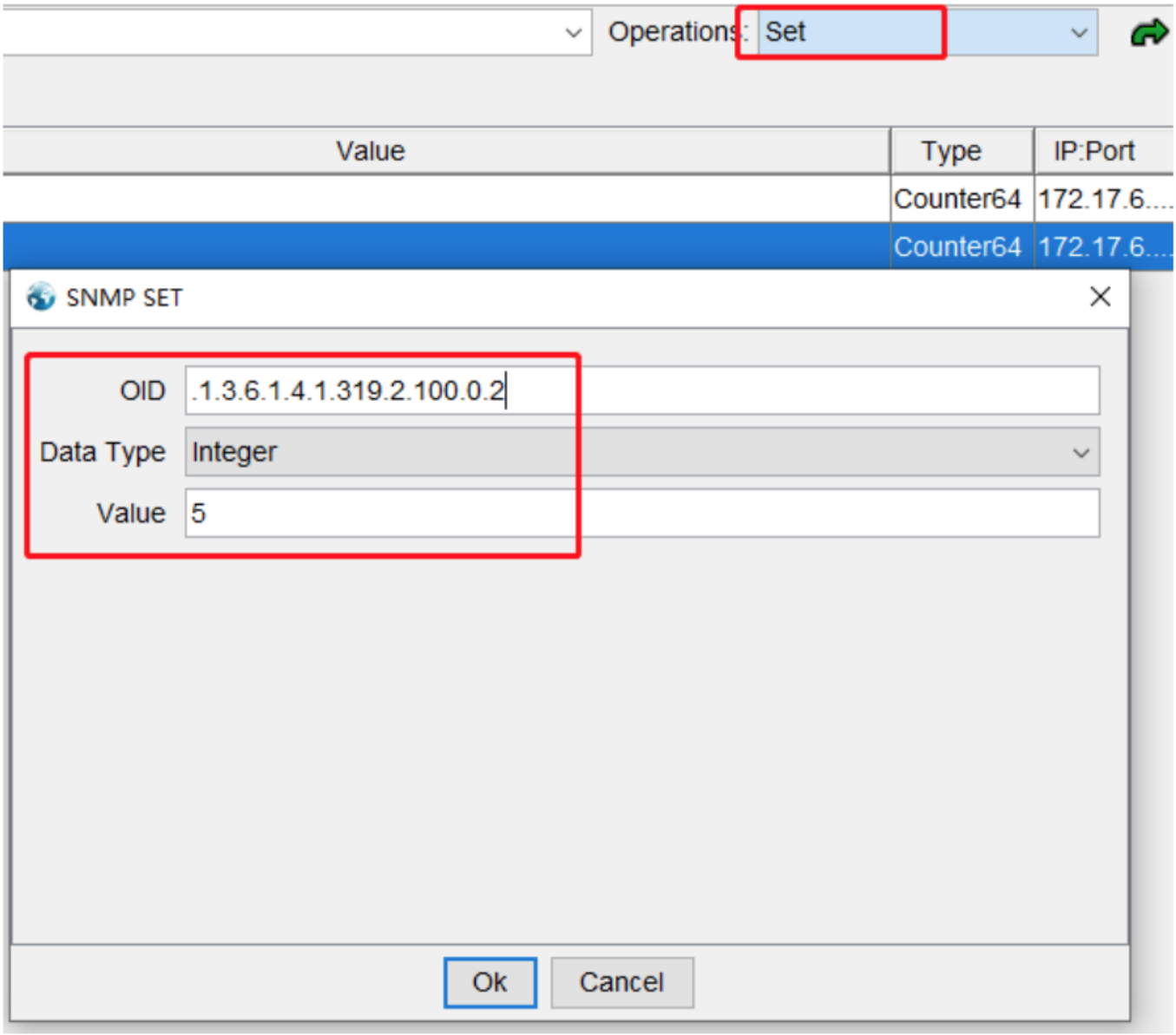


Trap example

To test the connection status change of receiving cards 1- 64 under Ethernet port 1, you can manually unplug and then plug the receiving cards to cause changes.

Set example

Set the reporting period to 5 minutes, as follows (MIB software):



COEX Series Controller and SNMP OID Parameter Comparison

N in the OID denotes a numerical value and takes a value in the range of 1 to the maximum value of the quantity (the maximum value of the quantity is obtained by the corresponding OID).

SNMP GET (Read-only)

Controller Information

Function	OID	Data Type	Controller Type	Description
Controller time and date	1.3.6.1.4.1.319.10.10.1.1	string	Single-card & Card-based	2006/01/03 15:04:05
Controller model	1.3.6.1.4.1.319.10.10.1.2	string	Single-card & Card-based	\
Controller firmware version	1.3.6.1.4.1.319.10.10.1.3	string	Single-card & Card-based	\
Controller name	1.3.6.1.4.1.319.10.10.1.4	string	Single-card & Card-based	\
Controller primary/backup status	1.3.6.1.4.1.319.10.10.1.5	int	Single-card & Card-based	0: primary; 1: backup
Controller serial number	1.3.6.1.4.1.319.10.10.1.6	string	Single-card & Card-based	\
Controller MAC address	1.3.6.1.4.1.319.10.10.1.7	string	Single-card & Card-based	\
Controller IP address	1.3.6.1.4.1.319.10.10.1.8	string	Single-card & Card-based	192.168.12.34

Controller Status

Function	OID	Data Type	Controller Type	Description
Number of mainboard temperature measurement points	1.3.6.1.4.1.319.10.10.10.1	int	Single-card & Card-based	N ≥ 0

Name of mainboard temperature measurement point N	1.3.6.1.4.1.319.10.10.10. 2.N.1	string	Single-card & Card-based	
Status of mainboard temperature measurement point N	1.3.6.1.4.1.319.10.10.10. 2.N.2	int	Single-card & Card-based	Normal: 0 Abnormal: 1
Value of mainboard temperature measurement point N	1.3.6.1.4.1.319.10.10.10. 2.N.3	int	Single-card & Card-based	
Number of mainboard voltage measurement points	1.3.6.1.4.1.319.10.10.10. 3	int	Single-card & Card-based	
Name of mainboard voltage measurement point N	1.3.6.1.4.1.319.10.10.10. 4.N.1	string	Single-card & Card-based	
Status of mainboard voltage measurement point N	1.3.6.1.4.1.319.10.10.10. 4.N.2	int	Single-card & Card-based	Normal: 0 Abnormal: 1
Value of mainboard voltage measurement point N	1.3.6.1.4.1.319.10.10.10. 4.N.3	int	Single-card & Card-based	
Number of fans	1.3.6.1.4.1.319.10.10.10. 5	int	Single-card & Card-based	

Name of fan N	1.3.6.1.4.1.319.10.10.10.6.N.1	string	Single-card & Card-based	
Status of fan N	1.3.6.1.4.1.319.10.10.10.6.N.2	int	Single-card & Card-based	Normal: 0 Abnormal: 1
Rotating speed of fan N	1.3.6.1.4.1.319.10.10.10.6.N.3	int	Single-card & Card-based	
Number of controller power supplies	1.3.6.1.4.1.319.10.10.10.7	int	Single-card & Card-based	
Status of controller power supply N	1.3.6.1.4.1.319.10.10.10.8.N.1	int	Single-card & Card-based	Not inserted: 0 Inserted: 1
Genlock connection status	1.3.6.1.4.1.319.10.10.10.9.1	int	Single-card & Card-based	Not connected: 0 Connected: 1
Genlock frame rate	1.3.6.1.4.1.319.10.10.10.9.2	int	Single-card & Card-based	

Output Card Slot Information

Function	OID	Data Type	Controller Type	Description
Number of output card slots (N)	1.3.6.1.4.1.319.10.10.30.1	int	Single-card & Card-based	N ≥ 0 Single-card controller: N = 1 (The number of output card slots for a single-card

				controller is always 1)
Output card slot status	1.3.6.1.4.1.319.10.10.30.2	int	Single-card & Card-based	Connected: 0 Disconnected: 1
Card firmware version of output card slot N	1.3.6.1.4.1.319.10.10.30.3.N.1	Counter64	Single-card & Card-based	
Card name of output card slot N	1.3.6.1.4.1.319.10.10.30.3.N.2	string	Single-card & Card-based	
Card primary/backup status of output card slot N	1.3.6.1.4.1.319.10.10.30.3.N.3	string	Single-card & Card-based	0x4D 58 5F 34 C3 97 31 30 47 5F 46 69 62 65 72 20 6F 75 74 70 75 74 20 63 61 72 64
Card SN of output card slot N	1.3.6.1.4.1.319.10.10.30.3.N.4	int	Single-card & Card-based	0: primary 1: backup

Output Card Slot Status

Function	OID	Data Type	Controller Type	Description
Number of card temperature measurement points (Y) of output card slot N	1.3.6.1.4.1.319.10.10.30.4.N.1	string	Card-based	Y ≥ 0
Name of temperature measurement point Y of output card slot N	1.3.6.1.4.1.319.10.10.30.4.N.2.Y.1	int	Card-based	
Temperature status of temperature measurement point Y of output card slot N	1.3.6.1.4.1.319.10.10.30.4.N.2.Y.2	string	Card-based	0: Normal 1: Abnormal

Temperature of temperature measurement point Y of output card slot N	1.3.6.1.4.1.319.10.10.30. 4.N.2.Y.3	int	Card-based	
Number of card voltage measurement points of output card slot N	1.3.6.1.4.1.319.10.10.30. 4.N.3	int	Card-based	
Name of voltage measurement point Y of output card slot N	1.3.6.1.4.1.319.10.10.30. 4.N.4.Y.1	int	Card-based	
Voltage status of voltage measurement point Y of output card slot N	1.3.6.1.4.1.319.10.10.30. 4.N.4.Y.2	string	Card-based	0: Normal 1: Abnormal
Voltage of voltage measurement point Y of output card slot N	1.3.6.1.4.1.319.10.10.30. 4.N.4.Y.3	int	Card-based	
Number of card Ethernet ports of output card slot N	1.3.6.1.4.1.319.10.10.30. 5.N.1	int	Single-card & Card-based	
Connection speed of card Ethernet ports of output card slot N	1.3.6.1.4.1.319.10.10.30. 5.N.2	int	Single-card & Card-based	
Connection status of card Ethernet ports of	1.3.6.1.4.1.319.10.10.30. 5.N.3	int	Single-card & Card-based	0: Normal 1: Abnormal

output card slot N				
Number of online receiving cards of Ethernet port Y of output card slot N	1.3.6.1.4.1.319.10.10.30.5.N.4.Y.1	Counter64	Single-card & Card-based	
Temperature status of receiving card M of Ethernet port Y of output card slot N	1.3.6.1.4.1.319.10.10.30.6.N.1.Y.1.M	int	Single-card & Card-based	0: Normal 1: Abnormal
Voltage status of receiving card M of Ethernet port Y of output card slot N	1.3.6.1.4.1.319.10.10.30.6.N.1.Y.2.M	Counter64	Single-card & Card-based	0: Normal 1: Abnormal

Screen Information

Function	OID	Data Type	Controller Type	Description
Number of screens (N)	1.3.6.1.4.1.319.10.20.1. 1	int	Single-card & Ca rd-based	N ≥ 0 Single-card controller: N = 1 (The number of screens for a single-card controller is al ways 1)
Name of screen N	1.3.6.1.4.1.319.10.20.1. 2. N.1	string	Single-card & Ca rd-based	
Width of screen N	1.3.6.1.4.1.319.10.20.1. 2. N.2	int	Single-card & Ca rd-based	
Height of screen N	1.3.6.1.4.1.319.10.20.1. 2. N.3	int	Single-card & Ca rd-based	
Frame rate of screen N	1.3.6.1.4.1.319.10.20.1. 2. N.4	int	Single-card & Ca rd-based	
Brightness of screen N	1.3.6.1.4.1.319.10.20.1. 2. N.5	string	Single-card & Ca rd-based	
Sync type of screen N	1.3.6.1.4.1.319.10.20.1. 2. N.6	int	Single-card & Ca rd-based	0: Current video source 1: Genlock 2: Internal
Sync frame rate of s creen N	1.3.6.1.4.1.319.10.20.1. 2. N.7	int	Single-card & Ca rd-based	

Note: The “Brightness of screen N” is a read-write information

Input Card Slot Information

Function	OID	Data Type	Controller Type	Description
Number of input card slots (N)	1.3.6.1.4.1.319.10.10.20.1	int	Single-card & Card-based	N ≥ 0 Single-card controller: N = 1 (The number of input card slots for a single-card controller is always 1)
Input card slot status	1.3.6.1.4.1.319.10.10.20.2	Counter64	Single-card & Card-based	
Card firmware version of input card slot N	1.3.6.1.4.1.319.10.10.20.3.N.1	string	Single-card & Card-based	
Card name of input card slot N	1.3.6.1.4.1.319.10.10.20.3.N.2	string	Single-card & Card-based	
Card primary/backup status of input card slot N	1.3.6.1.4.1.319.10.10.20.3.N.3	int	Single-card & Card-based	0: Primary 1: Backup
Card SN of input card slot N	1.3.6.1.4.1.319.10.10.20.3.N.4	string	Single-card & Card-based	

Input Card Slot Status

Function	OID	Data Type	Controller Type	Description
Number of card temperature measurement points (Y) of input card slot N	1.3.6.1.4.1.319.10.10.20. 4.N.1	int	Card-based	Y ≥ 0
Name of temperature measurement point Y of input card slot N	1.3.6.1.4.1.319.10.10.20. 4.N.2.Y.1	string	Card-based	
Temperature status of temperature measurement point Y of input card slot N	1.3.6.1.4.1.319.10.10.20. 4.N.2.Y.2	int	Card-based	0: Normal 1: Abnormal
Temperature of temperature measurement point Y of input card slot N	1.3.6.1.4.1.319.10.10.20. 4.N.2.Y.3	int	Card-based	
Number of card voltage measurement points of input card slot N	1.3.6.1.4.1.319.10.10.20. 4.N.3	int	Card-based	
Name of voltage measurement point Y of input card slot N	1.3.6.1.4.1.319.10.10.20. 4.N.4.Y.1	string	Card-based	
Voltage status of voltage measurement point Y of input card slot N	1.3.6.1.4.1.319.10.10.20. 4.N.4.Y.2	int	Card-based	0: Normal 1: Abnormal
Voltage of voltage measurement point Y of input card slot N	1.3.6.1.4.1.319.10.10.20. 4.N.4.Y.3	int	Card-based	

Input Source Information

Function	OID	Data Type	Controller Type	Description
Number of card input sources of input card slot (N)	1.3.6.1.4.1.319.10.10.20. 5.N.1	int	Single-card & Card-based	N ≥ 0
Signal status of input source Y of input card slot N	1.3.6.1.4.1.319.10.10.20. 5.N.2.Y.1	int	Single-card & Card-based	0: Not inserted 1: Signal available 2: Inserted but no signal
Type of input source Y of input card slot N	1.3.6.1.4.1.319.10.10.20. 5.N.2.Y.2	string	Single-card & Card-based	0: DVI 1: DualDVI 2: HDMI1.4 3: HDMI2.0 4: DP1.1
				5: DP1.2 6: DP1.4 7: 3G-SDI 8: 6G-SDI 9: 12G-SDI 10: PIP Video 16: HDMI1.3 17: HDMI2.1 18: PCIE 19: Serdes 20: LVDS 21: VByOne 22: ST 2110 224: internal-source Other value: Unknown
Application status of input source Y of input card slot N	1.3.6.1.4.1.319.10.10.20. 5.N.2.Y.3	int	Single-card & Card-based	0: Normal 2: Abnormal

Internal Source Information

Function	OID	Data Type	Controller Type	Description
Number of internal sources (N)	1.3.6.1.4.1.319.10.10.50.1	int	Single-card & Card-based	N ≥ 1
Number of screens applying internal source N	1.3.6.1.4.1.319.10.10.50.2.N.1	int	Single-card & Card-based	0: Not applied 1: Applied
Link status of internal source N	1.3.6.1.4.1.319.10.10.50.2.N.2	int	Single-card & Card-based	0: Not inserted 1: Signal available 2: Inserted but no signal

SNMP TRAP Reporting

Output Anomaly Reporting

Function	OID	Data Type	Controller Type	Description
Index of abnormal output card slot	1.3.6.1.4.1.319.10.120.N.Y	int	Single-card & Card-based	N: Output card slot N Single-card controller: N = 1 (The number of output card slots for a single-card controller is always 1) Y: Output card temperature, voltage, fan
Number of Ethernet port connections	1.3.6.1.4.1.319.10.120.N.4	int	Single-card & Card-based	
Number of receiving cards connected of Ethernet port Y of output card slot N	1.3.6.1.4.1.319.10.120.N.Y.5	int	Single-card & Card-based	
Number of receiving cards with abnormal temperature of Ethernet port Y of output card slot N	1.3.6.1.4.1.319.10.120.N.Y.6	int	Single-card & Card-based	
Number of receiving cards with abnormal voltage of Ethernet port Y of output card slot N	1.3.6.1.4.1.319.10.120.N.Y.7	int	Single-card & Card-based	

Screen Information Reporting

Function	OID	Data Type	Controller Type	Description
Number of receiving cards connected of screen N	1.3.6.1.4.1.319.10.130.N.1	int	Single-card & Card-based	
Number of receiving cards with abnormal temperature of screen N	1.3.6.1.4.1.319.10.130.N.2	int	Single-card & Card-based	
Number of receiving cards with abnormal voltage of screen N	1.3.6.1.4.1.319.10.130.N.3	int	Single-card & Card-based	

Controller Information Reporting

Function	OID	Data Type	Controller Type	Description
Index of abnormal mainboard item	1.3.6.1.4.1.319.10.100.N	int	Single-card & Card-based	N: controller temperature 1, voltage 2, fan 3
Number of input cards connected	1.3.6.1.4.1.319.10.100.4	int	Single-card & Card-based	
Number of output cards connected	1.3.6.1.4.1.319.10.100.5	int	Single-card & Card-based	
Number of expansion cards connected	1.3.6.1.4.1.319.10.100.6	int	Single-card & Card-based	
Genlock connection status	1.3.6.1.4.1.319.10.100.7	int	Single-card & Card-based	0: Not connected 1: Connected
SNMP Start Time	1.3.6.1.4.1.319.10.100.8	string	Single-card & Card-based	
Index of abnormal input card slot	1.3.6.1.4.1.319.10.110.N. Y	int	Single-card & Card-based	%D: input card slot N %d: input card temperature, voltage, fan
Number of connections of input source N	1.3.6.1.4.1.319.10.110.N.4	int	Single-card & Card-based	N: controller temperature 1, voltage 2, fan 3

SNMP SET Read and Write

Function	OID	Data Type	Controller Type	Description
SNMP Trap server	1.3.6.1.4.1.319.10.200.1	string	Single-card & Card-based	
SNMP Trap reporting period	1.3.6.1.4.1.319.10.200.2	int	Single-card & Card-based	
Temperature Unit	1.3.6.1.4.1.319.10.200.3	int	Single-card & Card-based	0: Fahrenheit 1: Celsius

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Statement
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Technical support
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Documents / Resources

	NOVASTAR COEX Series Controller Control System [pdf] Instructions MX40 Pro, MX30, MX20, KU20, MX6000 Pro, CX40 Pro, COEX Series Controller Control System, COEX Series, Controller Control System, Control System, System

References

- User Manual