Model 400-Series

SDI-Over-Fiber Transport System

SNMP Agent Guide

Issue 1, July 2010

This document applies to Model 400-Series SNMP MIB version 1.00

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Overview

This guide provides an overview of the capabilities provided by the Model 400-Series SNMP Agent. This agent is used in both the Model 400 and Model 410 SDI-Over-Fiber Transport units. For the most complete and up-to-date information, please refer to the MIB files located on the website: www.studio-tech.com.

SNMPv2-MIB Support

The Model 400-Series SNMP Agent implements the system group from SNMPv2-MIB. See the SNMPv2-MIB for more details.

system group

OID	Function
sysDescr	This OID reports a textual description of the device. Read only.
sysObjectID	The authoritative identification of the device's top-level OID address: 1.3.6.1.4.1.26565.4. Read only.
sysUpTime	The number of hundredths of a second since the device was last restarted. Read only.
sysContact	Textual identification of the person in charge of managing the device. The factory default for this field is "Unknown". Read-write.
sysName	Textual name to identify the device. Factory default is "Studio Technologies, Inc." Read-write.
sysLocation	Textual name to identify the location of the device. Factory default is "Skokie, Illinois USA". Read-write.
sysServices	The OID reports 72 indicating this device supports the TCP and application protocols. Read only.
sysORLastChange	The OID reports 0 due to the characteristics of the device. Read only.

The following objects are located within the sysORTable:

OID	Function
sysORIndex	The OID reports 1 as is appropriate for the device. Read only.
sysORID	Fixed to 1.3.6.1.4.1.26565.100.1, which is the OID address of the stiM100Capability statement within the STI-CAPABILITIES MIB. Read only.
sysORDescr	Fixed as "M400 Capabilities" in the device. "A textural description of the capabilities identified by the corresponding instance of sysORID." Read only.
sysORUpTime	Fixed to 0 in the device. "The value of sysUpTime at the time this conceptual row was last instantiated." Read only.

M400-MIB

The data objects within the M400-MIB are separated into a number of functional groups.

m400Notifications group

Model 400-Series units can be configured to send SNMP traps (notifications) to a trap receiver. All of the relevant parameters can be configured using the Models 400 and 410's Monitoring and Alarms and SNMP web pages. The Monitoring and Alarms page can be used to enable SNMP traps, configure which parameters to generate alarms, and at what threshold alarms should occur. The SNMP page can be used to enable the startup trap and configure the community name, receiver address, and version. Test traps can be generated from the unit's SNMP web page as well.

OID	Function
trapString	This text object is sent only as part of a trap (notification) to identify the cause of the trap. It has three possible values: "Alarm Trap", "Test Trap", and "Startup Trap". Not accessible.

m400Data group

The m400Data group contains the M400 Status Table. This table contains a row for each SDI transport card installed in the associated system, currently a max of four, and a column for each piece of information about the cards. (Table index is .1 for fiber 1, .2 for fiber 2, .3 for fiber 3, and .4 for fiber 4.)

OID	Function
m400StatusType	Integer display of the card type at each location. Read only. 1 m402_11 (Model 402-11 E2O/O2E) 4 m403_30 (Model 403-30 Triple E2O) 5 m403_03 (Model 403-03 Triple O2E) 6 m402_22 (Model 402-22 Dual E2O/Dual O2E) 7 m403_33_tx (Model 403-33 Triple E2O/Triple O2E TX) 8 m403_33_rx (Model 403-33 Triple E2O/Triple O2E RX) 255 notPresent
m400StatusSDIstatus	Bit mask used to read SDI status of each channel in card. Bits 0 and 1 are for Channel A. Bits 2 and 3 are for Channel B. Bits 4 and 5 are for Channel C. Read only. 0 unlocked 1 sd (SD-SDI or DVB-ASI) 2 hd (HD-SDI) 3 g3 (3G-SDI) Note: g3 (rather than 3g or 3G) was used due to MIB syntax requirements.

m400Data group, continued

OID	Function
m400StatusLaserStatus	Bit mask used to read laser status of each channel. Applies only to transmitters (see m400StatusType). Bit 0 is for Channel A. Bit 1 is for Channel B. Bit 2 is for Channel C. Read only. 0 on 1 off
m400StatusLaserWavelengthA	Integer display of channel A's laser wavelength in nm. Applies only to E2O (transmitter) cards. Returns a negative value if valid data is not available. Read only.
m400StatusLaserWavelengthB	Integer display of channel B's laser wavelength in nm. Applies only to E2O (transmitter) cards. Returns a negative value if valid data is not available. Read only.
m400StatusLaserWavelengthC	Integer display of channel C's laser wavelength in nm. Applies only to E2O (transmitter) cards. Returns a negative value if valid data is not available. Read only.
m400StatusLaserMode	Bit mask used to read laser mode of each channel in card. Applies only for transmitters. Bits 0 and 1 are for Channel A. Bits 2 and 3 are for Channel B. Bits 4 and 5 are for Channel C. Read only. Plans to make read-write in future. 0 alwaysOn 1 onWhenLocked 2 disabled
m400StatusOptRxPowerA	Textual display of the optical power of channel A, reported in tenths of a dBm. Read only.
m400StatusOptRxPowerB	Textual display of the optical power of channel B, reported in tenths of a dBm. Read only.
m400StatusOptRxPowerC	Textual display of the optical power of channel C, reported in tenths of a dBm. Read only.
m400StatusSFPtemp1	Temperature reported in tenths of degrees Celsius by SFP 1. Read only.
m400StatusSFPtemp2	Temperature reported in tenths of degrees Celsius by SFP 2. Read only.
m400StatusFirmwareVersion	Textual display of the firmware version of the card, reported in tenths. Read only.

m400Config Group

The m400Config group contains a number of read-write objects used to configure Models 400 and 410. Writing to many of these objects with a *set* command may change the behavior of the Models 400 and 410.

OID	Function
sendTestTrap	This feature is not yet implemented.
channelLabel1A	Textual description, up to 15 characters in length, of Channel 1A. Also handled by Channel Labels web page.
channelLabel1B	Textual description, up to 15 characters in length, of Channel 1B. Also handled by Channel Labels web page.
channelLabel1C	Textual description, up to 15 characters in length, of Channel 1C. Also handled by Channel Labels web page.
channelLabel2A	Textual description, up to 15 characters in length, of Channel 2A. Also handled by Channel Labels web page.
channelLabel2B	Textual description, up to 15 characters in length, of Channel 2B. Also handled by Channel Labels web page.
channelLabel2C	Textual description, up to 15 characters in length, of Channel 2C. Also handled by Channel Labels web page.
channelLabel3A	Textual description, up to 15 characters in length, of Channel 3A. Also handled by Channel Labels web page.
channelLabel3B	Textual description, up to 15 characters in length, of Channel 3B. Also handled by Channel Labels web page.
channelLabel3C	Textual description, up to 15 characters in length, of Channel 3C. Also handled by Channel Labels web page.
channelLabel4A	Textual description, up to 15 characters in length, of Channel 4A. Also handled by Channel Labels web page.
channelLabel4B	Textual description, up to 15 characters in length, of Channel 4B. Also handled by Channel Labels web page.
channelLabel4C	Textual description, up to 15 characters in length, of Channel 4C. Also handled by Channel Labels web page.

m400Sys Group

This group displays general details about the Model 400 and Model 410 systems. All objects are read only.

OID	Function
productID	Integer display of the current product ID.
	1 m400-12T (Model 400-12T)
	2 m400-12R (Model 400-12R)
	3 m400-6T6R (Model 400-6T/6R)
	4 m400-9T3R (Model 400-9T/3R)
	5 m400-3T9R (Model 400-3T/9R)
	6 m400-6T (Model 400-6T)
	7 m400-6R (Model 400-6R)
	8 m400-3T3R (Model 400-3T/3R)
	9 m410-3T (Model 410-3T)
	10 m410-3R (Model 410-3R)
	11 m410-3T3R (Model 410-3T/3R)
serialNum	Integer display of the unit's serial number.
systemFirmwareVersion	Textual display of the supervisor card's currently running main processor firmware version. Between 4 and 7 characters in length.
systemHardwareVersion	Two-character textual display of the supervisor card's hardware version.
supervisorCardTemperature	Textual display of the temperature of the supervisor card reported in whole degrees Celsius.
dcInputVoltage	Textual display of the DC input voltage reported in tenths of volts.
mainsPowerDCVoltage	Textual display of the DC output voltage of the internal AC/DC power supply, reported in tenths of volts. Model 410 always returns 0.