NEC

SNMP Guide
for NEC Large-Screen Displays

Revision: 210630

Introduction

NEC professional displays support SNMP using a standard MIB definition created by Printer Working Group (PWG) in 2008. More information about PWG can be found here: http://www.pwg.org/mib/. This document intends to be a guide to make using the SNMP feature of the displays easier.

Notes:

1. The acts of disclosure, duplication, and modification of part or whole contents in this reference manual without permission are prohibited.
2. The contents of this reference manual are subject to change without notice.
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4. Notwithstanding article 3. NEC will not be responsible for any claims on loss of profit or other matters deemed to result from using this reference manual.

Revision History

Revision	Date	Modified by	Description
		Tammy Denny	First public release
210630	June 30, 2021	Tammy Denny and Rebecca Holz	Update company name, copyright, SNMP information

Contents

1 SNMP Primer

1.1 SNMP

Simple Network Management Protocol (SNMP) is an Internet Standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behavior.

1.2 SNMP Agent

SNMP Agent is a program that runs on the hardware of managed devices and resources, or it can run as a service on managed devices and resources, and is monitored by the SNMP Manager. The agent can send information to the SNMP Manager when the manager requests, or it can send alert messages if something happens. The SNMP Agent runs on NEC Professional Displays when enabled.

1.3 SNMP Manager

SNMP Manager is a software platform that functions as a centralized console. The manager can request updates from SNMP Agents and receive Traps from SNMP Agents. Many managers work on a polling scheme and periodically request information from devices.

> It is out of scope of this document to describe specific details for individual network managers that an individual company may use. The specific network manager used is entirely up to the individual company.

1.4 SNMP Community String

SNMP Community String is a username or password that is sent along with the requests and is used to allow access. Most devices ship with default community strings of “public” and “private”. It is common practice for network administrators to change these.

1.5 MIB (Management Information Base)

Management Information Base is a database used for managing the entities in a communication network, most often associated with SNMP. It is a collection of information that is organized hierarchically and are collections of definitions defining the properties of a managed object with a device to be managed or monitored. The MIB can be imported into the SNMP Manager.

1.6 OID (Object Identifier)

Object Identifier is an address used to identify devices and their statuses. An OID is a huge string of numbers. For example, 1.3.6.1.4.1.2699.1.4.1.2.1 is the OID for pdmGeneralProductName (Product Name). The first part of an OID is the same for all equipment. See the table below:

Number	Label	Definition
1	iso	ISO is the group that established the OID standard
.3	org	An organization will be specified next.
.6	dod	The US Department of Defense (established the early internet)
.1	internet	Communication will be over the internet/network.
.4	private	This is a device manufactured by a private entity, not the government.
.1	enterprise	The device manufacturer is classified as an enterprise.

The next table describes the rest of the pdmGeneralProductName OID:

Number	Label	Definition
.2699	pwg	Printer Working Group
.1	mibs	The mib definitions for pwg.
.4	projectorDisplayMIB	The mib definitions for displays.
.1	pdmMIBObjects	MIB Objects.
.2	pdmGeneral	General MIB Objects.
.1	pdmGeneralProductName	General product name.

1.7 SNMP Trap

SNMP Traps are alert messages sent from an SNMP-enabled device to a central collector or SNMP Manager. Traps may alert that the device is overheating, that the device is powered off, or some other emergent condition. SNMP Traps do not expect nor wait on a response from the SNMP Manager.

1.8 SNMP Versions

Basically, three versions of SNMP exist today: 1, 2, and 3. Version 2 (v2) has some sub-versions. SNMP v2c is the most popular, and SNMP v3 is the most secure.

1.8.1 SNMP V1

SNMP V1 is the oldest version. It is easy to set up and requires a plaintext community string for communication. The community strings are either READ-ONLY or READ/WRITE. It does not support 64-bit counters, and it has little security.

1.8.2 SNMP V2C

SNMP V2C is almost identical to version 1, except it adds support for 64-bit counters, improves SET commands, improves error handling, and adds Inform, which can be used instead of Trap. The difference between Inform and Trap is that Inform is acknowledged when received. So, if the SNMP Manager does not reply to the Inform, the device resends it. Not all devices that use v2c will use Inform. Many still just use Trap.

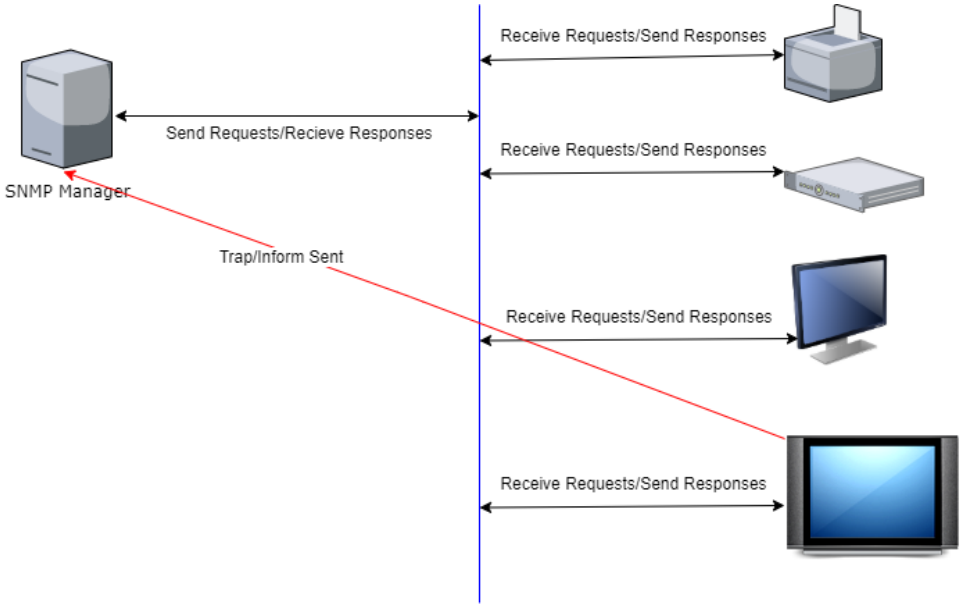
1.8.3 SNMP V3

This version adds security to the 64-bit counters. It adds both encryption and authentication that can be used together or separately. Setup is more complex than just defining a community string.

> NEC does not support this version.

1.9 How SNMP Works

The management system can issue read or write commands to individual SNMP-managed devices. For example, it could change a configuration setting or read the setting. Also, the SNMP-managed devices can send a Trap or Inform to alert the SNMP Manager that a significant event has occurred on the device. See the below image for an overview of SNMP.



2 Using SNMP with NEC Devices

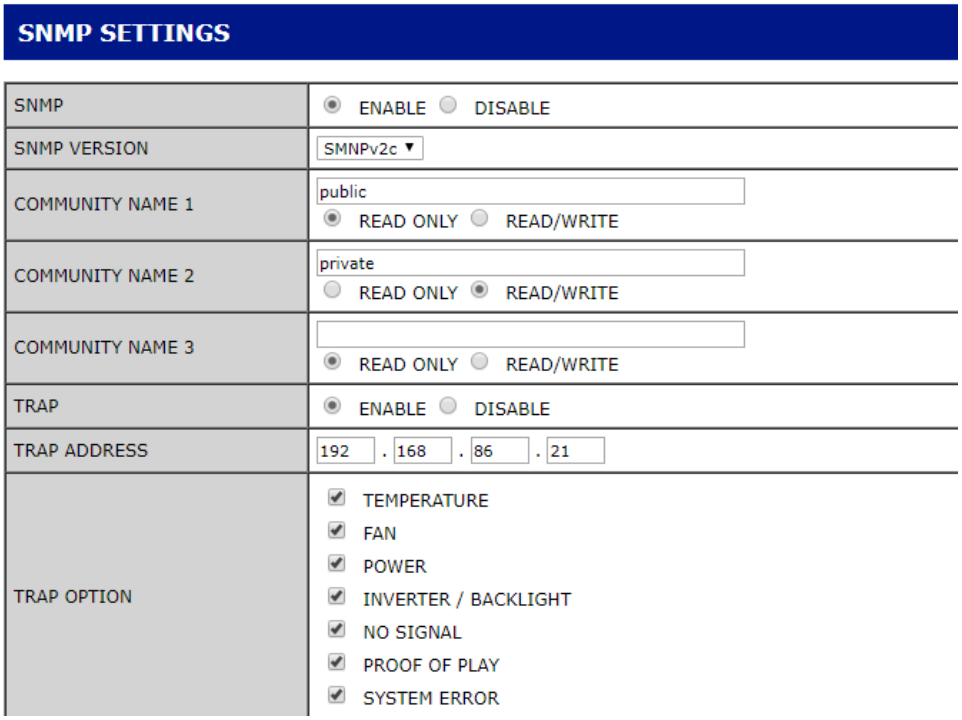
To use SNMP with NEC devices, SNMP must be enabled in each NEC device via the device's web interface. If traps are desired, they must also be enabled and selected from the available Traps. If READ or WRITE commands need to be sent from the Network/SNMP Manager, then the MIB should be imported.

2.1 Enabling SNMP

For up to date information, please see the documentation provided with your individual NEC Professional Display. SNMP cannot be enabled via the OSD (On-Screen Display). It must be accessed and configured via the device web interface. To find the IP address or Hostname of the device easily, use NaViSet Administrator 2, NaViSet Administrator SE Console, or the OSD of the device.

In a web browser:

1. Navigate to the IP address or Hostname of your device.
2. Select the SNMP link on the left-hand side. You should see something like this:



3. Select ENABLE to turn on SNMP.
4. Select the version of SNMP you wish to use, either 1 or 2c.
5. You can input 3 separate community strings and mark them as either READ-ONLY or READ/WRITE.
6. Select ENABLE to turn on Traps if desired.
7. The Trap Address is the IP Address of your Network Manager that receives the traps when enabled.
8. If Traps are enabled, select the Traps you desire to monitor.

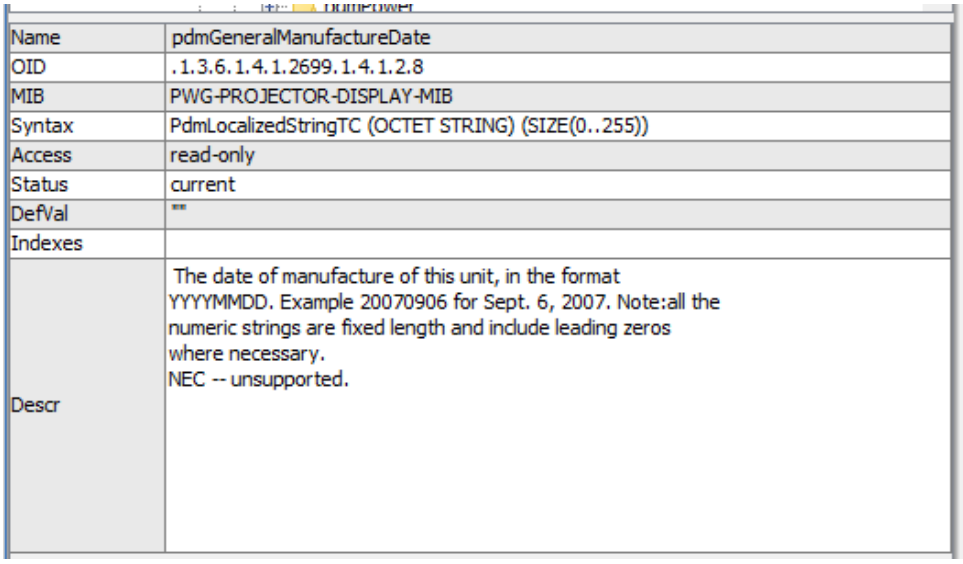
9. Click Apply to save the changes.

2.2 The MIB

PWG provides two MIB Modules, one that defines the textual conventions, such as enumerations and other refined data types, and the other for the passive monitoring and active management of network-connected projectors and displays. NEC provides these Modules in one combined MIB with updated descriptions. The purpose of the MIB is to give the SNMP Manager the OIDs and definitions of what can be read, set, and received as Traps from the device.

> Please refer to your specific Network/SNMP Manager for how to import the NEC MIB. Traps from NEC devices will work without importing the MIB, but each Trap will only be referenced by the OID. If issuing READ or READ/WRITE commands via SNMP is important, then the MIB will need to be imported into the Network/SNMP Manager.

If using a MIB Browser, the description of each OID contains information denoting whether the OID is supported by NEC devices and, if so, information specifically about NEC for the given OID. For example, pdmGeneralManufactureDate is NOT supported:



Name	pdmGeneralManufactureDate
OID	.1.3.6.1.4.1.2699.1.4.1.2.8
MIB	PWG-PROJECTOR-DISPLAY-MIB
Syntax	PdmLocalizedStringTC (OCTET STRING) (SIZE(0..255))
Access	read-only
Status	current
DefVal	""
Indexes	
Descr	The date of manufacture of this unit, in the format YYYYMMDD. Example 20070906 for Sept. 6, 2007. Note:all the numeric strings are fixed length and include leading zeros where necessary. NEC -- unsupported.

PdmGeneralProductName IS supported:

Name	pdmGeneralProductName
OID	.1.3.6.1.4.1.2699.1.4.1.2.1
MIB	PWG-PROJECTOR-DISPLAY-MIB
Syntax	PdmLocalizedStringTC (OCTET STRING) (SIZE(0..255))
Access	read-only
Status	current
DefVal	""
Indexes	
Descr	A product name string supplied by the manufacturer, to supplement the string in sysDescr. Should contain at least the manufacturer name and model name. NEC -- (255 bytes) returns NEC/modelname.

For more information on what OID's from the PWG MIB that NEC professional displays support, please see Appendix B.

2.3 File List

The files provided to support NEC customers using SNMP are:

File	Description
SNMP Guide	Documentation for using SNMP with NEC professional displays.
wd-pdmmib10-20080613.necmod_210304	Single MIB that can be imported into a network manager.

3 Appendix A

3.1 References

PWG -- http://www.pwg.org/index.html

Individual Original PWG MIBS -- https://ftp.pwg.org/pub/pwg/pdm/wd/

4 Appendix B

MIB (Management Information Base) Reference List

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OID	TAG Name	Data Type	Data size	Access	Summary	Status
1.3.6.1.4.1.2699.1.4.1.2.1	pdmGeneralProductName	OCTET STRING	255 byte	R	GET: Get "NEC/*model name*".	Supported
1.3.6.1.4.1.2699.1.4.1.2.2	pdmGeneralSerialNumber	OCTET STRING	255 byte	R	GET: Get *Serial number*.	Supported
1.3.6.1.4.1.2699.1.4.1.2.3	pdmGeneralAssetTag	OCTET STRING	63 byte	R/W	GET: Get the user set *Asset Tag*. If no tag is set, return spaces. SET: Set the *Asset Tag*.	Supported
1.3.6.1.4.1.2699.1.4.1.2.4	pdmGeneralHardwareVersion	OCTET STRING	255 byte	R	GET: Always return spaces.	Supported
1.3.6.1.4.1.2699.1.4.1.2.5	pdmGeneralServicePerson	OCTET STRING	255 byte	R/W	GET: Always return spaces. SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.2.6	pdmGeneralDeviceAge	Counter32	4 byte	R	GET: Get the time of power on period in1 hour intervals in the range of 0 - 65535.	Supported
1.3.6.1.4.1.2699.1.4.1.2.7	pdmGeneralPowerOnCount	Counter32	4 byte	R	GET: Get *Power ON COUNT* in the range of 0 - 65535.	Supported
1.3.6.1.4.1.2699.1.4.1.2.8	pdmGeneralManufactureDate	OCTET STRING	255 byte	R	GET: Always return spaces.	Supported
1.3.6.1.4.1.2699.1.4.1.2.9	pdmGeneralLanguageTagSNMP	OCTET STRING	63 byte	R/W	GET: Always return "en" SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.2.10	pdmGeneralNtpServerAddress	OCTET STRING	255 byte	R/W	GET: Get the "*IP Address*" stored in the device. If any address isn't stored, get "000.000.000.000". SET: Set "*IP Address*" in the device	Supported
1.3.6.1.4.1.2699.1.4.1.3.1.1.2	pdmCtlrDescription	OCTET STRING	255 byte	R	GET: Always return spaces.	Supported
1.3.6.1.4.1.2699.1.4.1.3.1.1.3	pdmCtlrHardwareVersion	OCTET STRING	255 byte	R	GET: Always return spaces.	Supported
1.3.6.1.4.1.2699.1.4.1.3.1.1.4	pdmCtlrFirmwareVersion	OCTET STRING	255 byte	R	GET: Always return spaces.	Supported
1.3.6.1.4.1.2699.1.4.1.3.1.1.5	pdmCtlrFirmwareUpgradeable	INTEGER	4 byte	R	GET: Always return 2 (unknown)	Supported
1.3.6.1.4.1.2699.1.4.1.3.1.1.6	pdmCtlrUpgradeInstructions	OCTET STRING	255 byte	R/W	GET: Always return spaces. SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.3.1.1.7	pdmCtlrPostStatus	INTEGER	4 byte	R	GET: Always return 2 (unknown)	Supported
1.3.6.1.4.1.2699.1.4.1.3.1.1.8	pdmCtlrPostCode	Integer32	4 byte	R	GET: Always return 0 (zero)	Supported
1.3.6.1.4.1.2699.1.4.1.3.1.1.9	pdmCtlrPostStatusDefinitions	OCTET STRING	255 byte	R	GET: Always return spaces.	Supported
1.3.6.1.4.1.2699.1.4.1.4.1.1.2	pdmPowerImplementedState	INTEGER	4 byte	R	GET: Get current power status. Power ON state: ON(11), Power save state: PowerSave(8), Stand-by state: Standby(7).	Supported
1.3.6.1.4.1.2699.1.4.1.4.1.1.3	pdmPowerDescription	OCTET STRING	255 byte	R	GET: Return a description of the current power status.	Supported
1.3.6.1.4.1.2699.1.4.1.4.1.1.4	pdmPowerMfrDescription	OCTET STRING	255 byte	R	GET: Always return spaces.	Supported
1.3.6.1.4.1.2699.1.4.1.4.1.1.5	pdmPowerTargetState	INTEGER	4 byte	R	GET: Always return 3 (noTransition)	Supported
1.3.6.1.4.1.2699.1.4.1.4.1.1.6	pdmPowerTransitionTime	Integer32	4 byte	R	GET: Always return 3.	Supported
1.3.6.1.4.1.2699.1.4.1.4.1.1.7	pdmPowerCommAvailable	INTEGER	4 byte	R	GET: Always return 3 (Available)	Supported
1.3.6.1.4.1.2699.1.4.1.4.2	pdmPowerCurrentState	INTEGER	4 byte	R	GET: Return the current power status. 11 (ON) 8 (PowerSave) 7 (Standby)	Supported
1.3.6.1.4.1.2699.1.4.1.4.3	pdmPowerRequestedState	INTEGER	4 byte	R/W	GET: Return the current power status 11 (ON) 8 (PowerSave) 7 (Standby) 6 (ActiveOff) 5 (DeepSleep) SET: Change the power state. 11 (on) 7 (Stancby) 5 (DeepSleep) 8 (PowerSave)	Supported
1.3.6.1.4.1.2699.1.4.1.5.1	pdmDisplayCapResolutionH	Integer32	4 byte	R	GET: Return the horizontal resolution in pixels.	Supported
1.3.6.1.4.1.2699.1.4.1.5.2	pdmDisplayCapResolutionV	Integer32	4 byte	R	GET: Return the vertical resolution in pixels.	Supported
1.3.6.1.4.1.2699.1.4.1.5.3	pdmDisplayCapPhysSizeH	Integer32	4 byte	R	GET: Return Physical panel size horizontal direction.	Supported
1.3.6.1.4.1.2699.1.4.1.5.4	pdmDisplayCapPhysSizeV	Integer32	4 byte	R	GET: Return Physical panel size vertical direction.	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.2	pdmDisplaySetAffectsAll	INTEGER	4 byte	R	Unsupported.	Unsupported

OID	TAG Name	Data Type	Data size	Access	Summary	Status
1.3.6.1.4.1.2699.1.4.1.6.1.1.3	pdmDisplaySetInputSource	Integer32	4 byte	R/W	GET: Return the current input source. See the set valued below. SET: Change the input source VGA(RGB)(1) DVI(3) VGA(YPbPr)(12) OPTION(13) DisplayPort1(15) DisplayPort2(16) HDMI1(17) HDMI2(18) HDMI3(130) MP(135) COMPUTE MODULE(136) VIDEO1(5) VIDEO2(6) S-VIDEO(7) TV(10) NOTE: Not all inputs are available on all models	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.4	pdmDisplaySetBrightness	Integer32	4 byte	R/W	GET: Return the current *Brightness* value (0 - 100). SET: Change the *Brightness* value (0 - 100).	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.5	pdmDisplaySetBrtMax	Integer32	4 byte	R	GET: Return the *Brightness* maximum value (100).	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.6	pdmDisplaySetContrast	Integer32	4 byte	R/W	GET: Return the current *Contrast* value (0 - 100). SET: Change the *Contrast* value (0 - 100).	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.7	pdmDisplaySetConMax	Integer32	4 byte	R	GET: Return the *Contrast* maximum value (100).	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.8	pdmDisplaySetRed	Integer32	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.6.1.1.9	pdmDisplaySetGreen	Integer32	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.6.1.1.10	pdmDisplaySetBlue	Integer32	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.6.1.1.11	pdmDisplaySetRGBMax	Integer32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.6.1.1.12	pdmDisplaySetSaturation	Integer32	4 byte	R/W	GET: Return the current *Saturation* value (0 - 100). SET: Change the *Saturation* value (0 - 100).	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.13	pdmDisplaySetSatMax	Integer32	4 byte	R	GET: Return the *Saturation* maximum value (100).	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.14	pdmDisplaySetHue	Integer32	4 byte	R/W	GET: Return current *Hue* value (0 - 100). SET: Change the *Hue* value (0 - 100). Note: Not available on all models	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.15	pdmDisplaySetHueMax	Integer32	4 byte	R	GET: Return the *Hue* maximum value (100).	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.16	pdmDisplaySetSharpness	Integer32	4 byte	R/W	GET: Return the current *Sharpness* value (0 - 100). SET: Change the *Sharpness* value (0 - 100).	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.17	pdmDisplaySetShpMax	Integer32	4 byte	R	GET: Return the *Sharpness* maximum value (100).	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.18	pdmDisplaySetColorTemp	INTEGER	4 byte	R/W	GET: Return the current color temperature preset setting. SET: Change the color temperature unknown(2): 10000K, userDefined(3): CUSTOM.	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.19	pdmDisplaySetRedClrTmp	Integer32	4 byte	R/W	GET: Return the current color temperature red value (0 - 255). SET: Change the color temperature red value (0 - 255). Note: This control is valid if pdmDisplaySetColorTemp is set to userDefined(3). Otherwise 0 is returned.	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.20	pdmDisplaySetGreenClrTmp	Integer32	4 byte	R/W	GET: Return the current color temperature green value (0 - 255). SET: Change the color temperature green value (0 - 255). Note: This control is valid if pdmDisplaySetColorTemp is set to userDefined(3). Otherwise 0 is returned.	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.21	pdmDisplaySetBlueClrTmp	Integer32	4 byte	R/W	GET: Return the current color temperature blue value (0 - 255). SET: Change the color temperature blue value (0 - 255). Note: This control is valid if pdmDisplaySetColorTemp is set to userDefined(3). Otherwise 0 is returned.	Supported
1.3.6.1.4.1.2699.1.4.1.6.1.1.22	pdmDisplaySetClrTmpMax	Integer32	4 byte	R	GET: Return the current color temperature value (255). Note: This control is valid if pdmDisplaySetColorTemp is set to userDefined(3). Otherwise 0 is returned.	Supported
1.3.6.1.4.1.2699.1.4.1.6.2	pdmDisplaySetVideoMute	INTEGER	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.6.3	pdmDisplaySetDisplayMode	INTEGER	4 byte	R/W	GET: Return the current Display Mode (*Aspect)* SET: Change the *Display Mode* (Aspect) 1 (normal) 2 (full) 3 (wide) 4 (zoom) 6 (dynamic) 7 (1:1)	Supported
1.3.6.1.4.1.2699.1.4.1.7.1.1.2	pdmLightSourceDescription	OCTET STRING	255 byte	R	GET: Always return spaces.	Supported

OID	TAG Name	Data Type	Data size	Access	Summary	Status
1.3.6.1.4.1.2699.1.4.1.7.1.1.3	pdmLightSourceStatus	INTEGER	4 byte	R	GET: Return the Light Source Status. 4 (failed) -- if "Inverter abnormality" occurs 2 (unknown)	Supported
1.3.6.1.4.1.2699.1.4.1.7.1.1.4	pdmLightSourceEcoSetting	INTEGER	4 byte	R/W	GET: Always return 1 (other). SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.7.1.1.5	pdmLightSourceAge	Counter32	4 byte	R/W	GET: Return the time of power on period at 30 minute intervals in the range of 0 - 65535. SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.7.1.1.6	pdmLightSourceErrorCounter	Counter32	4 byte	R	GET: Always return 0.	Supported
1.3.6.1.4.1.2699.1.4.1.7.1.1.7	pdmLightSourceReset	INTEGER	4 byte	R/W	GET: Always return 4 (resetCountersOnly) SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.7.1.1.8	pdmLightSourceReplacementCount	Counter32	4 byte	R	GET: Always return 0.	Supported
1.3.6.1.4.1.2699.1.4.1.7.1.1.9	pdmLightSourceReplacementTime	OCTET STRING	19 ～ 25 byte	R	GET: Always return “1980-01-01T00:00:00”	Supported
1.3.6.1.4.1.2699.1.4.1.7.1.1.10	pdmLightSourceReplacemenInterval	Integer32	4 byte	R/W	GET: Always return 0 SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.7.1.1.11	pdmLightSourceReplacementPN	OCTET STRING	255 byte	R/W	GET: Always return spaces	Supported
1.3.6.1.4.1.2699.1.4.1.8.1.1.2	pdmFanDescription	OCTET STRING	1～63 byte	R	GET: Always return spaces	Supported
1.3.6.1.4.1.2699.1.4.1.8.1.1.3	pdmFanStatus	INTEGER	4 byte	R	GET: Return the current fan status. 1 (other) 2 (unknown) 3 (okay) 4 (warning) 5 (tooFastFail) 6 (tooSlowFail) – if at least one of FAN1, FAN2 or FAN3 is abnormal 7 (slowStartWarning)	Supported
1.3.6.1.4.1.2699.1.4.1.8.1.1.4	pdmFanSpeed	Gauge32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.8.1.1.5	pdmFanErrorCounter	Counter32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.8.1.1.6	pdmFanReset	INTEGER	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.8.1.1.7	pdmFanReplacementCount	Counter32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.8.1.1.8	pdmFanReplacementTime	OCTET STRING	19 ～ 25 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.8.1.1.9	pdmFanReplacemenInterval	Integer32	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.8.1.1.10	pdmFanReplacementPartNumber	OCTET STRING	255 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.9.1.1.2	pdmFilterDescription	OCTET STRING	63 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.9.1.1.3	pdmFilterStatus	INTEGER	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.9.1.1.4	pdmFilterErrorCounter	Counter32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.9.1.1.5	pdmFilterReset	INTEGER	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.9.1.1.6	pdmFilterReplaceCount	Counter32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.9.1.1.7	pdmFilterReplaceTime	OCTET STRING	19 ～ 25 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.9.1.1.8	pdmFilterReplaceInterval	Integer32	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.9.1.1.9	pdmFilterReplacePN	OCTET STRING	255 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.9.1.1.10	pdmFilterAirFlow	Gauge32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.10.1.1.2	pdmTempSensorDescription	OCTET STRING	255 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.10.1.1.3	pdmTempSensorStatus	INTEGER	4 byte	R	GET: Return the current temperature status. 4 (Warning) – when the temperature sensor state is backlight down. 3 (Okay) – All other cases	Supported
1.3.6.1.4.1.2699.1.4.1.10.1.1.4	pdmTempSensorTemp	Gauge32	4 byte	R	GET: Returns the SENSOR 1 temperature to a scale of 0.1 degrees centigrade. For example, 490 = 49.	Supported
1.3.6.1.4.1.2699.1.4.1.10.1.1.5	pdmTempSensorErrorCounter	Counter32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.10.1.1.6	pdmTempSensorReset	INTEGER	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.10.1.1.7	pdmTempSensorReplaceCount	Counter32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.10.1.1.8	pdmTempSensorReplaceTime	OCTET STRING	19 ～ 25 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.10.1.1.9	pdmTempSensorReplaceInterval	Integer32	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.10.1.1.10	pdmTempSensorReplacePN	OCTET STRING	255 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.11.1.1.2	pdmTempSwitchDescription	OCTET STRING	255 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.11.1.1.3	pdmTempSwitchStatus	INTEGER	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.11.1.1.4	pdmTempSwitchErrorCounter	Counter32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.11.1.1.5	pdmTempSwitchReset	INTEGER	4 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.11.1.1.6	pdmTempSwitchReplaceCount	Counter32	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.11.1.1.7	pdmTempSwitchReplaceTime	OCTET STRING	19 ～ 25 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.11.1.1.8	pdmTempSwitchReplacePN	OCTET STRING	255 byte	R/W	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.12.1.1.2	pdmConnectorDescription	OCTET STRING	255 byte	R	GET: Returns the description of the connector. HDMI, VGA, DisplayPort, etc.	Supported

OID	TAG Name	Data Type	Data size	Access	Summary	Status
1.3.6.1.4.1.2699.1.4.1.12.1.1.3	pdmConnectorType	INTEGER	4 byte	R	GET: Returns the current input type. 2 (unknown) 4 (dvi) 6 (hdmi) 9 (displayPort)	Supported
1.3.6.1.4.1.2699.1.4.1.12.1.1.4	pdmConnectorEnabled	INTEGER	4 byte	R/W	GET: Always return 0. SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.12.1.1.5	pdmConnectorAudioAdjust	Integer32	4 byte	R/W	GET: Always return 0 SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.12.1.1.6	pdmConnectorVideoAdjust	Integer32	4 byte	R/W	GET: Always return 0. SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.12.2	pdmConnectorVideoCurrInput	Integer32	4 byte	R/W	GET: Return the current video connector input. Value depends on model. Possible values are: VGA(RGB)(1) DVI(3) VGA(YPbPr)(12) OPTION(13) DisplayPort1(15) DisplayPort2(16) HDMI1(17) HDMI2(18) HDMI3(130) MP(135) COMPUTE MODULE(136) SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.12.3	pdmConnectorAudioCurrInput	Integer32	4 byte	R/W	GET: Return the current audio connector input Value depends on model Possible values are: IN1(1) IN2(2) HDMI1(4) OPTION(6) DisplayPort1(7) DisplayPort2(9) HDMI2(10) HDMI3(11) MP(13) COMPUTE MODULE(14) SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.13.1.1.2	pdmInterlockDescription	OCTET STRING	255 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.13.1.1.3	pdmInterlockStatus	INTEGER	4 byte	R	Unsupported.	Unsupported
1.3.6.1.4.1.2699.1.4.1.14.1.1.2	pdmLocaleCharsetEnum	Integer32	4 byte	R	GET: Always return 4 (Latin)	Supported
1.3.6.1.4.1.2699.1.4.1.14.2	pdmLocaleCharsetEnumEWS	Integer32	4 byte	R/W	GET: Always return 4 (Latin) SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.15.1.1.2	pdmLocaleLanguageTag	OCTET STRING	63 byte	R	GET: Always return spaces.	Supported
1.3.6.1.4.1.2699.1.4.1.15.2	pdmLocaleLanguageTagEWS	OCTET STRING	63 byte	R/W	GET: Always return “en” SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.15.3	pdmLocaleLanguageTagOSD	OCTET STRING	63 byte	R/W	GET: Always return spaces. SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.15.4	pdmLocaleLanguageTagWSM	OCTET STRING	63 byte	R/W	GET: Always return spaces. SET: Unsupported.	Supported
1.3.6.1.4.1.2699.1.4.1.16.1	pdmAudioDescription	OCTET STRING	255 byte	R	GET: Always return spaces	Supported
1.3.6.1.4.1.2699.1.4.1.16.2	pdmAudioVolume	INTEGER	4 byte	R/W	GET: Return the current *Audio Volume* value (0 - 100). SET: Change the *Audio Volume* value (0 - 100).	Supported
1.3.6.1.4.1.2699.1.4.1.16.3	pdmAudioMute	INTEGER	4 byte	R/W	GET: Return the current *Audio Mute* state 1 (muted) 2 (notMuted) SET: Change *Audio Mute* state 1 (mute) 2 (unmute)	Supported
1.3.6.1.4.1.2699.1.4.1.16.4	pdmAudioTreble	Integer32	4 byte	R/W	GET: Return the current *Audio Treble* value (0 - 100). SET: Change the *Audio Treble* value (0 - 100).	Supported
1.3.6.1.4.1.2699.1.4.1.16.5	pdmAudioBass	Integer32	4 byte	R/W	GET: Return the current *Audio Bass* value (0 - 100). SET: Change the *Audio Bass* value (0 - 100).	Supported
1.3.6.1.4.1.2699.1.4.1.16.6	pdmAudioBalance	Integer32	4 byte	R/W	GET: Return the current *Audio Balance* value (0 - 100). SET: Change the *Audio Balance* value (0 - 100).	Supported
1.3.6.1.4.1.2699.1.4.1.17.1.1.2	pdmButtonDescription	OCTET STRING	255 byte	R	GET: Return “Key/IR Lock”	Supported
1.3.6.1.4.1.2699.1.4.1.17.1.1.3	pdmButtonEnabled	INTEGER	4 byte	R/W	GET: Return the Control Panel Key Lock and IR Control status. UNLOCK: true(1), LOCK: false(2). SET: Change the Control Panel Key Lock and IR Control status. 1 (UNLOCK) 2 (LOCK)	Supported
1.3.6.1.4.1.2699.1.4.1.18.1.1.2	pdmAlertGroupType	OCTET STRING	255 byte	R	GET: Return the error status when it has one error, as; Power supply is abnormal: "7X POWER",	Supported
					FAN is abnormal: "8X FAN",	Supported

OID	TAG Name	Data Type	Data size	Access	Summary	Status
					Inverter is abnormnal: "9X INVERTER"	Supported
					Temperature is abnormal: "AX TEMPARATURE"	Supported
					Signal changed: "BX SIGNAL"	Supported*
					Option is abnormal: "CX OPTION".	Supported*
					If it has two or more errors, get "General".	Supported
1.3.6.1.4.1.2699.1.4.1.18.1.1.3	pdmAlertGroupId	OCTET STRING	255 byte	R	GET: Get the error status as; Standby-power +3.3V abnormality: "Power_0",	Supported
					Standby-power +5V abnormality: "Power_1",	Supported
					Panel-power +12V abnormality: "Power_2",	Supported
					Main-power +2.5V abnormality: "Power_3",	Supported*
					Main-power +1.8V abnormality: "Power_4",	Supported*
					Main-power +5V abnormality: "Power_5",	Supported
					Sub-power +3.3V abnormality: "Power_6",	Supported
					Main-power +3.3V abnormality: "Power_7",	Supported
					Inverter/Option-power +24V abnormality: "Power_8",	Supported*
					Cooling fan-1 abnormality: "Fan_0",	Supported
					Cooling fan-2 abnormality: "Fan_1",	Supported
					Cooling fan-3 abnormality: "Fan_2",	Supported*
					Inverter abnormality: "Inverter_0",	Supported*
					LED backlight abnormality: "Backlight_1"	Supported*
					Tenperature abnormality – shutdown: "Temperature_0",	Supported
					Tenperature abnormality – half brightness: "Temperature_1".	Supported
					Sensor reached the user setting temperature: "Temperature_2"	Supported*
					No Signal: "Signal_0"	Supported*
					Option board abnormality: Option_0"	Supported*
1.3.6.1.4.1.2699.1.4.1.18.1.1.4	pdmAlertCode	Integer32	4 byte	R	GET: Get the error status as; Standby-power +3.3V abnormality: 70h,	Supported
					Standby-power +5V abnormality: 71h,	Supported
					Panel-power +12V abnormality: 72h,	Supported
					Main-power +2.5V abnormality: 73h,	Supported*
					Main-power +1.8V abnormality: 74h,	Supported*
					Main-power +5V abnormality: 75h,	Supported
					Sub-power +3.3V abnormality: 76h,	Supported
					Main-power +3.3V abnormality: 77h,	Supported
					Inverter/Option-power +24V abnormality:78h,	Supported*
					Cooling fan-1 abnormality: 80h,	Supported
					Cooling fan-2 abnormality: 81h,	Supported
					Cooling fan-3 abnormality: 82h,	Supported*
					Inverter abnormality: 90h,	Supported*
					LED Backlight abnormality:91h,	Supported*
					Tenperature abnormality – shutdown: A0h,	Supported
					Tenperature abnormality – half brightness: A1h	Supported
					Sensor reached the user setting temperature: A2h,	Supported*
					No Signal: B0h,	Supported*
					Option board abnormality: C0h.	Supported*
1.3.6.1.4.1.2699.1.4.1.18.1.1.5	pdmAlertDescription	OCTET STRING	255 byte	R	GET: Always return spaces.	Supported
1.3.6.1.4.1.2699.1.4.1.18.1.1.6	pdmAlertSeverityLevel	INTEGER	4 byte	R	GET: Always return 4 (warning)	Supported
1.3.6.1.4.1.2699.1.4.1.18.1.1.7	pdmAlertTrainingLevel	INTEGER	4 byte	R	GET: Always return 2 (unknown)	Supported
1.3.6.1.4.1.2699.1.4.1.18.1.1.8	pdmAlertDateTime	OCTET STRING	25 byte	R	GET: Always return "1980-01-01T00:00:00".	Supported
1.3.6.1.4.1.2699.1.4.1.18.1.1.9	pdmAlertPowerOnCount	Counter32	4 byte	R	GET: Always return 0 (zero).	Supported
1.3.6.1.4.1.2699.1.4.1.18.1.1.10	pdmAlertSysUptime	TimeTicks		R	GET: Always return 0 (zero).	Supported
1.3.6.1.4.1.2699.1.4.1.18.2	pdmAlertCriticalAlertsCount	Counter32	4 byte	R	GET: Always return 0 (zero).	Supported
1.3.6.1.4.1.2699.1.4.1.18.3	pdmAlertAllAlertsCount	Counter32	4 byte	R	GET: Always return 0 (zero).	Supported

*Support depends on model

All data are subject to change without notice.