

OTD140 SNMP

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The information in this page is updated in accordance with firmware version [OTD140_R_00.07.07.1](#).



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Summary

Simple Network Management Protocol (SNMP) is a network management protocol used for collecting information and configuring network devices. This page is an overview of the SNMP function in OTD140 devices.

Note: SNMP is additional software that can be installed from the **System** → [Package Manager](#) page.

If you're having trouble finding this page or some of the parameters described here on your device's WebUI, you should **turn on "Advanced WebUI" mode**. You can do that by clicking the "Advanced" button, located at the top of the WebUI.



SNMP settings

The **SNMP settings** page is used to configure SNMP accessibility and general SNMP information for your device.

SNMP agent settings



Field	Value	Description
Enable SNMP service	off on; default: off	Run SNMP service on system's startup.
Enable remote access	off on; default: off	Open port in firewall so that SNMP service may be reached from WAN.
IP type	IPv4 IPv6 IPv4v6; default: IPv4	IP type used by SNMP.
Port	integer [0..65535]; default: 161	SNMP service's port.
SNMP v1 Mode	off on; default: on	Enable/disable SNMP v1 Mode.
SNMP v2c Mode	off on; default: on	Enable/disable SNMP v2c Mode.
SNMP v3 Mode	off on; default: off	Enable/disable SNMP v3 Mode.

SNMP System Summary

The **SNMP System Summary** section contains general information about SNMP on this device. You can also download this device's **MIB file** from this section.



Field	Value	Description
MIB file	-(interactive button)	Downloads the device's MIB file.
System OID	1.3.6.1.4.1.48690	OID or Object Identifier, is an identifier used to name and point to an object in the MIB hierarchy.
Location	string; default: location	Trap named sysLocation.
Contact	string; default: email@example.com	Trap named sysContact.
Name	string; default: name	Trap named sysName.

SNMP v3 users

The **SNMP v3 users** page is used to create and manage users, who can be authenticated using SNMP v3. To configure an SNMP user, you must first create it:

1. Enter a custom name for the new user in the 'Name' field.
2. Click the 'Add' button.
3. Click the 'Edit' button next to the newly created user.



The SNMP user configuration window should look similar to this:



Note: this table has coloring scheme to indicate which fields can be seen with different configuration.

Field	Value	Description
Enable	off on; default: off	Turns this SNMP user on or off.
Username	string; default: none	Set username to access SNMP.
Security level	No authentication, no privacy Authentication, no privacy Authentication and privacy ; default: No authentication, no privacy	A security level is an authentication strategy that is set up for the user. No authentication, no privacy - authenticates with a username. Authentication - provides MD5 or SHA algorithms for authentication. Privacy - Provides DES or AES encryption.
Authentication type	Authentication, no privacy Authentication and privacy : SHA MD5; default: SHA	Set authentication type to use with SNMP v3.
Authentication passphrase	Authentication, no privacy Authentication and privacy : string; default: none	Set authentication passphrase to generate key for SNMP v3.
Privacy type	Authentication and privacy : DES AES; default: DES	Set privacy type to use with SNMP v3.
Privacy passphrase	Authentication and privacy : string; default: none	Set privacy passphrase to generate key for SNMP v3.
Access Mode	Read-Only Read-Write; default: Read-Only	The access mode specifies the access the hosts in the community are allowed with respect to retrieving and modifying the MIB variables from a specific SNMP agent.
MIB subtree	string; default: none	Leave empty to access full MIB tree.

Communities

The **SNMP Community** section is used to manage access rights. You can edit an SNMP community by clicking the 'Edit' button next to it:



This will redirect you to the community's configuration page.



Field	Value	Description
Community name	string; default: none	Name of the community.
IP Address	ip; default: none	IP address of the community.
IP Mask	ip; default: none	Netmask for IP of the community.

Access Mode	Read-Only Read-Write; default: Read-Only	Access mode for current community.
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SNMPv6 community configuration page:



Field	Value	Description
Community name string; default: public		Name of the community.
Source	ip6 domain name; default: default	Source of the community.
Access Mode	Read-Only Read-Write; default: Read-Only	Access mode for current community.

Trap Settings

SNMP Traps are used to send alert messages to a central collector, the “SNMP manager” when an important event happens. A benefit of using Traps for reporting alarms is that they trigger instantaneously, rather than waiting for a status request from the manager.

Trap settings page is divided in two sections - **Trap service settings** and **Trap rules**. Trap service settings lets you manage hosts which will get configured alert messages, Trap rules lets you manage rules which when triggered will send alerts.

Trap Service Settings

The **Trap Service Settings** is used to manage **hosts** which will be alerted when an SNMP trap is triggered. The host list is empty by default thus, to begin configuration you must first create at least one host.

Click the 'Add' button at the bottom-right side of the table to create a new host.



The newly added Host configuration should look similar to this:



Field	Value	Description
Host/IP	url ip; default: none	Hostname or IP address to transfer SNMP traffic to.
Port	integer [0..65535]; default: 162	Trap host's port number.
Community	string; default: Public	Name of the community to which the trap belongs.
Delete	- (interactive button)	Deletes the host next to the button.
off/on slider	off on; default: off	Turns the host on or off. SNMP traffic is only sent to enabled hosts.

Trap Rules

SNMP Trap Rules are alerts that trigger when certain user-specified events occur. When the trigger event happens, the trap will notify known SNMP hosts.

You can create a new trap rule by clicking the 'Add' button.



You should be redirected to the rule's configuration page which should look something like this:



Above is an example of what rule configuration window looks like. Below is a table with detailed explanations on how to configure the rule and what each of the fields mean.

To avoid redundancy, screenshots for the other rules will not be provided, since the structures, syntax and the overall look of the configuration windows for each rule are very similar. Instead, only tables containing information on how to edit each rule will be provided.

Signal strength

Field	Value	Description
Enable	off on; default: off	Enable or disable this rule.
Action	Signal strength trap	Rule will be triggered if signal strength falls below specified number.
Signal strength	integer [-130..0]; default: none	GSM signal's strength value in dBm, e.g. -85

Connection type

Field	Value	Description
Enable	off on; default: off	Enable or disable this rule.
Action	Connection type trap	Rule will be triggered when connection type will change.

Events log

Event	Event subtype	Description
Config change	All Specific config change; default: all	Informs on changes to the device's configuration.
Reboot	All From Web UI From ping reboot From reboot scheduler From button From SMS; default: All	Informs on if the device was rebooted.
Startup	Device startup completed	Informs on when the device is fully booted.

Mobile data	All Connected Disconnected; default All	Informs on changes to the state of the device's mobile connection.
New DHCP client	All Connected from LAN; default All	Informs on new DHCP lease give outs.
Ports state	All Link speed Link state Unplugged Plugged in Specific port; default: All	Informs on Ethernet port state (plugged in or unplugged) or speed (100 Mbps or 1000 Mbps) changes.
Reboot	All From button From Input/Output From Ping Reboot From Reboot Scheduler From WebUI From SMS; default: All	Informs after device reboot occurrences.
Signal strength	All - 121 dBm - 113 dBm - 113 dBm - 98 dBm - 98 dBm - 93 dBm - 93 dBm - 75 dBm - 75 dBm - 60 dBm - 60 dBm - 50 dBm; default: All	Informs on signal strength changes.
SMS	SMS received	Informs on received SMS messages.
SSH	All Successful authentication Unsuccessful authentication; default: All	Informs on successful or unsuccessful SSH login attempts.
Topology state	Topology changes	Informs on changes to the device's network topology.
WebUI	ALL Successful authentication Unsuccessful authentication; default: All	Informs on successful or unsuccessful HTTP/HTTPS login attempts.

SNMP variables list

Name	OID	Description
Device		
serial	.1.3.6.1.4.1.48690.1.1.0	Device serial number
routerName.0	.1.3.6.1.4.1.48690.1.2.0	Device name
productCode	.1.3.6.1.4.1.48690.1.3.0	Device product (ordering) code
batchNumber	.1.3.6.1.4.1.48690.1.4.0	Device batch number
hardwareRevision	.1.3.6.1.4.1.48690.1.5.0	Device hardware revision
fwVersion	.1.3.6.1.4.1.48690.1.6.0	Device RutOS firmware version
deviceUptime	.1.3.6.1.4.1.48690.1.7.0	Device uptime
Mobile		
modemNum	.1.3.6.1.4.1.48690.2.1.0	The number of modems (regardless of their current state) present on this system
mIndex	.1.3.6.1.4.1.48690.2.2.1.1.1	Available modem indexes; used to index OIDs between when the device has multiple modems
mDescr	.1.3.6.1.4.1.48690.2.2.1.2.1	Modem description
mImei	.1.3.6.1.4.1.48690.2.2.1.3.1	Modem IMEI
mModel	.1.3.6.1.4.1.48690.2.2.1.4.1	Modem model
mManufacturer	.1.3.6.1.4.1.48690.2.2.1.5.1	Modem manufacturer
mRevision	.1.3.6.1.4.1.48690.2.2.1.6.1	Modem firmware version
mSerial	.1.3.6.1.4.1.48690.2.2.1.7.1	Modem serial number
mIMSI	.1.3.6.1.4.1.48690.2.2.1.8.1	Modem IMSI number
mSimState	.1.3.6.1.4.1.48690.2.2.1.9.1	SIM card status
mPinState	.1.3.6.1.4.1.48690.2.2.1.10.1	PIN status
mNetState	.1.3.6.1.4.1.48690.2.2.1.11.1	Mobile network registration status
mSignal	.1.3.6.1.4.1.48690.2.2.1.12.1	Signal strength level
mOperator	.1.3.6.1.4.1.48690.2.2.1.13.1	Current mobile network operator
mOperatorNumber	.1.3.6.1.4.1.48690.2.2.1.14.1	Mobile operator number (MCC+MNC)
mConnectionState	.1.3.6.1.4.1.48690.2.2.1.15.1	Mobile data connection state
mConnectionType	.1.3.6.1.4.1.48690.2.2.1.16.1	Mobile data connection type
mTemperature	.1.3.6.1.4.1.48690.2.2.1.17.1	Modem's temperature in 0.1 degrees Celsius
mCellID	.1.3.6.1.4.1.48690.2.2.1.18.1	Cell (Base transceiver station) ID
mSINR	.1.3.6.1.4.1.48690.2.2.1.19.1	SINR value in dB
mRSRP	.1.3.6.1.4.1.48690.2.2.1.20.1	RSRP value in dBm
mRSRQ	.1.3.6.1.4.1.48690.2.2.1.21.1	RSRQ value in dB
mSent	.1.3.6.1.4.1.48690.2.2.1.22.1	Total bytes sent
mReceived	.1.3.6.1.4.1.48690.2.2.1.23.1	Total bytes received

mIP	.1.3.6.1.4.1.48690.2.2.1.24.1
mSentToday	.1.3.6.1.4.1.48690.2.2.1.25.1
mReceivedToday	.1.3.6.1.4.1.48690.2.2.1.26.1
mICCID	.1.3.6.1.4.1.48690.2.2.1.27.1
mSentCurrentWeek	.1.3.6.1.4.1.48690.2.2.1.28.1
mReceivedCurrentWeek	.1.3.6.1.4.1.48690.2.2.1.29.1
mSentCurrentMonth	.1.3.6.1.4.1.48690.2.2.1.30.1
mReceivedCurrentMonth	.1.3.6.1.4.1.48690.2.2.1.31.1
connectionUptime	.1.3.6.1.4.1.48690.2.3.0.1

Mobile notifications

signalChangeNotification	.1.3.6.1.4.1.48690.4.1.1
networkTypeNotification	.1.3.6.1.4.1.48690.4.1.2

Hotspot Notifications

clientConnectedNotification	.1.3.6.1.4.1.48690.4.3.1
clientDisconnectedNotification	.1.3.6.1.4.1.48690.4.3.2

Hotspot

hsState	.1.3.6.1.4.1.48690.5.1.0
hsIP	.1.3.6.1.4.1.48690.5.2.0
hsNet	.1.3.6.1.4.1.48690.5.3.0
hsAuth	.1.3.6.1.4.1.48690.5.4.0
hsSessionCount	.1.3.6.1.4.1.48690.5.5.0

Hotspot Sessions

hssIndex	.1.3.6.1.4.1.48690.5.6.1.1.1
hssMAC	.1.3.6.1.4.1.48690.5.6.1.2.1
hssIP	.1.3.6.1.4.1.48690.5.6.1.3.1
hssID	.1.3.6.1.4.1.48690.5.6.1.4.1
hssUsername	.1.3.6.1.4.1.48690.5.6.1.5.1
hssState	.1.3.6.1.4.1.48690.5.6.1.6.1
hssDwLimit	.1.3.6.1.4.1.48690.5.6.1.7.1
hssUpLimit	.1.3.6.1.4.1.48690.5.6.1.8.1
hssTimeLimit	.1.3.6.1.4.1.48690.5.6.1.9.1
hssIdleTimeout	.1.3.6.1.4.1.48690.5.6.1.10.1
hssDwBandwidth	.1.3.6.1.4.1.48690.5.6.1.11.1
hssUpBandwidth	.1.3.6.1.4.1.48690.5.6.1.12.1
hssURL	.1.3.6.1.4.1.48690.5.6.1.13.1

Port based vlan

pVlanCount	.1.3.6.1.4.1.48690.8.1
pVlanTable	.1.3.6.1.4.1.48690.8.2
pVlanEntry	.1.3.6.1.4.1.48690.8.2.1
pVlanIndex	.1.3.6.1.4.1.48690.8.2.1.1
pVlanNum	.1.3.6.1.4.1.48690.8.2.1.2
pVlanPorts	.1.3.6.1.4.1.48690.8.2.1.3
pVlanVID	.1.3.6.1.4.1.48690.8.2.1.4

Interface based vlan

iVlanCount	.1.3.6.1.4.1.48690.8.3
iVlanTable	.1.3.6.1.4.1.48690.8.4
iVlanEntry	.1.3.6.1.4.1.48690.8.4.1
iVlanIndex	.1.3.6.1.4.1.48690.8.4.1.1
iVlanName	.1.3.6.1.4.1.48690.8.4.1.2
iVlanType	.1.3.6.1.4.1.48690.8.4.1.3
iVlanIfName	.1.3.6.1.4.1.48690.8.4.1.4
iVlanVID	.1.3.6.1.4.1.48690.8.4.1.5

Smart Queue Management

queueCount	.1.3.6.1.4.1.48690.9.1
queueTable	.1.3.6.1.4.1.48690.9.2
queueEntry	.1.3.6.1.4.1.48690.9.2.1
queueIndex	.1.3.6.1.4.1.48690.9.2.1.1
queueName	.1.3.6.1.4.1.48690.9.2.1.2
queueEnabled	.1.3.6.1.4.1.48690.9.2.1.3
queueIface	.1.3.6.1.4.1.48690.9.2.1.4
queueDownLimit	.1.3.6.1.4.1.48690.9.2.1.5
queueUpLimit	.1.3.6.1.4.1.48690.9.2.1.6
queueQdisk	.1.3.6.1.4.1.48690.9.2.1.7
queueScript	.1.3.6.1.4.1.48690.9.2.1.8

Port

portCount	.1.3.6.1.4.1.48690.10.1.0
portTable	.1.3.6.1.4.1.48690.10.2.0
portEntry	.1.3.6.1.4.1.48690.10.2.1.0
pIndex	.1.3.6.1.4.1.48690.10.2.1.1
pName	.1.3.6.1.4.1.48690.10.2.1.2

Modem IP address(es)

Bytes sent today

Bytes received today

SIM ICCID

Bytes sent this week

Bytes received this week

Bytes sent this month

Bytes received this month

Mobile connection uptime

Signal strength trap

Network type trap

Hotspot client connected trap

Hotspot client disconnected trap

Current Hotspot state

Hotspot IP address

WiFi interface ID

Hotspot authentication type

Hotspot current active session (connected user) count

Connected Hotspot user indexes

Hotspot user MAC addresses

Hotspot user local IP addresses

Hotspot user session unique IDs

Hotspot connected user usernames

Hotspot user session states

Hotspot user download limits

Hotspot user upload limits

Hotspot user session time limit

Hotspot user maximum idle timeout values

Hotspot user maximum download speed

Hotspot user maximum upload speed

Hotspot URL

Amount of port-based virtual networks

A list port-based virtual networks

An entry containing information about a port-based VLAN

The index of the port-based VLAN

The vlan number of the port-based VLAN

The assigned ports of the port-based VLAN

The vlan ID of the port-based VLAN

Amount of interface-based virtual networks

A list interface-based virtual networks

An entry containing information about an interface-based VLAN

The index of an iface-based VLAN

The name of an iface-based VLAN

The type of an iface-based VLAN

The interface name of an iface-based VLAN

The VLAN ID of an iface-based VLAN

Amount of traffic shaping configs

A list of traffic shaping configs

Entry containg info of a traffic shaping config

The index of the queue

The internal name of the queue

Is the queue enabled?

The assigned interface of the queue

The download limit of the queue

The upload limit of the queue

The queuing discipline in use for this queue

The queuing discipline setup script used in this queue

Number of ports on device

A list of port entries. The number of entries is given by the value of portCount

An entry containing information of a particular port

A unique value, greater than zero, for each port

Port's name

pNumber	.1.3.6.1.4.1.48690.10.2.1.3	Port's number
pPosition	.1.3.6.1.4.1.48690.10.2.1.4	Port's physical position
pState	.1.3.6.1.4.1.48690.10.2.1.5	Port's state
pSpeed	.1.3.6.1.4.1.48690.10.2.1.6	Port's speed
pDuplex	.1.3.6.1.4.1.48690.10.2.1.7	Boolean value whether port is duplex or not