Application Note

SNMP Object Identifiers

Advantech Czech s.r.o., Sokolska 71, 562 04 Usti nad Orlici, Czech Republic
Document No. APP-0010-EN, revised on April 23, 2026.

Used symbols

Important

Important — Indicates a risk to personal safety or potential damage to the router. Follow these instructions precisely to prevent injury or equipment damage.

Warning

Warning — Highlights conditions that may cause malfunction, loss of data, or unexpected behavior in specific situations. Read carefully before proceeding.

Info

Info — Provides helpful tips, context, or references that improve understanding but are not strictly required to complete the task.

Firmware Version

This manual applies to firmware version **6.6.1 (April 24, 2026)**. Features introduced after this version may not be covered.

Contents

List of Figures

List of Tables

1. Basics and MIB Files

1.1 SNMP OID Basics

An OID (Object Identifier) is a unique numeric identifier used to reference each data object in SNMP. An OID consists of a sequence of numbers separated by dots. Each element in the sequence represents a node in a hierarchical namespace, where every OID is defined relative to its parent by appending a dot followed by a numeric value. This organization forms a tree structure that enables systematic addressing of management data.

OID definitions are stored in the MIB (Management Information Base). A MIB file maps numeric OIDs to human-readable names and provides descriptive metadata, including object purpose, data type, and access rights.

Warning

Information about the router is located primarily in the *mgmt* and *private* branches of the SNMP tree. The private MIB subtree for Advantech routers is defined by MIB files available in the public repository at: https://bitbucket.org/bbsmartworx/snmp-mib/ (which requires the RFC1155-SMI and RFC-1212 modules). These MIB files are maintained as up-to-date and authoritative sources. They can be loaded into any standard SNMP MIB browser to inspect object definitions, base data types, value ranges, and additional metadata associated with each OID.

Info

- All SNMP values are *read-only* by default, with the exception of two binary outputs: *ioOut0* (.1.3.6.1.4.1.30140.2.3.2.0) and *xccntOut1* (.1.3.6.1.4.1.30140.2.1.9.0). These two OIDs are *read-write* and may be modified via SNMP, provided that write access is enabled in the router's *SNMP* configuration settings.
- The router supports SNMP versions v1, v2c, and v3.

1.2 Tree Structure

Figure 1 shows the basic tree structure used to create all OIDs.

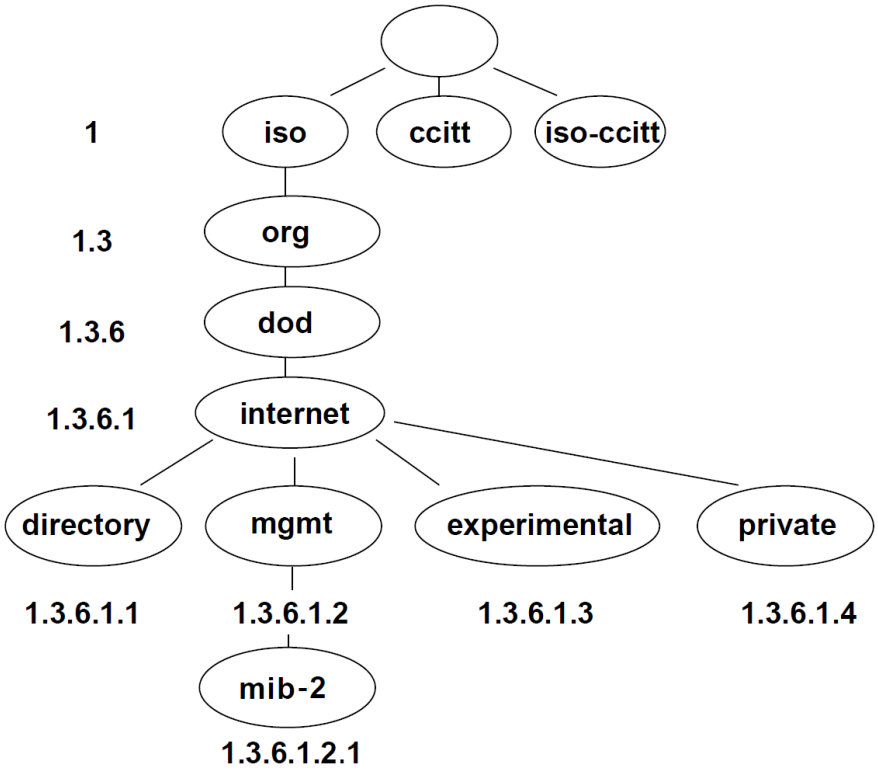

Figure 1: Basic structure

In the standard MIB tree, the *mgmt* item is further divided into the following groups:

OID	Group name	Note
.1.3.6.1.2.1.1	system	For more information see section 1.3
.1.3.6.1.2.1.2	interfaces	For more information see section 1.4
.1.3.6.1.2.1.3	at	*Not supported by Advantech routers*
.1.3.6.1.2.1.4	ip	For more information see section 1.5
.1.3.6.1.2.1.5	icmp	For more information see section 1.6
.1.3.6.1.2.1.6	tcp	For more information see section 1.7
.1.3.6.1.2.1.7	udp	For more information see section 1.8
.1.3.6.1.2.1.8	egp	*Not supported by Advantech routers*
.1.3.6.1.2.1.9	transmission	*Not supported by Advantech routers*
.1.3.6.1.2.1.10	snmp	*Not supported by Advantech routers*

Table 1: Basic groups of *mgmt* section

1.3 System

OID	Object	Description
.1.3.6.1.2.1.1.1	sysDescr	A textual description of the entity. Name of product and version of firmware in case of Advantech routers.
.1.3.6.1.2.1.1.2	sysObjectID	Identification of the network management subsystem contained in the entity. Contains OID of the product type in private tree from table 8.
.1.3.6.1.2.1.1.3	sysUpTime	The time (in hundredths of a second) since the device was last re-initialized.
.1.3.6.1.2.1.1.4	sysContact	The textual identification of the contact person, taken from router *Configuration* (page *Services*, *SNMP*). If it is unknown, the value is a zero-length string.
.1.3.6.1.2.1.1.5	sysName	System name (from *SNMP* configuration page). Otherwise a zero-length string.
.1.3.6.1.2.1.1.6	sysLocation	The physical location (from *SNMP* configuration page). Otherwise a zero-length string.
.1.3.6.1.2.1.1.7	sysServices	A value which indicates the set of services that this entity primarily offers. Value 4 for Advantech routers.

Table 2: System

1.4 Interfaces

OID	Table	Description
.1.3.6.1.2.1.2.1	ifNumber	The number of network interfaces (regardless of their current state).
.1.3.6.1.2.1.2.2	ifTable	A list of interface entries. Table with properties for every interface. The number of tables is given by the value of ifNumber.

Table 3: Interfaces

ifTable is the parent element for a group *ifEntry* (OID .1.3.6.1.2.1.2.2.1). This group includes scalar objects that store information about a particular interface. There are the following interface types:

- **eth*x*** – Ethernet interface:
  - **eth0** – primary Ethernet interface,
  - **eth1** – secondary Ethernet interface,
  - **eth2** – tertiary Ethernet interface,
- **lan*x*** – *x*th single Ethernet port of a switch (from left to right),
- **mwan0** – primary Mobile WAN interface,
- **mwan1** – secondary Mobile WAN interface,
- **wlan*x*** – WiFi interface:
  - **wlan0** – primary Access Point interface,
  - **wlan02** – secondary Access Point interface,
  - **wlan1** – primary Station interface,
  - **wlan2** – tertiary Access Point interface,
  - **wlan22** – quaternary Access Point interface,
  - **wlan3** – secondary Station interface.

1.5 IP

OID	Object	Description
.1.3.6.1.2.1.4.1	ipForwarding	The indication of whether this entity is acting as an IP gateway in respect to the forwarding of datagrams received by, but not addressed to, this entity.
.1.3.6.1.2.1.4.2	ipDefaultTTL	The default value inserted into the Time-To-Live field of the IP header of datagrams originated at this entity, whenever a TTL value is not supplied by the transport layer protocol.
.1.3.6.1.2.1.4.3	ipInReceives	The total number of input datagrams received from interfaces, including those received in error.
.1.3.6.1.2.1.4.4	ipInHdrErrors	The number of input datagrams discarded due to errors in their IP headers, including bad checksums, version number mismatch, other format errors, etc.
.1.3.6.1.2.1.4.5	ipInAddrErrors	The number of input datagrams discarded because the IP address in their IP header's destination field was not a valid address to be received at this entity.
.1.3.6.1.2.1.4.6	ipForwDatagrams	The number of input datagrams for which this entity was not their final IP destination, as a result of which an attempt was made to find a route to forward them to that final destination.
.1.3.6.1.2.1.4.7	ipInUnknownProtos	The number of locally-addressed datagrams received successfully but discarded because of an unknown or unsupported protocol.
.1.3.6.1.2.1.4.8	ipInDiscards	The number of input IP datagrams for which no problems were encountered to prevent their continued processing, but which were discarded (e.g., for lack of buffer space).
.1.3.6.1.2.1.4.9	ipInDelivers	The total number of input datagrams successfully delivered to IP user-protocols (including ICMP).
.1.3.6.1.2.1.4.10	ipOutRequests	The total number of IP datagrams which local IP userprotocols (including ICMP) supplied to IP in requests for transmission. Note that this counter does not include any datagrams counted in *ipForwDatagrams*.
.1.3.6.1.2.1.4.11	ipOutDiscards	The number of output IP datagrams for which no problem was encountered to prevent their transmission to their destination, but which were discarded (e.g., for lack of buffer space). Note that this counter would include datagrams counted in *ipForwDatagrams* if any such packets met this (discretionary) discard criterion.
.1.3.6.1.2.1.4.12	ipOutNoRoutes	The number of IP datagrams discarded because no route could be found to transmit them to their destination. Note that this counter includes any packets counted in *ipForwDatagrams* which meet this "no-route" criterion.
.1.3.6.1.2.1.4.13	ipReasmTimeout	The maximum number of seconds which received fragments are held while they are awaiting reassembly at this entity.
.1.3.6.1.2.1.4.14	ipReasmReqds	The number of IP fragments received which needed to be reassembled at this entity.
.1.3.6.1.2.1.4.15	ipReasmOKs	The number of IP datagrams successfully re-assembled.
.1.3.6.1.2.1.4.16	ipReasmFails	The number of failures detected by the IP re-assembly algorithm (for whatever reason: timed out, errors, etc).

Table 4: IP

OID	Object	Description
.1.3.6.1.2.1.4.17	ipFragOKs	The number of IP datagrams that have been successfully fragmented at this entity.
.1.3.6.1.2.1.4.18	ipFragFails	The number of IP datagrams that have been discarded because they needed to be fragmented at this entity but could not be.
.1.3.6.1.2.1.4.19	ipFragCreates	The number of IP datagram fragments that have been generated as a result of fragmentation at this entity.
.1.3.6.1.2.1.4.20	ipAddrTable	*Not supported by Advantech routers.*
.1.3.6.1.2.1.4.21	ipRouteTable	*Not supported by Advantech routers.*
.1.3.6.1.2.1.4.22	ipNetToMediaTable	*Not supported by Advantech routers.*
.1.3.6.1.2.1.4.23	ipRoutingDiscards	*Not supported by Advantech routers.*

Table 4: IP (continued)

1.6 ICMP

OID	Object	Description
.1.3.6.1.2.1.5.1	icmpInMsgs	The total number of ICMP messages which the entity received. Note that this counter includes all those counted by *icmpInErrors*.
.1.3.6.1.2.1.5.2	icmpInErrors	The number of ICMP messages which the entity received but determined as having ICMP-specific errors (bad ICMP checksums, bad length, etc.).
.1.3.6.1.2.1.5.3	icmpInDestUnreachs	The number of ICMP Destination Unreachable messages received.
.1.3.6.1.2.1.5.4	icmpInTimeExcds	The number of ICMP Time Exceeded messages received.
.1.3.6.1.2.1.5.5	icmpInParmProbs	The number of ICMP Parameter Problem messages received.
.1.3.6.1.2.1.5.6	icmpInSrcQuenchs	The number of ICMP Source Quench messages received.
.1.3.6.1.2.1.5.7	icmpInRedirects	The number of ICMP Redirect messages received.
.1.3.6.1.2.1.5.8	icmpInEchos	The number of ICMP Echo (request) messages received.
.1.3.6.1.2.1.5.9	icmpInEchoReps	The number of ICMP Echo Reply messages received.
.1.3.6.1.2.1.5.10	icmpInTimestamps	The number of ICMP Timestamp (request) messages received.
.1.3.6.1.2.1.5.11	icmpInTimestampReps	The number of ICMP Timestamp Reply messages received.
.1.3.6.1.2.1.5.12	icmpInAddrMasks	The number of ICMP Address Mask Request messages received.
.1.3.6.1.2.1.5.13	icmpInAddrMaskReps	The number of ICMP Address Mask Reply messages received.
.1.3.6.1.2.1.5.14	icmpOutMsgs	The total number of ICMP messages which this entity attempted to send. Note that this counter includes all those counted by *icmpOutErrors*.
.1.3.6.1.2.1.5.15	icmpOutErrors	The number of ICMP messages which this entity did not send due to problems discovered within ICMP such as a lack of buffers.
.1.3.6.1.2.1.5.16	icmpOutDestUnreachs	The number of ICMP Destination Unreachable messages sent.
.1.3.6.1.2.1.5.17	icmpOutTimeExcds	The number of ICMP Time Exceeded messages sent.
.1.3.6.1.2.1.5.18	icmpOutParmProbs	The number of ICMP Parameter Problem messages sent.
.1.3.6.1.2.1.5.19	icmpOutSrcQuenchs	The number of ICMP Source Quench messages sent.
.1.3.6.1.2.1.5.20	icmpOutRedirects	The number of ICMP Redirect messages sent. For a host, this object will always be zero, since hosts do not send redirects.
.1.3.6.1.2.1.5.21	icmpOutEchos	The number of ICMP Echo (request) messages sent.
.1.3.6.1.2.1.5.22	icmpOutEchoReps	The number of ICMP Echo Reply messages sent.
.1.3.6.1.2.1.5.23	icmpOutTimestamps	The number of ICMP Timestamp (request) messages sent.
.1.3.6.1.2.1.5.24	icmpOutTimestamp-Reps	The number of ICMP Timestamp Reply messages sent.
.1.3.6.1.2.1.5.25	icmpOutAddrMasks	The number of ICMP Address Mask Request messages sent.
.1.3.6.1.2.1.5.26	icmpOutAddr-MaskReps	The number of ICMP Address Mask Reply messages sent.

Table 5: ICMP

1.7 TCP

OID	Object	Description
.1.3.6.1.2.1.6.1	tcpRtoAlgorithm	The algorithm used to determine the timeout value used for retransmitting unacknowledged octets.
.1.3.6.1.2.1.6.2	tcpRtoMin	The minimum value permitted by a TCP implementation for the retransmission timeout, measured in milliseconds.
.1.3.6.1.2.1.6.3	tcpRtoMax	The maximum value permitted by a TCP implementation for the retransmission timeout, measured in milliseconds.
.1.3.6.1.2.1.6.4	tcpMaxConn	The limit on the total number of TCP connections the entity can support. In entities where the maximum number of connections is dynamic, this object should contain -1.
.1.3.6.1.2.1.6.5	tcpActiveOpens	The number of times TCP connections have made a direct transition to the SYN-SENT state from the CLOSED state.
.1.3.6.1.2.1.6.6	tcpPassiveOpens	The number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state.
.1.3.6.1.2.1.6.7	tcpAttemptFails	The number of times TCP connections have made a direct transition to the CLOSED state from either the SYN-SENT state or the SYN-RCVD state, plus the number of times TCP connections have made a direct transition to the LISTEN state from the SYN-RCVD state.
.1.3.6.1.2.1.6.8	tcpEstabResets	The number of times TCP connections have made a direct transition to the CLOSED state from either the ESTABLISHED state or the CLOSE-WAIT state.
.1.3.6.1.2.1.6.9	tcpCurrEstab	The number of TCP connections for which the current state is either ESTABLISHED or CLOSE-WAIT.
.1.3.6.1.2.1.6.10	tcpInSegs	The total number of segments received, including those received in error. This count includes segments received on currently established connections.
.1.3.6.1.2.1.6.11	tcpOutSegs	The total number of segments sent, including those on current connections but excluding those containing only retransmitted octets.
.1.3.6.1.2.1.6.12	tcpRetransSegs	The total number of segments retransmitted – that is, the number of TCP segments transmitted containing one or more previously transmitted octets.
.1.3.6.1.2.1.6.13	tcpConnTable	*Not supported by Advantech routers.*
.1.3.6.1.2.1.6.14	tcpInErrs	*Not supported by Advantech routers.*
.1.3.6.1.2.1.6.15	tcpOutRsts	*Not supported by Advantech routers.*

Table 6: TCP

1.8 UDP

OID	Object	Description
.1.3.6.1.2.1.7.1	udpInDatagram	The total number of UDP datagrams delivered to UDP users.
.1.3.6.1.2.1.7.2	udpNoPorts	The total number of received UDP datagrams for which there was no application at the destination port.
.1.3.6.1.2.1.7.3	udpInErrors	The number of received UDP datagrams that could not be delivered for reasons other than the lack of an application at the destination port.
.1.3.6.1.2.1.7.4	udpOutDatagrams	The total number of UDP datagrams sent from this entity.
.1.3.6.1.2.1.7.5	udpTable	*Not supported by Advantech routers.*

Table 7: UDP

2. Private Tree for Advantech Routers

This chapter describes the SNMP values that are specific for the *Advantech Czech* company (formerly *Conel*). The tree starts at OID = .1.3.6.1.4.1.30140. It can be interpreted as:

iso.org.dod.internet.private.enterprises.conel

Figure 2 shows the tree that is used for creating conel OIDs for Advantech routers.

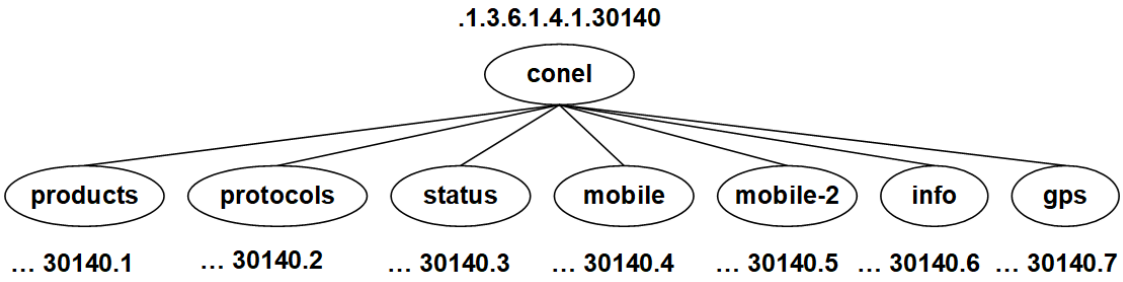

Figure 2: Private tree for Advantech routers

Info

Subtrees *mobile* and *mobile-2* are not available for routers with no cellular module.

2.1 Product OIDs

For products manufactured by *Advantech Czech* (formerly *Conel*), the following range of OIDs is used in `sysObjectID` (see Chapter 1.3):

Warning

Note on the OID Scheme (`.1.3.6.1.4.1.30140.1.X`):
The meaning of the last value (X) in the OID string depends on the product generation:
Legacy Scheme (`X < 1000`): X is simply a sequential number assigned to older products (e.g., X=42 for the `ICR-321x` series).
New Scheme (`X > 1000`): For newly introduced products and selected existing models, X corresponds directly to the numeric product identifier (e.g., X=3211 for the `ICR-3211`). In this new scheme, the OID name follows the format `routerICRX`.

OID	Name	Product
.1.3.6.1.4.1.30140.1.1	routerER75	EDGE router ER75
.1.3.6.1.4.1.30140.1.2	routerER75i	EDGE router ER75i
.1.3.6.1.4.1.30140.1.3	routerUR5	UMTS router UR5
.1.3.6.1.4.1.30140.1.4	routerUR5i	UMTS router UR5i
.1.3.6.1.4.1.30140.1.5	routerXR5i	Industrial router XR5i
.1.3.6.1.4.1.30140.1.6	routerER75iV2	EDGE router ER75i v2
.1.3.6.1.4.1.30140.1.7	routerUR5V2	UMTS router UR5 v2

Table 8: Product OIDs

OID	Name	Product
.1.3.6.1.4.1.30140.1.8	routerUR5iV2	UMTS router UR5i v2
.1.3.6.1.4.1.30140.1.9	routerXR5iV2	Industrial router XR5i v2
.1.3.6.1.4.1.30140.1.10	routerLR77V2	LTE router LR77 v2
.1.3.6.1.4.1.30140.1.11	routerCR10V2	CDMA router CR10 v2
.1.3.6.1.4.1.30140.1.12	routerUCR11V2	CDMA/UMTS router UCR11 v2
.1.3.6.1.4.1.30140.1.13	routerUR5iV2L	HSPA+ router UR5i v2 Libratum
.1.3.6.1.4.1.30140.1.14	routerSpectre3G	HSPA+ router UR5i v2 SL for US
.1.3.6.1.4.1.30140.1.15	routerSpectreRT	Industrial router XR5i v2 SL for US
.1.3.6.1.4.1.30140.1.16	routerRR75i	GSM-R router RR75i v2
.1.3.6.1.4.1.30140.1.17	routerSpectreLTEAT	LTE router LR77 v2 SL for US AT&T
.1.3.6.1.4.1.30140.1.18	routerXR5iV2E	Industrial router XR5i v2 Libratum
.1.3.6.1.4.1.30140.1.19	routerBiviasV2HC	Twin cellular module router Bivias v2 HC
.1.3.6.1.4.1.30140.1.20	routerBiviasV2LC	Twin cellular module router Bivias v2 LC
.1.3.6.1.4.1.30140.1.21	routerSpectreLTEVZ	LTE router LR77 v2 SL for US Verizon
.1.3.6.1.4.1.30140.1.22	routerBiviasV2LL	Twin cellular module router Bivias v2 LL
.1.3.6.1.4.1.30140.1.23	routerBiviasV2LH	Twin cellular module router Bivias v2 LH
.1.3.6.1.4.1.30140.1.24	routerBiviasV2HH	Twin cellular module router Bivias v2 HH
.1.3.6.1.4.1.30140.1.25	routerLR77V2L	LTE router LR77 v2 Libratum
.1.3.6.1.4.1.30140.1.26	routerSpectreV3HSPA	*not launched*
.1.3.6.1.4.1.30140.1.27	routerSpectreV3LTE	LTE router SmartFlex
.1.3.6.1.4.1.30140.1.28	routerSpectreV3CDMA	*not launched*
.1.3.6.1.4.1.30140.1.29	routerSpectreV3ERT	Industrial router SmartFlex SR300
.1.3.6.1.4.1.30140.1.32	routerSpectreV3TLTE	Twin module LTE router SmartMotion
.1.3.6.1.4.1.30140.1.35	routerSpectreV3LTEUS	LTE router SmartFlex for US
.1.3.6.1.4.1.30140.1.36	routerSpectreV3LLTE	LTE router SmartStart
.1.3.6.1.4.1.30140.1.37	routerSpectreV3LLTEUS	LTE router SmartStart for US
.1.3.6.1.4.1.30140.1.38	routerSpectreV3ERTUS	*not launched*
.1.3.6.1.4.1.30140.1.39	routerSpectreV3LERT	*not launched*
.1.3.6.1.4.1.30140.1.40	routerSpectreV3LERTUS	*not launched*
.1.3.6.1.4.1.30140.1.41	routerSpectreV3TLTEUS	*not launched*
.1.3.6.1.4.1.30140.1.42	routerICR321X	LTE router ICR-321x
.1.3.6.1.4.1.30140.1.43	routerICR323X	LTE router ICR-323x
.1.3.6.1.4.1.30140.1.44	routerICR324X	LTE router ICR-324x
.1.3.6.1.4.1.30140.1.45	routerICR320X	LAN router ICR-320x
.1.3.6.1.4.1.30140.1.46	routerICR383X	LTE industrial router ICR-383x
.1.3.6.1.4.1.30140.1.47	routerICR213X	HSPA+ industrial router ICR-213x
.1.3.6.1.4.1.30140.1.48	routerICR233X	LTE industrial router ICR-233x
.1.3.6.1.4.1.30140.1.49	routerICR440X	LAN industrial router ICR-440x
.1.3.6.1.4.1.30140.1.50	routerICR443X	LTE industrial router ICR-443x
.1.3.6.1.4.1.30140.1.51	routerICR444X	LTE industrial router ICR-444x
.1.3.6.1.4.1.30140.1.52	routerICR203X	LTE industrial router ICR-203x
.1.3.6.1.4.1.30140.1.53	routerICR204X	LTE industrial router ICR-204x
.1.3.6.1.4.1.30140.1.54	routerICR240X	LAN industrial router ICR-240x

Table 8: Product OIDs (continued)

OID	Name	Product
.1.3.6.1.4.1.30140.1.55	routerICR243X	LTE industrial router ICR-243x
.1.3.6.1.4.1.30140.1.56	routerICR244X	LTE industrial router ICR-244x
.1.3.6.1.4.1.30140.1.57	routerICR201X	LTE industrial router ICR-201X
.1.3.6.1.4.1.30140.1.58	routerICR241X	LTE industrial router ICR-241X
.1.3.6.1.4.1.30140.1.59	routerICR445X	LTE industrial router ICR-445X
.1.3.6.1.4.1.30140.1.60	routerICR446X	LTE industrial router ICR-446X
.1.3.6.1.4.1.30140.1.61	routerICR250X	LTE industrial router ICR-250X
.1.3.6.1.4.1.30140.1.62	routerICR253X	LTE industrial router ICR-253X
.1.3.6.1.4.1.30140.1.63	routerICR254X	LTE industrial router ICR-254X
.1.3.6.1.4.1.30140.1.64	routerICR260X	LTE industrial router ICR-260X
.1.3.6.1.4.1.30140.1.65	routerICR263X	LTE industrial router ICR-263X
.1.3.6.1.4.1.30140.1.66	routerICR264X	LTE industrial router ICR-264X
.1.3.6.1.4.1.30140.1.67	routerICR270X	LAN industrial router ICR-270X
.1.3.6.1.4.1.30140.1.68	routerICR271X	LTE industrial router ICR-271X
.1.3.6.1.4.1.30140.1.69	routerICR273X	LTE industrial router ICR-273X
.1.3.6.1.4.1.30140.1.70	routerICR274X	LTE industrial router ICR-274X
.1.3.6.1.4.1.30140.1.71	routerICR280X	LAN industrial router ICR-280X
.1.3.6.1.4.1.30140.1.72	routerICR281X	LTE industrial router ICR-281X
.1.3.6.1.4.1.30140.1.73	routerICR283X	LTE industrial router ICR-283X
.1.3.6.1.4.1.30140.1.74	routerICR284X	LTE industrial router ICR-284X
.1.3.6.1.4.1.30140.1.75	routerICR410X	LAN industrial router ICR-410X
.1.3.6.1.4.1.30140.1.76	routerICR413X	LTE industrial router ICR-413X
.1.3.6.1.4.1.30140.1.77	routerICR414X	LTE industrial router ICR-414X
.1.3.6.1.4.1.30140.1.78	routerICR416X	5G industrial router ICR-416X
.1.3.6.1.4.1.30140.1.79	routerICR417X	5G industrial router ICR-417X
.1.3.6.1.4.1.30140.1.80	routerICR420X	LAN industrial router ICR-420X
.1.3.6.1.4.1.30140.1.81	routerICR423X	LTE industrial router ICR-423X
.1.3.6.1.4.1.30140.1.82	routerICR424X	LTE industrial router ICR-424X
.1.3.6.1.4.1.30140.1.83	routerICR426X	5G industrial router ICR-426X
.1.3.6.1.4.1.30140.1.84	routerICR427X	5G industrial router ICR-427X
.1.3.6.1.4.1.30140.1.85	routerICR160X	LTE industrial router ICR-160X
.1.3.6.1.4.1.30140.1.86	routerICR164X	LTE industrial router ICR-164X
.1.3.6.1.4.1.30140.1.87	routerICR170X	5G industrial router ICR-170X
.1.3.6.1.4.1.30140.1.88	routerICR174X	5G industrial router ICR-174X
.1.3.6.1.4.1.30140.1.89	routerICR447X	5G industrial router ICR-447X
.1.3.6.1.4.1.30140.1.2452	routerICR2452	LAN industrial router ICR-2452
.1.3.6.1.4.1.30140.1.2701	routerICR2701	LAN industrial router ICR-2701
.1.3.6.1.4.1.30140.1.2734	routerICR2734	LTE industrial router ICR-2734
.1.3.6.1.4.1.30140.1.2834	routerICR2834	LTE industrial router ICR-2834
.1.3.6.1.4.1.30140.1.3211	routerICR3211	LTE industrial router ICR-3211
.1.3.6.1.4.1.30140.1.3231	routerICR3231	LTE industrial router ICR-3231
.1.3.6.1.4.1.30140.1.3232	routerICR3232	LTE industrial router ICR-3232
.1.3.6.1.4.1.30140.1.3241	routerICR3241	LTE industrial router ICR-3241

Table 8: Product OIDs (continued)

2.2 Protocols

2.2.1 XC-CNT

Info

To use the *xccnt* part of the tree, you have to use the v2 router with XC-CNT interface (expansion board) installed and activated on *SNMP* configuration page in the router. See the *Configuration Manual for v2 Routers* for more details. It is possible to set the binary output *xccntOut1* (.1.3.6.1.4.1.30140.2.1.9.0) via SNMP. Other values are read-only. The following range of OIDs is used for the CNT expansion port:

OID	Name	Description
.1.3.6.1.4.1.30140.2.1.1.0	xccntAn1	Analogy input AN1 (range 0-4095)
.1.3.6.1.4.1.30140.2.1.2.0	xccntAn2	Analogy input AN2 (range 0-4095)
.1.3.6.1.4.1.30140.2.1.3.0	xccntCnt1	Counter input CNT1 (range 0-4294967295)
.1.3.6.1.4.1.30140.2.1.4.0	xccntCnt2	Counter input CNT2 (range 0-4294967295)
.1.3.6.1.4.1.30140.2.1.5.0	xccntBin1	Binary input BIN1 (values 0,1)
.1.3.6.1.4.1.30140.2.1.6.0	xccntBin2	Binary input BIN2 (values 0,1)
.1.3.6.1.4.1.30140.2.1.7.0	xccntBin3	Binary input BIN3 (values 0,1)
.1.3.6.1.4.1.30140.2.1.8.0	xccntBin4	Binary input BIN4 (values 0,1)
.1.3.6.1.4.1.30140.2.1.9.0	xccntOut1	Binary output OUT1 (values 0,1)

Table 9: OIDs for XC-CNT

2.2.2 M-BUS

Info

The following range of OIDs is used for M-BUS expansion port. It can be used only in v2 routers and it is necessary to enable sending SNMP values on *SNMP* Configuration page in the router (*Enable M-BUS extension*). There are 255 branches in the mbus tree. Every branch is defined by mbus device address in hexadecimal format. Textual names of branches (addresses) are *mbus00* to *mbusFF*, which is equivalent to addresses 0 to 255. Every address branch carries the following range of OIDs:

OID	Name	Description
.1.3.6.1.4.1.30140.2.2.<address>.1.0	IdNumber	Number of meter
.1.3.6.1.4.1.30140.2.2.<address>.2.0	Manufacturer	Manufacturer
.1.3.6.1.4.1.30140.2.2.<address>.3.0	Version	Specified meter version
.1.3.6.1.4.1.30140.2.2.<address>.4.0	Medium	Type of metered medium
.1.3.6.1.4.1.30140.2.2.<address>.5.0	Status	Errors report
.1.3.6.1.4.1.30140.2.2.<address>.6.0	VIF00	Value information field
.1.3.6.1.4.1.30140.2.2.<address>.7.0	Value00	Out
.1.3.6.1.4.1.30140.2.2.<address>.8.0	VIF01	1. VIF – value information field
.1.3.6.1.4.1.30140.2.2.<address>.9.0	Value01	1. measured value
⋮	⋮	⋮
.1.3.6.1.4.1.30140.2.2.<address>.100.0	VIF2F	47. VIF – value information field
.1.3.6.1.4.1.30140.2.2.<address>.101.0	Value2F	47. measured value

Table 10: OIDs for M-BUS

Where <address> is a number from range 0 to 255 (address of MBUS device). Usable are addresses 0 to 250, the rest is reserved or used by broadcast.

2.2.3 Binary Input and Output

Info

It is necessary to activate I/O reading on *SNMP* page in the router's configuration Web interface. It is possible to set one binary output *ioOut0* (.1.3.6.1.4.1.30140.2.3.2.0) via SNMP. Other values are read-only. The following range of OIDs is used for binary input and output:

OID	Name	Description
.1.3.6.1.4.1.30140.2.3.1.0	ioBin0	Binary input BIN0 (values 0,1)
.1.3.6.1.4.1.30140.2.3.2.0	ioOut0	Binary output OUT0 (values 0,1)
.1.3.6.1.4.1.30140.2.3.3.0	ioBin1	Binary input BIN1 (values 0,1)
.1.3.6.1.4.1.30140.2.3.4.0	ioOut1	Binary output OUT1 (values 0,1)
.1.3.6.1.4.1.30140.2.3.5.0	ioBin2	Binary input BIN2 (values 0,1)
.1.3.6.1.4.1.30140.2.3.6.0	—	N/A
.1.3.6.1.4.1.30140.2.3.7.0	ioBin3	Binary input BIN3 (values 0,1)
.1.3.6.1.4.1.30140.2.3.8.0	—	N/A

Table 11: OIDs for binary I/O

2.3 Status

OID	Name	Description
.1.3.6.1.4.1.30140.3.1.0	statusMBusOverload1	M-BUS overload 1 (values 0,1)
.1.3.6.1.4.1.30140.3.2.0	statusMBusOverload2	M-BUS overload 2 (values 0,1)
.1.3.6.1.4.1.30140.3.3.0	statusTemperature	Internal temperature[1]
.1.3.6.1.4.1.30140.3.4.0	statusVoltage	Power voltage[1] (input power supply)
.1.3.6.1.4.1.30140.3.5.0[2]	statusRTCBattery	RTC backup battery state: 0 = unknown 1 = ok 2 = empty
.1.3.6.1.4.1.30140.3.6.0	statusCPUUsage	CPU Usage (in %)
.1.3.6.1.4.1.30140.3.7.0	statusRAMUsage	RAM Usage (in %)
.1.3.6.1.4.1.30140.3.8.0	statusRAMUsed	RAM Used (in bytes)
.1.3.6.1.4.1.30140.3.9.0	statusRAMFree	RAM Free (in bytes)
.1.3.6.1.4.1.30140.3.10.0	statusRAMTotal	RAM Total (in bytes)

Table 12: Status OIDs

[1] Information about power voltage and internal temperature:
- Is available only for routers with firmware 3.0.4 and later.
- For v2 routers, it is necessary to have router with RB-v2-6 board and later.
- It is not supported by ICR-2[0|4|5|6]xx routers.

[2] Supported on routers of v3 platform only.

2.4 Mobile

OID	Name	Description
.1.3.6.1.4.1.30140.4.1.0	mobileTechnology	*Values 0–24, see Table 2.4.1*
.1.3.6.1.4.1.30140.4.2.0	mobilePLMN	Operator code
.1.3.6.1.4.1.30140.4.3.0	mobileCell	Cell
.1.3.6.1.4.1.30140.4.4.0	mobileChannel	Channel
.1.3.6.1.4.1.30140.4.5.0	mobileSignalStrength	Signal strength for cell (dBm)
.1.3.6.1.4.1.30140.4.6.0	mobileChannelN1	Adjacent channel No. 1
.1.3.6.1.4.1.30140.4.7.0	mobileSignalStrengthN1	Signal strength, cell of adjacent channel No. 1
.1.3.6.1.4.1.30140.4.8.0	mobileChannelN2	Adjacent channel No. 2
.1.3.6.1.4.1.30140.4.9.0	mobileSignalStrengthN2	Signal strength, cell of adjacent channel No. 2
.1.3.6.1.4.1.30140.4.10.0	mobileChannelN3	Adjacent channel No. 3
.1.3.6.1.4.1.30140.4.11.0	mobileSignalStrengthN3	Signal strength, cell of adjacent channel No. 3
.1.3.6.1.4.1.30140.4.12.0	mobileChannelN4	Adjacent channel No. 4
.1.3.6.1.4.1.30140.4.13.0	mobileSignalStrengthN4	Signal strength, cell of adjacent channel No. 4
.1.3.6.1.4.1.30140.4.14.0	mobileChannelN5	Adjacent channel No. 5
.1.3.6.1.4.1.30140.4.15.0	mobileSignalStrengthN5	Signal strength, cell of adjacent channel No. 5
.1.3.6.1.4.1.30140.4.16.0	mobileUpTime	Elapsed time since the connection was established
.1.3.6.1.4.1.30140.4.17.0	mobileConnect	Timestamp of the last connection (otherwise 0)
.1.3.6.1.4.1.30140.4.18.0	mobileDisconnect	Timestamp of the last disconnection event
.1.3.6.1.4.1.30140.4.19.0	mobileCard	SIM card number: primary (0), secondary (1) or tertiary (2)
.1.3.6.1.4.1.30140.4.20.0	mobileIPAddress	Assigned IP address (or zeros)
.1.3.6.1.4.1.30140.4.21.0	mobileLatency	Response time – keeps a valid value only when sending trap (otherwise the value is 0)
.1.3.6.1.4.1.30140.4.22.0	mobileReportPeriod	Period of sending reports to the R-SeeNet
.1.3.6.1.4.1.30140.4.23.0	mobileRegistration	State of the network registration: unknown (0), idle (1), search (2), denied (3), home (4) or foreign (5)
.1.3.6.1.4.1.30140.4.24.0	mobileOperator	Mobile network (operator) the router is connected to
.1.3.6.1.4.1.30140.4.25.0	mobileLAC	Location Area Code
.1.3.6.1.4.1.30140.4.26.0	mobileSignalQuality	Signal quality of the selected cell
.1.3.6.1.4.1.30140.4.27.0	mobileCSQ	Signal strength number (0 to 31)
.1.3.6.1.4.1.30140.4.28.0	mobilePNOffset	`[obsolete]` PN Offset (0 to 511)
.1.3.6.1.4.1.30140.4.29.0	mobileBand	Cellular band
.1.3.6.1.4.1.30140.4.30.0	mobileRSSI	RSSI signal strength
.1.3.6.1.4.1.30140.4.31.0	mobileRSCP	RSCP signal strength
.1.3.6.1.4.1.30140.4.32.0	mobileRSRP	RSRP signal strength
.1.3.6.1.4.1.30140.4.33.0	mobileRSRQ	RSRQ signal strength
.1.3.6.1.4.1.30140.4.34.0	mobileEcIo	Ec/Io signal strength

Table 13: Mobile OIDs

OID	Name	Description
.1.3.6.1.4.1.30140.4.35.0	mobileNRBand	NR Cellular band
.1.3.6.1.4.1.30140.4.36.0	mobileNRChannel	NR channel
.1.3.6.1.4.1.30140.4.37.0	mobileNRRSSI	NR RSSI signal strength
.1.3.6.1.4.1.30140.4.38.0	mobileNRRSRP	NR RSRP signal strength
.1.3.6.1.4.1.30140.4.39.0	mobileNRRSRQ	NR RSRQ signal strength
.1.3.6.1.4.1.30140.4.40.0	mobileNRSINR	NR SINR signal strength
.1.3.6.1.4.1.30140.4.41.0	mobileSINR	SINR signal strength
.1.3.6.1.4.1.30140.4.101.0	mobile2Technology	Second cellular module: *Values 0–24, see Table 2.4.1*
.1.3.6.1.4.1.30140.4.102.0	mobile2PLMN	Second cellular module: Operator code
.1.3.6.1.4.1.30140.4.103.0	mobile2Cell	Second cellular module: Cell
.1.3.6.1.4.1.30140.4.104.0	mobile2Channel	Second cellular module: Channel
.1.3.6.1.4.1.30140.4.105.0	mobile2SignalStrength	Second cellular module: Signal strength for cell (dBm)
.1.3.6.1.4.1.30140.4.106.0	mobile2ChannelN1	Second cellular module: Adjacent channel No. 1
.1.3.6.1.4.1.30140.4.107.0	mobile2Signal-StrengthN1	Second cellular module: Signal strength, cell of adjacent channel No. 1
.1.3.6.1.4.1.30140.4.108.0	mobile2ChannelN2	Second cellular module: Adjacent channel No. 2
.1.3.6.1.4.1.30140.4.109.0	mobile2Signal-StrengthN2	Second cellular module: Signal strength, cell of adjacent channel No. 2
.1.3.6.1.4.1.30140.4.110.0	mobile2ChannelN3	Second cellular module: Adjacent channel No. 3
.1.3.6.1.4.1.30140.4.111.0	mobile2Signal-StrengthN3	Second cellular module: Signal strength, cell of adjacent channel No. 3
.1.3.6.1.4.1.30140.4.112.0	mobile2ChannelN4	Second cellular module: Adjacent channel No. 4
.1.3.6.1.4.1.30140.4.113.0	mobile2Signal-StrengthN4	Second cellular module: Signal strength, cell of adjacent channel No. 4
.1.3.6.1.4.1.30140.4.114.0	mobile2ChannelN5	Second cellular module: Adjacent channel No. 5
.1.3.6.1.4.1.30140.4.115.0	mobile2Signal-StrengthN5	Second cellular module: Signal strength, cell of adjacent channel No. 5
.1.3.6.1.4.1.30140.4.116.0	mobile2UpTime	Second cellular module: Elapsed time since the connection was established
.1.3.6.1.4.1.30140.4.117.0	mobile2Connect	Second cellular module: Timestamp of the last connection (otherwise 0)
.1.3.6.1.4.1.30140.4.118.0	mobile2Disconnect	Second cellular module: Timestamp of the last disconnection event
.1.3.6.1.4.1.30140.4.119.0	mobile2Card	Second cellular module: SIM card number: primary (0), secondary (1) or tertiary (2)
.1.3.6.1.4.1.30140.4.120.0	mobile2IPAddress	Second cellular module: Assigned IP address (or zeros)
.1.3.6.1.4.1.30140.4.121.0	mobile2Latency	Second cellular module: Response time – keeps a valid value only when sending trap (otherwise the value is 0)
.1.3.6.1.4.1.30140.4.122.0	mobile2ReportPeriod	Second cellular module: Period of sending reports to the R-SeeNet

Table 13: Mobile OIDs (continued)

OID	Name	Description
.1.3.6.1.4.1.30140.4.123.0	mobile2Registration	Second cellular module: State of the network registration: unknown (0), idle (1), search (2), denied (3), home (4) or foreign (5)
.1.3.6.1.4.1.30140.4.124.0	mobile2Operator	Second cellular module: Mobile network (operator) the router is connected to
.1.3.6.1.4.1.30140.4.125.0	mobile2LAC	Second cellular module: Location Area Code
.1.3.6.1.4.1.30140.4.126.0	mobile2SignalQuality	Second cellular module: Signal quality of the selected cell
.1.3.6.1.4.1.30140.4.127.0	mobile2CSQ	Second cellular module: Signal strength number (0 to 31)
.1.3.6.1.4.1.30140.4.128.0	mobile2PNOffset	PN Offset (0 to 511)
.1.3.6.1.4.1.30140.4.129.0	mobile2Band	Second cellular module: Cellular band
.1.3.6.1.4.1.30140.4.130.0	mobile2RSSI	Second cellular module: RSSI signal strength
.1.3.6.1.4.1.30140.4.131.0	mobile2RSCP	Second cellular module: RSCP signal strength
.1.3.6.1.4.1.30140.4.132.0	mobile2RSRP	Second cellular module: RSRP signal strength
.1.3.6.1.4.1.30140.4.133.0	mobile2RSRQ	Second cellular module: RSRQ signal strength
.1.3.6.1.4.1.30140.4.134.0	mobile2EcIo	Second cellular module: Ec/Io signal strength
.1.3.6.1.4.1.30140.4.135.0	mobile2NRBand	Second cellular module: NR Cellular band
.1.3.6.1.4.1.30140.4.136.0	mobile2NRChannel	Second cellular module: NR channel
.1.3.6.1.4.1.30140.4.137.0	mobile2NRRSSI	Second cellular module: NR RSSI signal strength
.1.3.6.1.4.1.30140.4.138.0	mobile2NRRSRP	Second cellular module: NR RSRP signal strength
.1.3.6.1.4.1.30140.4.139.0	mobile2NRRSRQ	Second cellular module: NR RSRQ signal strength
.1.3.6.1.4.1.30140.4.140.0	mobileNRSINR	Second cellular module: NR SINR signal strength
.1.3.6.1.4.1.30140.4.141.0	mobileSINR	Second cellular module: SINR signal strength

Table 13: Mobile OIDs (continued)

2.4.1 Mobile Technology Values

The *mobileTechnology* OID (.1.3.6.1.4.1.30140.4.1.0) returns a numeric value indicating the current cellular technology in use. The possible values are listed here:

- 0 – none
- 2 – gprs
- 4 – edge
- 6 – umts
- 8 – hsdpa
- 10 – hsupa
- 12 – hspa
- 14 – lte
- 16 – cdma
- 18 – evdo
- 20 – evdo0
- 22 – evdoA
- 24 – evdoB
- 26 – nbiot
- 28 – lteM
- 30 – nr5gNSA
- 32 – nr5gSA

2.5 Mobile-2

These OIDs contain statistical and analytical data for the cellular connection, covering time periods such as today, yesterday, this week, last week, and others. The types of SNMP values (OIDs) are the same for every time period, as described in the table below for *mobileToday*.

2.5.1 MobileToday

OID	Name	Description
.1.3.6.1.4.1.30140.5.1.1.0	mobileTodayRxPri	Received data – primary SIM card
.1.3.6.1.4.1.30140.5.1.2.0	mobileTodayRxSec	Received data – secondary SIM card
.1.3.6.1.4.1.30140.5.1.3.0	mobileTodayTxPri	Sent data – primary SIM card
.1.3.6.1.4.1.30140.5.1.4.0	mobileTodayTxSec	Sent data – secondary SIM card
.1.3.6.1.4.1.30140.5.1.5.0	mobileTodayConnectionsPri	Number of connections – primary SIM card
.1.3.6.1.4.1.30140.5.1.6.0	mobileTodayConnectionsSec	Number of connections – secondary SIM card
.1.3.6.1.4.1.30140.5.1.7.0	mobileTodayOnlinePri	Time on primary SIM card
.1.3.6.1.4.1.30140.5.1.8.0	mobileTodayOnlineSec	Time on secondary SIM card
.1.3.6.1.4.1.30140.5.1.9.0	mobileTodayOffline	Time in offline mode
.1.3.6.1.4.1.30140.5.1.10.0	mobileTodayCells	Number of cells (during the period)
.1.3.6.1.4.1.30140.5.1.11.0	mobileTodaySignalAvg	Average signal strength
.1.3.6.1.4.1.30140.5.1.12.0	mobileTodaySignalMin	Minimum signal strength
.1.3.6.1.4.1.30140.5.1.13.0	mobileTodaySignalMax	Maximum signal strength
.1.3.6.1.4.1.30140.5.1.14.0	mobileTodayDateMin	Time stamp for LevelMin (the last moment when signal strength was minimal)
.1.3.6.1.4.1.30140.5.1.15.0	mobileTodayDateMax	Time stamp for LevelMax (the last moment when signal strength was maximal)
.1.3.6.1.4.1.30140.5.1.101.0	mobile2TodayRxPri	Second cellular module: Received data – primary SIM card
.1.3.6.1.4.1.30140.5.1.102.0	mobile2TodayRxSec	Second cellular module: Received data – secondary SIM card
.1.3.6.1.4.1.30140.5.1.103.0	mobile2TodayTxPri	Second cellular module: Sent data – primary SIM card
.1.3.6.1.4.1.30140.5.1.104.0	mobile2TodayTxSec	Second cellular module: Sent data – secondary SIM card
.1.3.6.1.4.1.30140.5.1.105.0	mobile2TodayConnectionsPri	Second cellular module: Number of connections – primary SIM card
.1.3.6.1.4.1.30140.5.1.106.0	mobile2TodayConnectionsSec	Second cellular module: Number of connections – secondary SIM card
.1.3.6.1.4.1.30140.5.1.107.0	mobile2TodayOnlinePri	Second cellular module: Time on primary SIM card
.1.3.6.1.4.1.30140.5.1.108.0	mobile2TodayOnlineSec	Second cellular module: Time on secondary SIM card

Table 14: MobileToday OIDs

OID	Name	Description
.1.3.6.1.4.1.30140.5.1.109.0	mobile2TodayOffline	Second cellular module: Time in offline mode
.1.3.6.1.4.1.30140.5.1.110.0	mobile2TodayCells	Second cellular module: Number of cells (during the period)
.1.3.6.1.4.1.30140.5.1.111.0	mobile2TodaySignalAvg	Second cellular module: Average signal strength
.1.3.6.1.4.1.30140.5.1.112.0	mobile2TodaySignalMin	Second cellular module: Minimum signal strength
.1.3.6.1.4.1.30140.5.1.113.0	mobile2TodaySignalMax	Second cellular module: Maximum signal strength
.1.3.6.1.4.1.30140.5.1.114.0	mobile2TodayDateMin	Second cellular module: Time stamp for LevelMin (the last moment when signal strength was minimal)
.1.3.6.1.4.1.30140.5.1.115.0	mobile2TodayDateMax	Second cellular module: Time stamp for LevelMax (the last moment when signal strength was maximal)

Table 14: MobileToday OIDs (continued)

2.5.2 MobileYesterday

The items in this group correspond to those listed in Table 14, but contain values for the previous day. Each item name uses *Yesterday* in place of *Today*. The range of object identifiers starts at .1.3.6.1.4.1.30140.5.**2**.1.

2.5.3 MobileThisWeek

The items in this group correspond to those listed in Table 14, but contain values for the current week. Each item name uses *ThisWeek* in place of *Today*. The range of object identifiers starts at .1.3.6.1.4.1.30140.5.**3**.1.

2.5.4 MobileLastWeek

The items in this group correspond to those listed in Table 14, but contain values for the previous week. Each item name uses *LastWeek* in place of *Today*. The range of object identifiers starts at .1.3.6.1.4.1.30140.5.**4**.1.

2.5.5 MobileThisPeriod

The items in this group correspond to those listed in Table 14, but contain values for the current billing period. Each item name uses *ThisPeriod* in place of *Today*. The range of object identifiers starts at .1.3.6.1.4.1.-30140.5.**5**.1.

2.5.6 MobileLastPeriod

The items in this group correspond to those listed in Table 14, but contain values for the previous billing period. Each item name uses *LastPeriod* in place of *Today*. The range of object identifiers starts at .1.3.6.1.4.1.-30140.5.**6**.1.

2.6 Info

This group of OIDs stores the basic information about the router.

OID	Name	Description
.1.3.6.1.4.1.30140.6.1.0	infoProduct	Designation of the product
.1.3.6.1.4.1.30140.6.2.0	infoFirmware	Information about firmware
.1.3.6.1.4.1.30140.6.3.0	infoSN	Serial number of the product
.1.3.6.1.4.1.30140.6.4.0	infoIMEI	IMEI number of the cellular module
.1.3.6.1.4.1.30140.6.5.0	infoESN	`[obsolete]` ESN number of the cellular module
.1.3.6.1.4.1.30140.6.6.0	infoMEID	`[obsolete]` MEID number of the cellular module
.1.3.6.1.4.1.30140.6.7.0	infoICCID	ICCID number of the SIM card in use on first cellular module
.1.3.6.1.4.1.30140.6.8.0	infoIMSI	IMSI number of the SIM card in use on first cellular module
.1.3.6.1.4.1.30140.6.9.0	infoRevision	Product revision, e.g. *2.0* for product revision printed on product as *Rev.2.0*.
.1.3.6.1.4.1.30140.6.10.0	infoProfile	Current active configuration profile (see *Administration → Change Profile* in the router's GUI). Possible values: *standard*, *alt1*, *alt2* and *alt3*.
.1.3.6.1.4.1.30140.6.11.0	infoCustom	A custom field designated for user-defined purposes.
.1.3.6.1.4.1.30140.6.12.0	infoPN	Part Number of the product
.1.3.6.1.4.1.30140.6.104.0	info2IMEI	IMEI number of the second cellular module
.1.3.6.1.4.1.30140.6.105.0	info2ESN	ESN number of the second cellular module
.1.3.6.1.4.1.30140.6.106.0	info2MEID	MEID number of the second cellular module
.1.3.6.1.4.1.30140.6.107.0	info2ICCID	ICCID number of the SIM card in use on second cellular module
.1.3.6.1.4.1.30140.6.108.0	info2IMSI	IMSI number of the SIM card in use on second cellular module

Table 15: Info OIDs

2.7 GPS

Warning

To use the *GPS* part of the SNMP tree, the router must support GPS functionality:

- Starting with firmware version 6.6.0, GPS functionality is included as a standard feature. It can be configured via *Configuration* → *Services* → *GNSS* and partially through *Configuration* → *Services* → *SNMP*.
- For firmware versions prior to 6.6.0, the *GPS* router app must be installed on the router. The app is available for download on our Engineering Portal — see the *Router Apps* page.

The following range of OIDs is then used for sending GPS messages:

OID	Name	Description
.1.3.6.1.4.1.30140.7.1.0	gpsTimeUTC	Current time in hhmmss format (UTC-based).
.1.3.6.1.4.1.30140.7.2.0	gpsLatitude	Geographic coordinate specifying the north-south position (in degrees).
.1.3.6.1.4.1.30140.7.3.0	gpsLongitude	Geographic coordinate that specifies the east-west position (in degrees).
.1.3.6.1.4.1.30140.7.4.0	gpsAltitude	Specifies the height above sea level of a location (in meters).
.1.3.6.1.4.1.30140.7.5.0	gpsSatellites	Number of satellites currently visible to the router.
.1.3.6.1.4.1.30140.7.6.0	gpsFixStatus	Indicates the availability of data and its quality. If no data is available, the value of this item is 0. A nonzero value indicates the presence of data.
.1.3.6.1.4.1.30140.7.7.0	gpsSpeedOver Ground	Current speed of the router relative to Earth's surface (in knots).
.1.3.6.1.4.1.30140.7.8.0	gpsCourseOver Ground	The actual course the router is moving along at the moment relative to Earth's surface (in degrees).
.1.3.6.1.4.1.30140.7.9.0	gpsDate	Current date in ddmmyy format.

Table 16: GPS OIDs

3. Usage on Advantech Routers

3.1 SNMP Configuration

This is an example of basic SNMP configuration of the router. You can see the *SNMP Configuration* page in Figure 3. It is accessible in the router's Web interface in the *Configuration* section, *Services*. To enable SNMP for the router, check the *Enable SNMP agent* box and click *Apply* button. Optionally fill in the Name, Location and Contact information and configure other details.

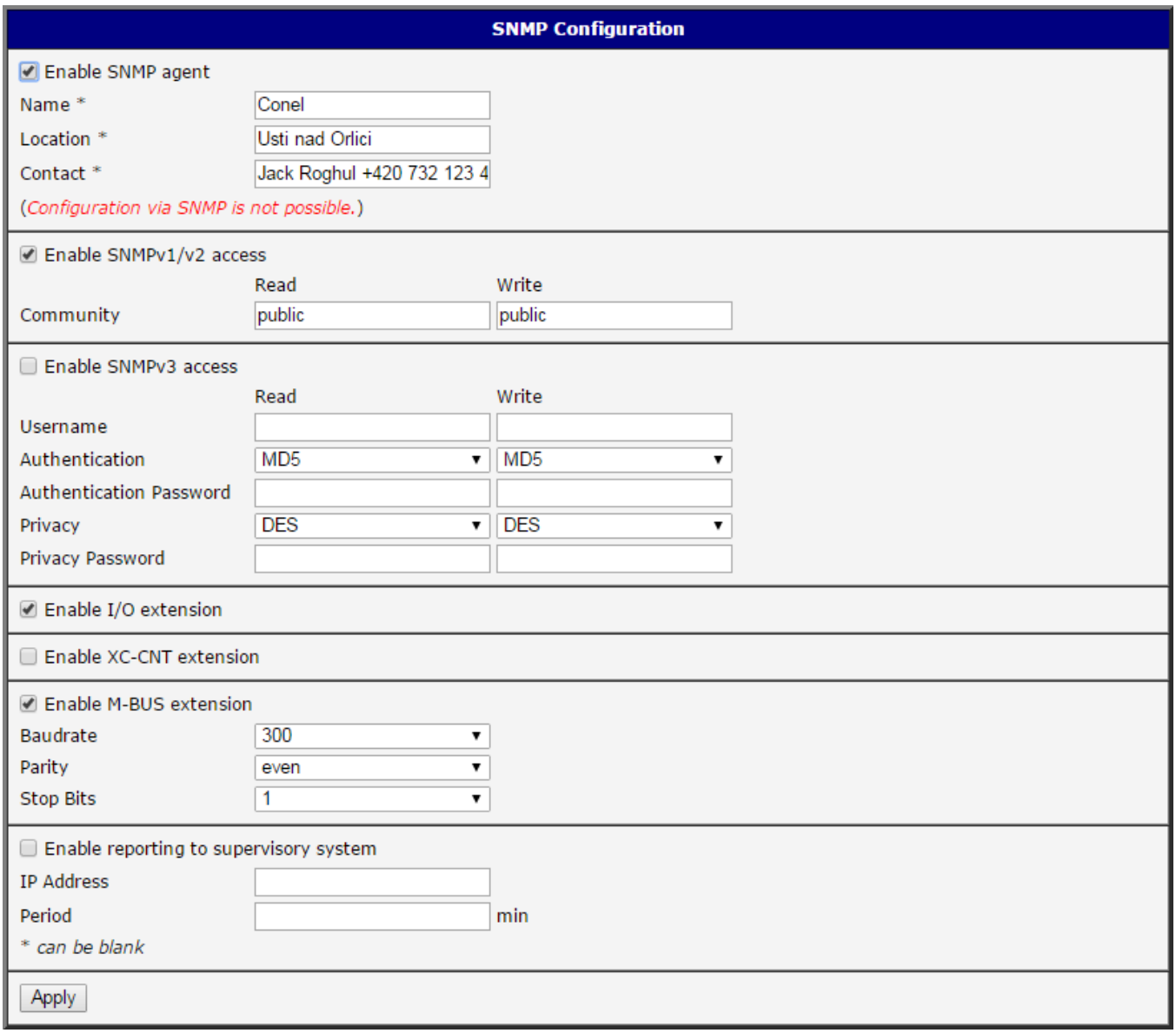

Figure 3: Example of SNMP configuration

3.2 OIDs in SNMP Trap

It is possible to enable continuous regular sending of SNMP traps to any supervisory system. On the *SNMP* page in the router, select *Enable reporting to supervisory system*, fill in the IP address and time interval, then click the *Apply* button. SNMP traps are then sent at the configured interval. An extended SNMP trap carrying additional information is also sent every 24 hours.

Every SNMP trap contains these OIDs:

.1.3.6.1.2.1.2.2.1.6.1 (ifPhysAddress)
.1.3.6.1.2.1.2.2.1.10.2 (ifInOctets)
.1.3.6.1.2.1.2.2.1.16.2 (ifOutOctets)
.1.3.6.1.4.1.30140.4.1.0 (mobileTechnology)
.1.3.6.1.4.1.30140.4.2.0 (mobilePLMN)
.1.3.6.1.4.1.30140.4.3.0 (mobileCell)
.1.3.6.1.4.1.30140.4.4.0 (mobileChannel)
.1.3.6.1.4.1.30140.4.5.0 (mobileSignalStrength)
.1.3.6.1.4.1.30140.4.6.0 (mobileChannelN1)
.1.3.6.1.4.1.30140.4.7.0 (mobileSignalStrengthN1)
.1.3.6.1.4.1.30140.4.8.0 (mobileChannelN2)
.1.3.6.1.4.1.30140.4.9.0 (mobileSignalStrengthN2)
.1.3.6.1.4.1.30140.4.10.0 (mobileChannelN3)
.1.3.6.1.4.1.30140.4.11.0 (mobileSignalStrengthN3)
.1.3.6.1.4.1.30140.4.12.0 (mobileChannelN4)
.1.3.6.1.4.1.30140.4.13.0 (mobileSignalStrengthN4)
.1.3.6.1.4.1.30140.4.14.0 (mobileChannelN5)
.1.3.6.1.4.1.30140.4.15.0 (mobileSignalStrengthN5)
.1.3.6.1.4.1.30140.4.16.0 (mobileUpTime)
.1.3.6.1.4.1.30140.4.17.0 (mobileConnect)
.1.3.6.1.4.1.30140.4.18.0 (mobileDisconnect)
.1.3.6.1.4.1.30140.4.19.0 (mobileCard)
.1.3.6.1.4.1.30140.4.21.0 (mobileLatency)
.1.3.6.1.4.1.30140.4.22.0 (mobileReportPeriod)
.1.3.6.1.4.1.30140.4.26.0 (mobileSignalQuality)
.1.3.6.1.4.1.30140.4.27.0 (mobileCSQ)
.1.3.6.1.4.1.30140.5.1.10.0 (mobileTodayCells)
.1.3.6.1.4.1.30140.3.3.0 (statusTemperature)
.1.3.6.1.4.1.30140.3.4.0 (statusVoltage)

The extended SNMP trap sent every 24 hours also contains these OIDs:

.1.3.6.1.4.1.30140.6.3.0 (infoSN)
.1.3.6.1.4.1.30140.6.4.0 (infoIMEI)
.1.3.6.1.4.1.30140.6.5.0 (infoESN)
.1.3.6.1.4.1.30140.6.6.0 (infoMEID)
.1.3.6.1.2.1.1.1.0 (sysDescr)
.1.3.6.1.2.1.1.5.0 (sysName)
.1.3.6.1.2.1.1.6.0 (sysLocation)

3.3 SNMP Capturing

You can access the router's SNMP tree using any available SNMP MIB browser like *MG-SOFT* (in Figure 4), *SnmpB* or any other. Set the router's IP address in the browser, load MIB files from the repository and explore the SNMP OIDs and the values they contain.

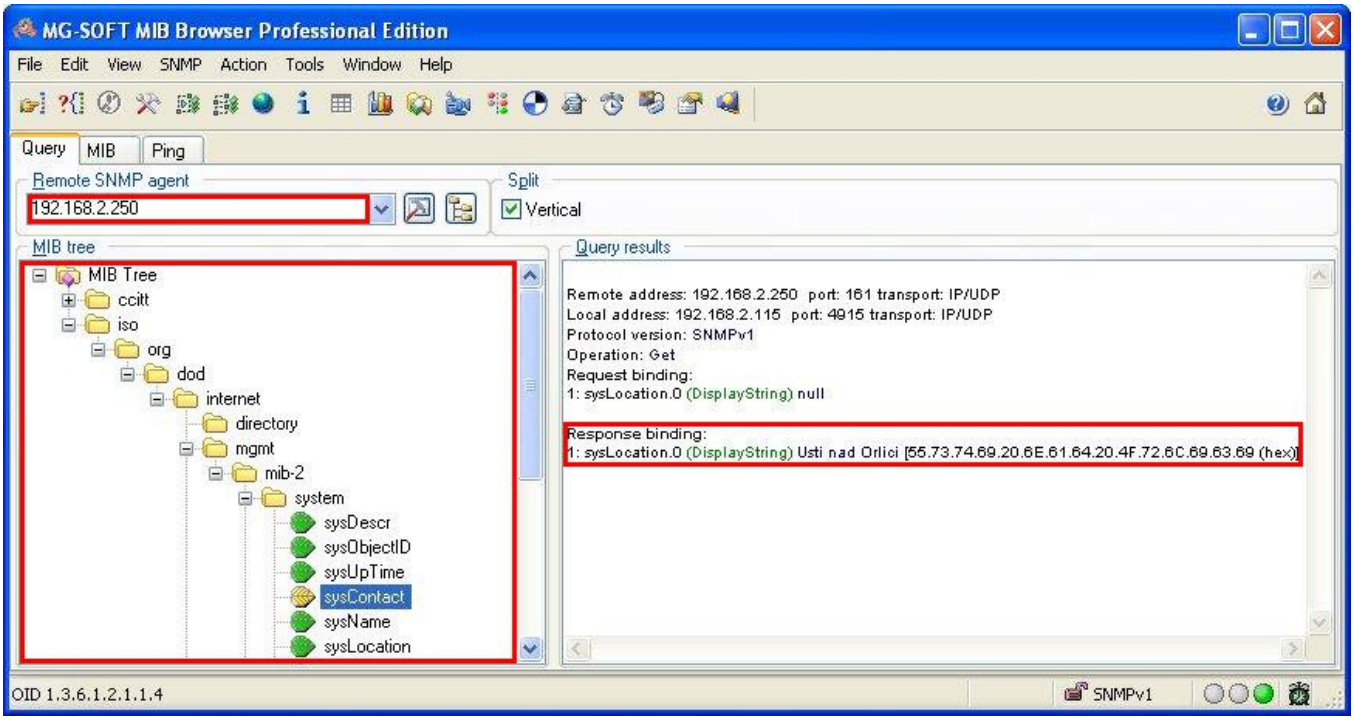

Figure 4: Example of MIB Browser

The path to private (Advantech routers) objects is:

iso → org → dod → internet → private → enterprises → conel

The path to basic information about the router is:

iso → org → dod → internet → mgmt → mib-2 → system

4. Related Resources

You can obtain all product-related documents, software updates, and supplementary materials on the Advantech *Engineering Portal* at *icr.advantech.com*.

For easy access to specific resources, please refer to the following sections of the portal:

- **Router Support Materials:** To access your router's supporting documents (such as the *Hardware Manual* and *Configuration Manual*), the latest firmware, or other technical resources, navigate to *Support* → *Router Models*. Locate your specific model and select the appropriate tab under the *Documents to download* section. Available tabs include *Brochures*, *Manuals*, *Certificates*, *Firmware*, *Images/3D Models*, *PCN/SA*, and *Others*.
- **Router Apps:** To extend your router's functionality, installation packages and comprehensive manuals for various extension modules are available by navigating to *Download* → *Router Apps*.
- **Application Notes:** For detailed guides, configuration examples, and step-by-step instructions for implementing specific networking features and use cases, navigate to *Download* → *Application Notes*.
- **Development Documents:** If you are interested in custom scripting, programming your own applications, or compiling custom modules, navigate to *Development* page.