

# 10 SNMP

SNMP (Simple Network Management Protocol) is an internet standard protocol for managing devices on IP networks. SNMP exposes management data in the form of a hierarchy of variables in a MIB (Management Information Base).

WCC Lite supports SNMP service which is not added to default build of firmware but can be installed as a module. It enables user to collect data on various parameters of system:

- CPU time - time spent for calculations of various processes:
  - *user* - time for user processes;
  - *system* - time for system processes;
  - *idle* - time spent idling;
  - *interrupts* - time spent handling interrupts.
- CPU load average - CPU load average for 1, 5 and 15 minutes respectively;
- Disk usage:
  - *total* - total amount of storage in the device (in kB)
  - *available* - amount of storage available to store data (in kB)
  - *used* - amount of storage used in the device (in kB)
  - *blocks used percentage* - blocks (sectors) used to store data in a disk (in kB)
  - *inodes used percentage* - the inode (index node) is a data structure in a Unix style file system that describes a filesystem object such as a file or a directory. Each inode stores the attributes and disk block location(s) of the object's data.
- Memory usage - RAM usage statistics:
  - *total* - total amount of RAM in the device (in kB);
  - *available* - unused amount of RAM in the device (in kB);
  - *shared* - shared amount of RAM between multiple processes (in kB);
  - *buffered* - refers to an electronic buffer placed between the memory and the memory controller;
  - *cached* - a portion of memory made of highspeed static RAM (SRAM) instead of the slower dynamic RAM (DRAM) used for main memory;
- Network interfaces:
  - *MTU* - maximum transmission unit to be sent over network;
  - *speed* - rate of network transmission;
  - *physical address* - unique MAC address assigned to a device;
  - *tx/rx*: byte, packet, drop, error count;
- System properties:
  - *uptime* - time since the device was turned on;
  - *process uptime* - time since the process has been started;
  - *hostname* - a label that is assigned to a device connected to a computer network;
  - *name* - name of the device (if defined);
  - *location* - location of the device (if defined).