



ANavS remote snow monitoring station

Overview

The ANavS snow monitoring stations provide accurate snow pack information based on Global Navigation Satellite System (GNSS) signals. The Snow Water Equivalent (SWE), snow height and Liquid Water Content (LWC) are determined with innovative algorithms within the stations.

The snow pack properties are transferred via satellite communications or cellular networks. Access to the snow information is provided via email or web service. The stations operate autonomously with an integrated solar-power supply and wireless communication, and can be set up permanently or temporarily.



Application

- Meteorological information systems
- Optimized operation of hydro-power plants enabled by accurate run-off prediction
- Monitoring of roof load caused by snow
- Scientific research on snow pack modeling and avalanches

Installation

- Compact design of all components for easy transportation and installation
- Station components can be easily carried by two persons and set-up within 2 hours
- Standalone installation or Integration in existing mast infrastructure
- No special mechanical tools required

Maintenance

- No maintenance during winter operation
- Clearance of measurement spot, visual and manual inspection advisable before winter season
- Battery replacement every 3-5 years recommended

Key Features

- Accurate determination of SWE, snow height and LWC based on differential GNSS measurements
- Cost-efficient monitoring instead of time-consuming manual measurements
- Weather-independent operations by no use of optical sensors/ lasers
- Outperformance of snow scales as GNSS measurements are independent of bridging effects
- Solar power supply for remote installations
- Efficient power management with extremely low power sleep mode and configurable schedule
- Iridium or cellular wireless communication for remote installations
- Access to GNSS raw measurements
- Processing of GNSS raw measurements within snow monitoring station
- Remote re-calibration of station via satellite communication (Iridium)

