QUAKELOGIC

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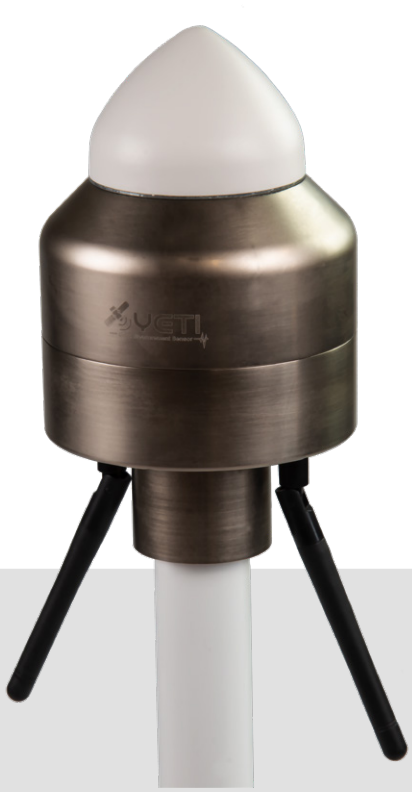
DATA-SHEET YETI 001



YETI

MEASUREMENT SENSOR

KEY FEATURES

- GNSS MUTLICOSTELLATION
- MILLIMETRICE RESOLUTION
- LOW POWER
- EASY DEPLOYMENT
- REMOTE ALLARMS
- NEEDS A SMALL PV TO BE ENERGY INDEPEDENT
- COST EFFECTIVE

Yeti is a compact and lightweight measurement sensor based on GNSS technology ideal for low budget projects.

It was designed for monitoring and early-warning of critical areas in the presence of hydrogeological risk.

Landslides, subsidence, volcanos, slope instability are some of the most common applications of the system but not only. All infrastructures such as civil buildings, water pipelines, energy plants, railways, bridges, dams, quarries, viaducts can be monitored using Yeti.

Yeti is easy to install/configure and is very low power: highly integrated, consuming less than 50mA @12V it can be powered with a small PV-battery system.

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Yeti embeds a high-performance single frequency GNSS receiver, a 868-915Mhz* radio transceiver and a LTE-M/NB-IoT modem with 2G fallback. User can decide whatever to use RF radio or modem link to create the Yeti network. The radio transceivers allow communication in the range of 5Km**(3Miles). Units with SIM cards can upload data directly to the cloud, others can send their data to SIM-equipped units. A unit must be deployed outside the monitored area, which is the reference station. At least two or more units can be deployed on the area subjected to deformation. GNSS and telemetry data (battery level, PV voltage, etc.) are sent in real time to the cloud where surface displacements are calculated with millimetric repeatability through a calculation engine developed by YETITMOVES. Server publishes the calculated data through REST web services. A desktop client application (dashboard) allows the visualization of the monitoring network status, system configuration parameters and calculated displacements. Generation and transmission of alert (email/SMS) can be set up when exceeding thresholds are detected both for displacement and SOH.

*Depending on the country laws / **Maximum distance without obstac

APPLICATIONS

Landslides, subsidence, volcanos, slope instability, buildings, bridges, dams, water/oil pipelines, energy plants, railways, quarries, viaducts.

PERFORMANCE

ENGINE GNSS L1
MAXIMUM UPDATE RATE 10Hz
RF Lora based (868-915Mhz)
MODEM LTE-M/NB-IoT 2G fallback

CONNECTORS

RF SMA RP
MODEM SMA
POWER Grommet

POWER SUPPLY

SUPPLY VOLTAGE 5 to 40Vdc
POWER CONSUMPTION 50mA@12Vdc
PROTECTION reverse voltage, overvoltage, surges

OP. CONDITIONS

STORAGE TEMPERATURE RANGE -40C° to 80C°
HUMIDITY 0 to 100%
OPERATING TEMPERATURE RANGE -25C° to 70C°
WEATHER RESISTANCE IP68°

PHYSICAL

HOUSING Aluminum with treatment
PROTECTION GRADE IP54
DIMENSIONS 98 mm (OD) x 163 mm (H)
WEIGHT 1 Kg