

## Viotel Flexinode



### FEATURES AND BENEFITS:

- LTE CAT-M1
- SD CARD LOGGING FOR HIGH RESOLUTION DATA
- 1X SDI-12 BUS (UP TO 8 SENSORS)
- 4X 4-20MA ANALOGUE INPUTS
- 4X 1KHZ PULSE COUNTING INPUTS
- SOLAR, PLUG-PACK OR SINGLE USE BATTERY POWER
- MADE IN AUSTRALIA

The Viotel Flexinode is a data logger with real-time data export capabilities. The unit's flexible inputs can be configured to monitor a range of sensors, energy/water/gas meters, weather stations, rain gauges, industrial motors, vehicle engines, float switches thermistors and more.

Using Viotel's Internet of Things (IoT) dashboard platform, each logger is shipped pre-programmed and integrated. Simply mount the sensor in the desired location and power on for reliable, continuous, real-time monitoring.

### Specifications

Inputs <i>(Configuration to be specified at time of order)</i>	1x SDI-12 BUS – Connect up to 8 sensors 4x 4-20mA Current Loop or 0-12V configurations 4x Pulse Counters AT UP TO 1KhZ simultaneously
Other protocols configurable on order	SDI-12 VCC, Data, GND. RS 485 CAN Bus
Sampling Rate	From every 5 minutes to Daily
Upload Rate	From every 5 minutes to Weekly
Dimensions	140mm * 120mm * 80mm (W X L X D)
Operating Temperature	-20°C to 60°C
Input Power	Battery powered. Battery life varies with Upload Rate Solar or DC Plug (24Volt Max) options available
Enclosure features	IP65 clam shell. ASA UV PROTECTED

Nov-2023

## Smart Barrier Node



### FEATURES AND BENEFITS:

- INTERNAL ACCELEROMETER WITH ADVANCED SIGNAL PROCESSING
- WIRELESS OPERATION USING CAT-M1
- ALARM CAPABILITY WHEN IMPACTS ARE DETECTED
- MEASURES WIRE ROPE TENSION
- TAMPERING DETECTED IN REAL-TIME
- INTERNAL GPS FOR POSITIONING
- PATENT PENDING
- MANUFACTURED IN AUSTRALIA

The Viotel Smart Barrier node features a unique patented design for quick installation crash barriers and fences to detect impacts. The node can measure the tension of the wires using a detachable strain band. Self manage configuration via [myViotel](#) device manager & dashboard..

The Smart Barrier node uses an integrated solar panel and rechargeable battery, and an internal LTE-M modem for connectivity. The asset status is uploaded regularly, and whenever an impact is detected.

### Specifications

Accelerometer	3 component – triaxial
Tension Measurement	Combination of tension in two wires
Tension Full-Scale	100 kN (3m spacing between posts, 5cm wire deflection)
Attachment to Barrier	Steel cable ties to upper and lower wires & steel band for tension measurement
Data Uploads	Hourly and whenever impacts are detected.
Tilt Tolerance	180° (Omnidirectional)
Dimensions	110mm x 150mm x 60mm (W X L X D)
Weight	0.3kg
Operating Temperature	-10°C to 65°C
Power	Integrated solar panel with rechargeable battery
Enclosure features	ASA Plastic, IP67

Nov-2023

## Accelerometer Node



### FEATURES AND BENEFITS:

- ULTRA-LOW NOISE INTEGRATED ACCELEROMETER
- EASY INSTALLATION – ANY ORIENTATION
- LTE-M COMMUNICATIONS
- TRIGGERED OR CONTINUOUS SEISMOGRAM DATA STREAMS
- GPS TIMING
- EVENT DETECTION MODE
- HIGH FREQUENCY DYNAMIC MONITORING
- MADE IN AUSTRALIA

The Viotel Accelerometer Node V2.0 is based on an ultra-low noise triaxial MEMS sensor and is self-contained with internal digital communication modem and GPS receiver. Self manage configuration via [myViotel](#) device manager & dashboard.

Used to measure acceleration and frequency, modal and resonance analysis such as ground motion from earthquakes, building earthquake response, structural modes and resonances, dynamic tilt measurements

### Specifications

Accelerometer	3 – triaxial
A/D	20 Bit
Sampling Rate	15.625 Hz, 31.25 Hz, 62.5 Hz, 125 Hz, 250 Hz, 500 Hz
Sensitivity	256,000 LSB/g
Scale Factor	3.9 $\mu$ g/LSB
Tilt Tolerance	180° (Omnidirectional)
Full Scale	$\pm$ 2.048 g
Noise Density	25 $\mu$ g/ $\sqrt$ Hz (MAX)
Broadband Noise (RMS)	< 70 $\mu$ g @ 31.25 Hz
Dynamic Range	90 Db @ 31.25 Hz
Dimensions / Weight	110mm x 150mm x 60mm (W X L X D) / 0.6kg
Operating Temperature	-35°C to 65°C
Input Power	Internal non-rechargeable battery / External 4 – 15 VDC
Enclosure features	ASA Plastic, IP67

Nov-2023

## Wireless Triaxial Tiltmeter



### FEATURES AND BENEFITS:

- WIRELESS OPERATION
- EVENT DETECTION MODE
- EASY INSTALLATION – ANY ORIENTATION
- LTE-M COMMUNICATIONS
- ALARM CAPABILITY WHEN TILT EXCEEDS PRE-SET LIMITS
- INTERNAL GPS FOR POSITIONING
- INTERNAL TEMPERATURE SENSOR
- MADE IN AUSTRALIA

The Viotel Wireless Triaxial Tiltmeter features a high accuracy triaxial tilt sensor and is self-contained with internal battery (solar panel optional), GPS and cellular (LTE-M CAT-M1) modem.

The tiltmeter is shipped pre-programmed and integrated. Simply mount the sensor in the desired location and power on for reliable, continuous, real-time monitoring. Self manage configuration via [myViotel](#) device manager & dashboard..

### Specifications

Number of Components	3 – triaxial
Resolution	0.0003°
Accuracy	0.001°
Sampling Rate	From every 1 minute to daily
Upload Rate	From every 1 minute to daily (max 24 samples per upload)
Operating Tilt Range	-180° TO +180°
Event Detection	Check sample every 7 seconds and trigger out of sequence upload if pre-set limit exceeded.
Dimensions / Weight	110mm × 150mm × 60mm (W X L X D) / 0.6kg
Operating Temperature	-35°C to 65°C
Input Power	Internal non-rechargeable battery <ul style="list-style-type: none"><li>• Hourly samples, daily upload &gt; 4.2 years</li></ul>
Enclosure features	ASA Plastic, IP67

## Smart IoT Node



### FEATURES AND BENEFITS:

- 1-CHANNEL MODBUS/RS485
- 2-CHANNEL 4-20MA
- 1-CHANNEL STRAIN GAUGE
- LTE-M COMMUNICATIONS
- INTERNAL GPS FOR POSITIONING
- INTERNAL TEMPERATURE SENSOR
- COMPATIBLE WITH A WIDE RANGE OF SENSORS INCLUDING INCLINOMETERS
- MADE IN AUSTRALIA

The Viotel SMART IoT Data Node is based on an ultra-low power microprocessor and is self-contained with internal battery (solar panel optional), GPS and cellular (LTE-M) modem.

The node is shipped pre-programmed and integrated. Simply mount the node in the desired location, connect the external sensor and power on for reliable, continuous, real-time monitoring. Self manage configuration via [myViotel](#) device manager & dashboard..

## Specifications

Interface	1x Modbus / RS485 2x 4-20mA current loop 1x strain gauge
Resolution	24 bits over 4-20mA
Accuracy	20 nA
Sampling Rate	From every 5 minutes to daily
Upload Rate	From every 5 minutes to daily (max 24 samples per upload)
Dimensions / Weight	150mm x 210mm x 55mm (W X L X D) / 0.7kg
Operating Temperature	-35°C to 65°C
Input Power	Internal non-rechargeable battery • <i>(Battery life will vary depending on interface type, number of instruments, sample rate and upload rate)</i> External 4 – 15 VDC
Enclosure features	ASA Plastic, IP67

## Vibrating Wire Node (4-Ch)



### FEATURES AND BENEFITS:

- 4-CHANNEL DUAL INPUTS: THERMISTOR & VW
- ALARM CAPABILITY WHEN MEASUREMENT EXCEEDS PRE-SET LIMITS
- COMPATIBLE WITH A WIDE RANGE OF SENSORS, INCLUDING STRAIN GAUGES, TILT AND CRACK METERS, LOAD CELLS AND PIEZOMETERS
- BAROMETRIC PRESSURE MEASUREMENTS
- INTERNAL GPS FOR POSITIONING
- INTERNAL TEMPERATURE SENSOR
- MADE IN AUSTRALIA

The Viotel Vibrating Wire Node achieves high-precision measurements with low power consumption at a cost effective price. The logger is self contained with internal battery (solar panel optional), GPS and cellular (LTE-M) modem. Extra long battery life – 8+ years.

The node is shipped pre-programmed and integrated. Simply mount the node in the desired location, connect the external sensor and power on for reliable, continuous, real-time monitoring. Self manage configuration via [myViotel](#) device manager & dashboard..

### Specifications

Interface	4x Vibrating Wire channels with dual input for VW and Thermistor
VW Measurement Range	100 to 6,000 Hz
VW Resolution	0.0224 Millibar
Temperature Measurement Range	-10°C to 100°C
Temperature Accuracy	±0.5°C
Sampling Rate	From every 5 minutes to daily
Upload Rate	From every 5 minutes to daily (max 24 samples per upload)
Dimensions / Weight	150mm x 210mm x 55mm (W X L X D) / 0.7kg
Operating Temperature	-35°C to 65°C
Input Power	Internal non-rechargeable battery <ul style="list-style-type: none"> <li>• Hourly sample, Daily upload: &gt;5.5 YEARS</li> <li>• Daily sample, Daily upload: &gt;8.5 YEARS</li> </ul> External 4 – 15 VDC
Enclosure features	ASA Plastic, IP67

Nov-2023