

INFORMATION LEAFLET

Features	Wireless Vibration Sensor	Wireless 24V Vibration Sensor	Wireless MAD Vibration Sensor
Function	Vibration Sensor	Vibration Sensor	Vibration Sensor
Type number	IVIB161010-ACC3-016	IVIB161410-24V-PWR	IVIB161510-MAD-008
Use	Wireless vibration monitoring on continuously running equipment (e.g. fan-motor combination)	Wireless vibration monitoring on dis-continuously running equipment (e.g. conveyor motor)	Wireless vibration monitoring on moving equipment and tracks, moving parts (e.g. wheel bearing on cart)
Power supply	2 x CR2032 batteries (replaceable)	6VDC – 60VDC (M8 connector) + 1 x CR2032 battery failover	2 x CR2032 batteries (replaceable)
Battery replacement type	2 x ACCS601010-2032-LOW	1 x ACCS601010-2032-LOW	2 x ACCS601010-2032-LOW
Power cable type	-	ACCS616210-M8-5MTR	-
Maximum external current draw	-	10 mA (peak)	-
Battery life time	Up to 5 years @ 1 full measurement per day (depending on temperature and settings)	Continuously cable powered with battery failover	Up to 2 years (depending on temperature, settings and activity level of the equipment)
Operating temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Recommended storage temperature	+30°C maximum	+30°C maximum	+30°C maximum
Temperature sensor on board	yes	yes	yes
Amplitude range	2G, 4G, 8G or 16G	2G, 4G, 8G or 16G	2G, 4G or 8G
Measurement axis	X, Y and/or Z (3-axial) Measured consecutively with related time stamp	X, Y and/or Z (3-axial) Measured in parallel with same time stamp	X, Y and/or Z (3-axial) Measured consecutively with related time stamp
Sampling rate	12 to 3200Hz	12 to 3200Hz	12 to 400Hz
Number of samples	32 to 8192 samples	32 to 8192 samples	32 to 8192 samples
Measurement units	g or mm/s	g or mm/s	g or mm/s

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High pass filter	0 to 800Hz	0 to 800Hz	0 to 200Hz
Sensor activity threshold	0 to 1g	0 to 1g	Set automatically based on sensor settings
Trend tracking statistics	RMS, kurtosis	RMS, kurtosis	MAD (Mean Absolute Deviation), RMS, kurtosis
MAD watchdog set-up	no	no	yes
MAD watchdog settings	-	-	<ul style="list-style-type: none"> sampling rate: 12 to 400Hz number of samples: 32 to 8192 samples
Self-learning signal peak detector function on board	no	yes	no
“Always on” function (sensor is always actively measuring)	no	yes	Yes, only during equipment activity (with automatic wake-up)

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Start sensor data acquisition	<ul style="list-style-type: none"> • manually recorded measurements <ul style="list-style-type: none"> ○ manually start data acquisition and data download • automatic measurements <ul style="list-style-type: none"> ○ time interval in between 2 measurements is programmable ○ a measurement is acquired and downloaded every interval period 	<ul style="list-style-type: none"> • manually recorded measurements <ul style="list-style-type: none"> ○ manually set start and endpoint of the measurement ○ after the set measurement interval, the measurement with the highest peak power will be downloaded • automatic measurements <ul style="list-style-type: none"> ○ duration of the measurement is programmable ○ after the programmed measurement interval, the measurement with the highest peak power will be downloaded 	<ul style="list-style-type: none"> • manually recorded measurements <ul style="list-style-type: none"> ○ manually set start and endpoint of the measurement ○ after the set measurement interval, the measurement with the highest MAD value will be downloaded • automatic measurements <ul style="list-style-type: none"> ○ duration of the measurement is programmable ○ after the programmed measurement interval, the highest MAD values will be downloaded ○ Measurement related to highest MAD value will be downloaded
Wireless frequency	SubGHz (868 / 915 MHz center frequency)	SubGHz (868 / 915 MHz center frequency)	SubGHz (868 / 915 MHz center frequency)
Data storage on sensor when outside wireless range	no	no	Yes

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Data acquisition when outside range	-	-	New (higher) MAD values during approx. 8 hours with time stamp
Maximum broadcast power	10 mW EIRP	10 mW EIRP	10 mW EIRP
Wireless range	up to 50m	up to 50m	up to 50m
Maximum number of repeaters between sensor and base station	1	1	1
Connectivity to local iQunet Server	via iQunet base station	via iQunet base station	via iQunet base station
Data storage	acquired sensor measurement data immediately transferred wireless to iQunet Data Server, stored in SQLite data base	acquired sensor measurement data immediately transferred wireless to iQunet Data Server, stored in SQLite data base	acquired sensor measurement data transferred wireless, when back in range to iQunet Data Server, stored in SQLite data base
Communication protocols iQunet Server	OPC UA (embedded iQunet OPC UA Server)	OPC UA (embedded iQunet OPC UA Server)	OPC UA (embedded iQunet OPC UA Server)
API	Yes, GraphQL Server	Yes, GraphQL Server	Yes, GraphQL Server
Alternative data export options iQunet Server	<ul style="list-style-type: none"> • Google Sheets export / Excel • Data Explorer export (.CSV file) 	<ul style="list-style-type: none"> • Google Sheets export / Excel • Data Explorer export (.CSV file) 	<ul style="list-style-type: none"> • Google Sheets export / Excel • Data Explorer export (.CSV file)
Postprocessing in iQunet Sensor Dashboard (on iQunet Server)	<ul style="list-style-type: none"> • 1/f flicker noise detrending (for velocity spectra) • DFT averaging for noise reduction 	<ul style="list-style-type: none"> • 1/f flicker noise detrending (for velocity spectra) • DFT averaging for noise reduction 	<ul style="list-style-type: none"> • 1/f flicker noise detrending (for velocity spectra) • DFT averaging for noise reduction

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Graph options in iQunet Sensor Dashboard (on iQunet Server)	measurement graphs: <ul style="list-style-type: none"> • time series • FFT • 3D-waterfall plot • temperature • battery power trend plots: <ul style="list-style-type: none"> • RMS • Kurtosis 	measurement graphs: <ul style="list-style-type: none"> • time series • FFT • 3D-waterfall plot • temperature • battery power trend plots: <ul style="list-style-type: none"> • RMS • Kurtosis 	measurement graphs: <ul style="list-style-type: none"> • time series • FFT • 3D-waterfall plot • temperature • battery power trend plots: <ul style="list-style-type: none"> • MAD (Mean Absolute Deviation) • RMS • Kurtosis
Raw data available for Machine Learning processing	yes	yes	yes
Machine Learning graph options in iQunet Sensor Dashboard (on iQunet Server)	yes	yes	yes