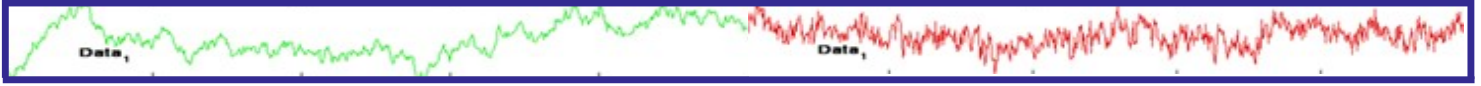


Electromagnetic / seismic data acquisition unit



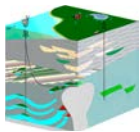
Portable data acquisition for electromagnetics & microseismic



KMS-820 & Web access box in transportation case

[KMS web access box](#)

[KMS MT family](#)



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KMS-820 data acquisition unit.

The KMS-820 data acquisition unit is developed for ElectroMagnetic (EM) and seismic applications to obtain subsurface resistivity and velocity structure for oil and gas exploration. It can also be used in general-purpose acquisition, microseismic monitoring, and long term monitoring services and protected by patent [US 9,057,801](#)

With the KMS-831 32-bit interface nodules it can expand to unlimited number of channels. High frequency options (to 4 KHz/channel are available).

Product features

- Multi-methods (EM: MT, CSEM (time & frequency), IP, & TFEM) and seismic
- Low-power design to increase battery life
- Long-range wireless (up to 5 miles' line-of-sight)
- Bluetooth, LAN, cell phone **via network option** and via web access box
- Bandwidth: DC - 40 kHz standard; ruggedized SINGLE board
- Up to 80 kHz sampling rate per channel (480 kHz cumulative)
- Six 24-bit GPS synchronized channels, plus digital 32-bit sub-interface
- Low noise & low drifting channels (plus patented active stability control)
- NOISE FREE continuous data stream available via web access interface
- Customizable digital interface for UNLIMITED digital sensors and other devices
- Portable and lightweight
- Ruggedized design for field application (operates closed)
- Acquisition and monitoring software included
- Autonomous operation and acquisition parameter changes via scheduler
- Method specific processing software (MT, CSEM, array monitoring etc.)
- User received user license for [US 9,057,801](#)

Options:

- Web access box – NOISE FREE data transfer (CLOUD), acquisition control & processing.
- WIFI – chip that allows point-to-point WIFI or connection via server
- L – with lightning protection

Product applications

Land EM

- Magnetotelluric node & array
- EM transmitter synchronization & monitoring
- System response recording (time domain & induced polarization, TFEM)
- EM survey in array configuration

Marine EM

- Transition zone transmitter & monitor
- Source controller & environmental monitor (current & one field component)

Land seismic

- Seismic survey of subsurface structure for hydrocarbon, minerals and geothermal energy exploration
- Passive microseismic monitoring for regional and local seismic activities

General lab measurement

- Coil calibrations
- Electrode long term stability study

Product specifications

Number of channels	6 analogue, unlimited digital
A/D resolution	24-bit, 32-bit with digital interface KMS-831
Signal bandwidth	DC to 40 kHz with three selectable low pass filters (10 Hz, 1 kHz, and 20 kHz), additional low pass filter with half of the sampling rate inside 24-bit sigma-delta A/D
Sampling rate	Up to 80 kHz/channel with customizable sampling frequency
Input impedance	> 1.0 M Ω standard; customizable for sensors
Input signal level	Signal dynamic range of -2.5 V ~ +2.5 V Internal system calibration incl. sensors Selectable waveform calibration
Signal gain	12 different gain settings from 1 to 2,560 (customizable), Auto-gain and auto scale standard
DC offset removal	Each channel has its own 16-bit D/A to remove external DC offset from -9.0 V to +9.0 V (patented)
Timing control	GPS synchronized
Wireless	Long range wireless up to 8 km (5 miles) line-of-sight or unlimited distance in mesh network mode. Bluetooth.
Data saving and retrieving	Data is saved to SD card; the files can be retrieved from SD card or directly copied to PC through USB mass storage
Data monitoring	Data can be streamed to PC/CLOUD via USB / cell phone/ wireless network for real-time monitoring & quality control
On-board temperature measurement	Yes
Power supply	External +7.5 ~ 32 V DC supply or internal 12 V battery; typical power consumption about 5 W
Temperature rating	-20°C to 50°C
Digital interface	Customizable digital interface for sensors & others; KMS-831(sub-acquisition controller) or KMS-029 (fluxgate)