KMS-200 Acquisition & Processing Software

KMS-200 is the most comprehensive acquisition & monitoring with embedded processing software to accompany KMS-820 & LEMI-424 system. With 3 basic steps, we are visualizing data, response parameters (for MT: apparent resistivity & phase). The same strategy applies to CSEM and EM methods. Microseismic is handled to separation of data in SEGY files.

KMS-200 is easy to use with default workflows. The scheduler allows multi-methods in the same receiver drop.

Software products

1. Acquisition software: KMS-200-ACQ
   - Receiver acquisition control & monitor
   - Acquisition scheduler
   - Sensor calibration

2. Transmitter control & monitor software: KMS-200-TX
   - Transmitter control & monitor
   - Pre-defined & customized transmitter waveform
   - Special transmitter safety feature

3. Basic robust MT processing software: KMS-200-P
   - Robust MT processing
   - Standard MT processing workflow

4. Fast robust processing software: KMS-200-AP
   - Fast robust processing
   - Adjustable processing parameter
   - Batch processing mode
   - Improved graphic display

5. 1D MT inversion software: KMS-200-IX1D
   - IX1D MT sounding inversion
   - Graphic display of apparent resistivity & impedance phase

6. 2D MT inversion software: KMS-200-ZONDMT2D
   - Zond 2D MT inversion

7. TEM processing software: KMS-200-tCSEM™
   - KMSPro tCSEM™ processing (lease only)

Software bundles (collection of software product application/price optimized)

8. KMS-200 MT Bundle 1: includes KMS-200-ACQ, KMS-200-P, KMS-200-AP, & KMS-200-IX1D

9. KMS-200 MT Bundle 2: all in Bundle 1 plus KMS-200-ZONDMT2D
Software features

- Available for all operating systems: Windows 32 and 64 bit, MacOS Sierra (High Sierra), Linux
- Time series editing
- Data processing (single site and remote reference) and visualizing of MT parameters
- Calculating the impedance, resistivity, phase and other MT parameters like skew, tipper, polar diagram, induction arrow etc. and plotting
- Real-time acquisition & monitoring software
- Export to numerous industry standard formats including: EDI, VTK, SEGY, miniSEED, ASCII, BIN
- 1D inversion: Ultra-fast transformation based, IX1D Interpex Ltd (included), SVD based Occam inversion with numerous regularization options (optional)

Options:
- Magnetotelluric robust processing workflow (shown)
- CSEM acquisition & processing (Lotem) - KMSPro
- TFEM & Induced polarization (time domain)
- Magnetotelluric 2D/3D inversion
- Others upon request

Acquisition software

- Acquisition control window
  - 14. Control both receiver & transmitter
  - 15. Customized acquisition scheduler
  - 16. Sensor Calibration function
  - 17. Quick-start windows for MT & CSEM

- Transmitter control window
  - 10. Data saturation protection
  - 11. Work with 32 bit KMS-831 modules
  - 12. High speed Wi-Fi stream data to cloud
  - 13. Special CSEM safety feature

Monitoring receiver & transmitter

- Receiver real-time monitoring
- Transmitter real-time monitoring
The KMS-820 array data acquisition system has been conceptualized as a next-generation, integrated data gathering unit. Today, this data integration has reached into the multi-physics domain. By combining the data acquisition of seismic and electromagnetic signals in a single unit we can take advantage of the strong synergy and complimentary nature of electromagnetic and microseismic data and enrich their interpretation.

Integrated acquisition of electromagnetic (EM) and microseismic data provides a unique tool to help reduce risk and improve productivity in reservoir monitoring. For example, in enhanced geothermal systems (EGS) microseismic monitoring allows for the imaging and visualization of active fracture networks within developing and producing EGS, while the EM response will differentiate the heated fluid flow regimes. This outlines the active and potential future commercial EGS areas.
Basic robust MT processing

Similar workflow is used for other methods

References:
Advanced MT processing – KMSProMT

KMSProQA Time series

KMSProMT multi-remote reference processing

KMSProTF magnetotelluric transfer functions manager
multi-remote reference apparent resistivity plots

References:
1D inversion - included

IX1D Sounding Window Graphics

IX1D Display of MT Data with apparent resistivity data displayed as curves, synthetic displayed as lines and smooth model displayed as a colored section.

2D inversion 3rd party example

Resistivity 2D inversion in ZondMT2D

MT editor for data filtration, analysis and rotation

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Software bundles
1. **KMS-200 MT Bundle 1**: includes KMS-200-ACQ, KMS-200-P, KMS-200-AP, & KMS-200-IX1D
2. **KMS-200 MT Bundle 2**: all in Bundle 1 plus KMS-200-ZONDMT2D

Individual software products
3. **KMS-200-ACQ**: Acquisition software for KMS-820 only
4. **KMS-200-TX**: Transmitter control & monitor software for KMS-820 only
5. **KMS-200-P**: Basic robust MT processing software for KMS-820 only
7. **KMS-200-IX1D**: 1D MT inversion software for KMS-820 & LEMI-424
8. **KMS-200-ZONDMT2D**: 2D MT inversion software for KMS-820 & LEMI-424
9. **KMS-200-tCSEM™**: TEM processing software for MS-820 only

Order Information

Please contact info@KMSTechnologies.com for more information and get your customized quote today!