



New digitizer for International Monitoring System (IMS) waveform technology stations

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An independent testing of the Guralp Systems CMG-DM24S3AM, a low power 24-bit authenticating digitizer has been carried out by joint team of representatives from IMS, Guralp Ltd. UK and RPKromer Professional/Technical Services LLC, USA. This digitizer is aimed to be used for the International Monitoring System (IMS) waveform technologies stations for CTBT verification purposes.

Optional set up of sampling rates and output data formats (including cd1.1) as well as compliance with IMS minimum technical specifications expands the range of potential applications of the new digitizer to be used for single 3C seismic, T-phase hydroacoustic stations as well as for existing and new IMS seismic and infrasound arrays in combinations with other high resolution digitizers previously installed there.

Flexible set up of the front end gaining allows matching system calibration factors without significant impact on the digitizer noise floor. The unit was tested under extreme temperature conditions potentially relevant for field applications over the entire IMS Network.

In addition to compliant performance within IMS specifications for generic tests like DC accuracy, input terminated noise, harmonic distortion, timing accuracy and channels cross-talk the new digitizer has about 3.5W power consumption measured with embedded authentication card. The digitizer has a 2Gb CD1.1 data buffer and has the casing shape pertaining installation inside the borehole, if necessary.