ZEN High-Res Receiver ™

The new Zonge Electromagnetic Network (ZEN)™ receiver is a high-resolution, multi-channel receiver for acquisition of controlled- and natural-source geo-electric and EM data.

Designed for high-performance and reduced deployment costs in the collection of MT data, the new ZEN High-Res Receiver™ collects the highest resolution data currently possible and weighs less than 6 pounds (2.6kg).

Large-scale surveys suddenly become possible with smaller crews due to the ease of transport and placement of stations.

Complete support, field peripherals, software, and training are available.

Uses 32-bit analog-digital converter designed specifically for geophysical applications

Signals not detected with conventional 16-bit or 24-bit receivers are easily detected with ZEN's 32-bit resolution, making surveys successful even in areas of cultural noise.

Distributed acquisition, wireless arrays

With a truly distributed acquisition system, survey design and setup becomes easier. Each analog signal can be measured wherever topography and accessibility make it convenient, rather than where survey geometry dictates.

- Resistivity, Time/Frequency Domain IP, CR, CSAMT, Harmonic Analysis CSAMT (HACSAMT), AMT, MT; DC to 1024 Hz
- 1/64 to 1024 Hz Controlled Source / IP
- Use as an analog or borehole data logger

- Rugged, portable, and environmentally sealed
- Modular design for easy upgrades
- Fully compatible with Zonge transmitters, controllers, and other ancillary equipment
- Native GPS synchronization with transmitter
- ZigBee® Radio Control
- Broadband time-series recording

- 60 MHz ARM CPU
- 1 to 6 channels, user expandable
- One 32-bit ADC *per channel* for maximum speed and phase accuracy
- Auto gain setting and internal calibration
- Storage: 8 GB data per channel for data and program, sufficient to hold several days' data
- USB data transfer

Zonge
TRUSTED GEOPHYSICS ™

Specifications

General

Broadband, multi-channel, multi-function digital receiver
Frequency range: DC – 1024 Hz
Number of channels: 1 to 6 (user expandable)
Standard Survey capabilities: Resistivity, Frequency- and Time-Domain IP, Complex Resistivity, CSAMT (scalar, vector, tensor), Harmonic Analysis (CSAMT, Frequency-Domain EM, MMR, Magnetic IP, Magnetotellurics, Downhole Logging.
Software language: C++
Size: 27 x 24 x 13 cm (10.5 x 9.5 x 6")
Weight: (without batteries and meter/connection panel): 6 channels: 3 Kg (6lb 9oz)
Enclosure: Heavy-duty, environmentally sealed aluminum
Power: 7-36V rechargeable batteries (external pack)
ZEN power consumption: 0.7 Ah
Temperature range: -40° to +50°C (-40° to +122°F)
Humidity range: 5% to 100%
Internal temperature sensors
Time base: GPS Synchronization

Displays & Controls

Power On-Off
Color coded LEDs
ZigBee$^®$ or USB Control from external computer

Standard Analog

Input impedance: >10 MΩ at DC
Board dynamic range: 180 db
Minimum detectable signal: 20 ηV
Maximum input voltage: $\pm$2.5V
Automatic gain ranging in binary steps from 1 to 64
Common-mode rejection at 1000 Hz: >100 db
Phase accuracy: $\pm$0.1 milliradians (0.006 degree)
Adjacent channel isolation at 100 Hz: >90 db
Analog to digital converter (standard channel)
    Resolution: 32 bits
    Conversion time: 0.25 msec
    One A/D per channel for maximum speed and phase accuracy
Analog connection via Pomona or 16-pin waterproof Mil-Spec connector

Digital Section

Microprocessor: 60 MHz ARM processor per channel
Mass Storage: 8 GB per channel. Data storage device with capacities to 16 GB/channel is optional.
Serial ports: USB connection to each channel
Distributed Control: Long-range mesh network (Unlicensed 2.4 GHz)

Acquisition Software

MT, CR, RDIP graphical interfaces for Windows based computers
External Control: Serial String based interface enables easy custom development
Real-time programmable through download of BASIC scripts

Specifications subject to change without notice. 2015/01/23

Zonge International is an employee-owned company providing ground geophysical field services, consulting, and customized equipment to geoscientists and geo-technical engineers worldwide. The company is a pioneer in the development and application of broad-band electrical and EM methods.

3322 E. Ft. Lowell Road
Tucson, AZ USA 85716
Tel: 1 (520) 327-5501
Fax: 1 (520) 325-1588

sales@zonge.com
www.zonge.com