



**PAN INDIA CONSULTANTS PVT  
LTD.**

105, Phase IV  
Udyog Vihar  
Gurgaon-122015  
Haryana, India

# What we do...



- Seismic digitizers/ recorders
- Seismic sensors
- Earthquake Monitoring Services
- Software by our OEM Geobit

## Pan India Consultants

- ✓ Seismic Tomography
- ✓ Natural Seismicity Monitoring
- ✓ Induced Seismicity Monitoring
- ✓ Structural Monitoring
- ✓ Reservoir Monitoring

# Benefits

- Low power instruments
- Cost Efficient
- Easy of use
- Wide band response, high sensitivity sensors
- Field tested for Induced Seismicity
- High Reliability
- All made in Europe, nothing made in China

## Geobit Instruments

Monitoring the earth

- ✓ Seismic Tomography
- ✓ Natural Seismicity  
Monitoring
- ✓ Induced Seismicity  
Monitoring
- ✓ Structural Monitoring
- ✓ Reservoir Monitoring

# GEObitinyMK2: Compact Digital Seismometer (10sec-98Hz)



## Geobit Instruments

Monitoring the earth

- ✓ 3 velocity + 3 acceleration ch
- ✓ Modular Sensor Electronics
- ✓ 10s to 4,5Hz low cut frequency
- ✓ High Sensitivity 1500V/m/sec
- ✓ Ultra low power consumption.
- ✓ 24bit digitizer.
- ✓ Surface Type
- ✓ Supports all SRi32S functionality

# GEOtiny20: Compact Digital Seismometer (20sec-50Hz)



## Geobit Instruments

Monitoring the earth

- ✓ 3 velocity + 3 acceleration ch
- ✓ Modular Sensor Electronics
- ✓ 20s to 50Hz frequency response
- ✓ High Sensitivity 1500V/m/sec
- ✓ Ultra low power consumption.
- ✓ 24bit digitizer.
- ✓ Surface Type

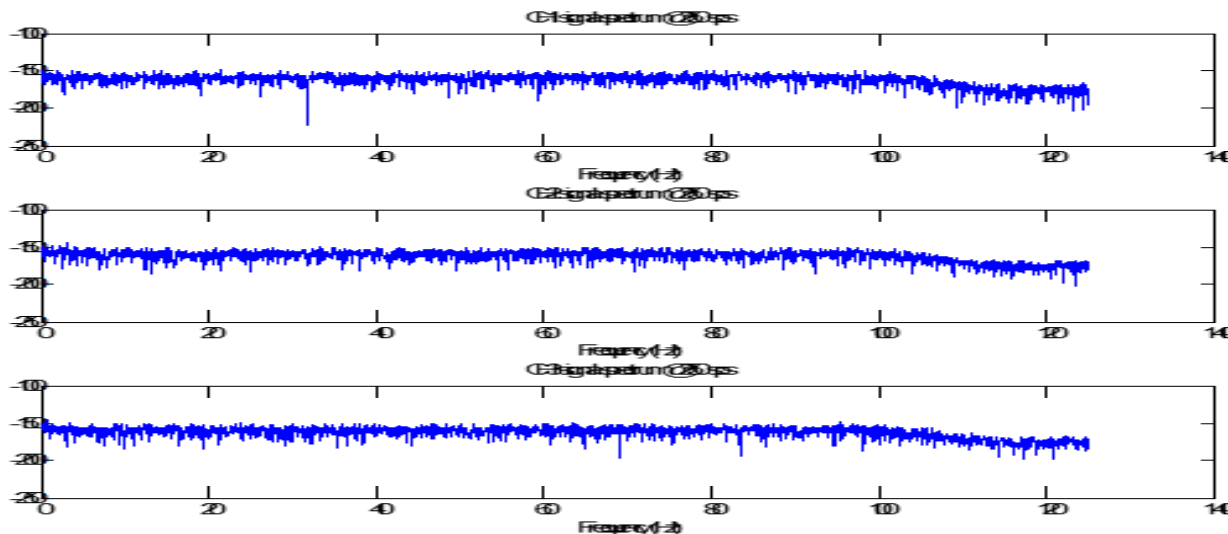
# SRi32 Standalone Digitizer / Recorder



## Geobit Instruments

Monitoring the earth

- ✓ Ultra High Resolution Digitizer,
- ✓ 32bit ADC, 138dB @ 100sps
- ✓ Ultra Low Power Consumption 0.66W
- ✓ Variable input range front end
- ✓ 4 extra analog lines
- ✓ 4 digital outputs
- ✓ Embedded Seedlink Server



# 3/6 channels Seedlink Digitizers (Real Time Telemetry)



## Geobit Instruments

Monitoring the earth

- ✓ Ultra High Resolution Digitizer
- ✓ Integrated sensor electronics
- ✓ 32bit ADC, 138dB @ 100sps
- ✓ Ultra Low Power Consumption 0.74W
- ✓ Embedded Seedlink Server
- ✓ Telemetry or Local Recording

# Web Interface Menu

**± Digitizer & SeedLink Stream Server**  
**START** **STOP** **Seedlink Server is running** **CLEAR BUFFER**  
Sampling Rate: 500 sps  
Filter Response: LINEAR  
Gain: 1  
GPS cycle: 60 sec  
Active Channels: 3  
Network description: HP Network  
Network ID: HP  
Station Name: GBT1  
Station description: GBT1 Node  
Channel Prefix: BH  
Archive: ☒  
Archive Keep: 5 days  
**SUBMIT** **READ**

**± System**  
**Boot Mode**  
Basic Stream: ☒  
Triggered Stream: ☐  
Trigger Detection: ☐  
  
Persistent Logs: ☐  
**SUBMIT** **REBOOT**  
**± Shutdown**

**± Trigger Detection**  
**START** **STOP** **Trigger Detection is running**  
LTA Time: 8 sec  
STA Time: 3 sec  
Decimation Factor: 1  
Ratio: 2.3  
Quiet: 2  
Trigger History: 5  
Time Tolerance: 2 sec  
Publish Network Trigger: ☒  
Trigger Server: 192.168.1.252  
**SUBMIT** **REFRESH**

**± Triggered SeedLink Chain**  
**START** **STOP** **Seedlink Chain is running** **CLEAR BUFFER**  
Pre Trigger: 1 min  
Post Trigger: 1 min  
Local Trigger: ☐  
Subscribe Network Trigger: ☒  
Trigger Server: 192.168.1.252  
Archive: ☒  
Archive Keep: 30 days  
**SUBMIT** **REFRESH**

## Geobit Instruments

Monitoring the earth

- ✓ User Friendly
- ✓ Web Brower connection
- ✓ Station Remote Control
- ✓ Recording parameters set
- ✓ Seismometer control
- ✓ Network interface set

# Applications

## Smart Seismic Network

- Transmits only the signal part which contains the earthquake
- Saves 95% of data transmission cost.
- Allows higher data rate acquisition at minor cost
- Very reliable technique collecting triggers from all the stations of the network
- The SEVER DECIDES if triggers are related to earthquake or reject them if they are related to noise

## Geobit Instruments

Monitoring the earth

- ✓ Smart Seismic Networks
- ✓ Smart Event trigger
- ✓ 100% reliable
- ✓ 0% event loss
- ✓ 98% transmission cost reduction

# Installation & Training- Pan India



## Geobit Instruments

Monitoring the earth

- ✓ BHU Varansai
- ✓ ONGC Vadodra Gujrat
- ✓ ISM Dhanbad

# Installation & Training- Pan India



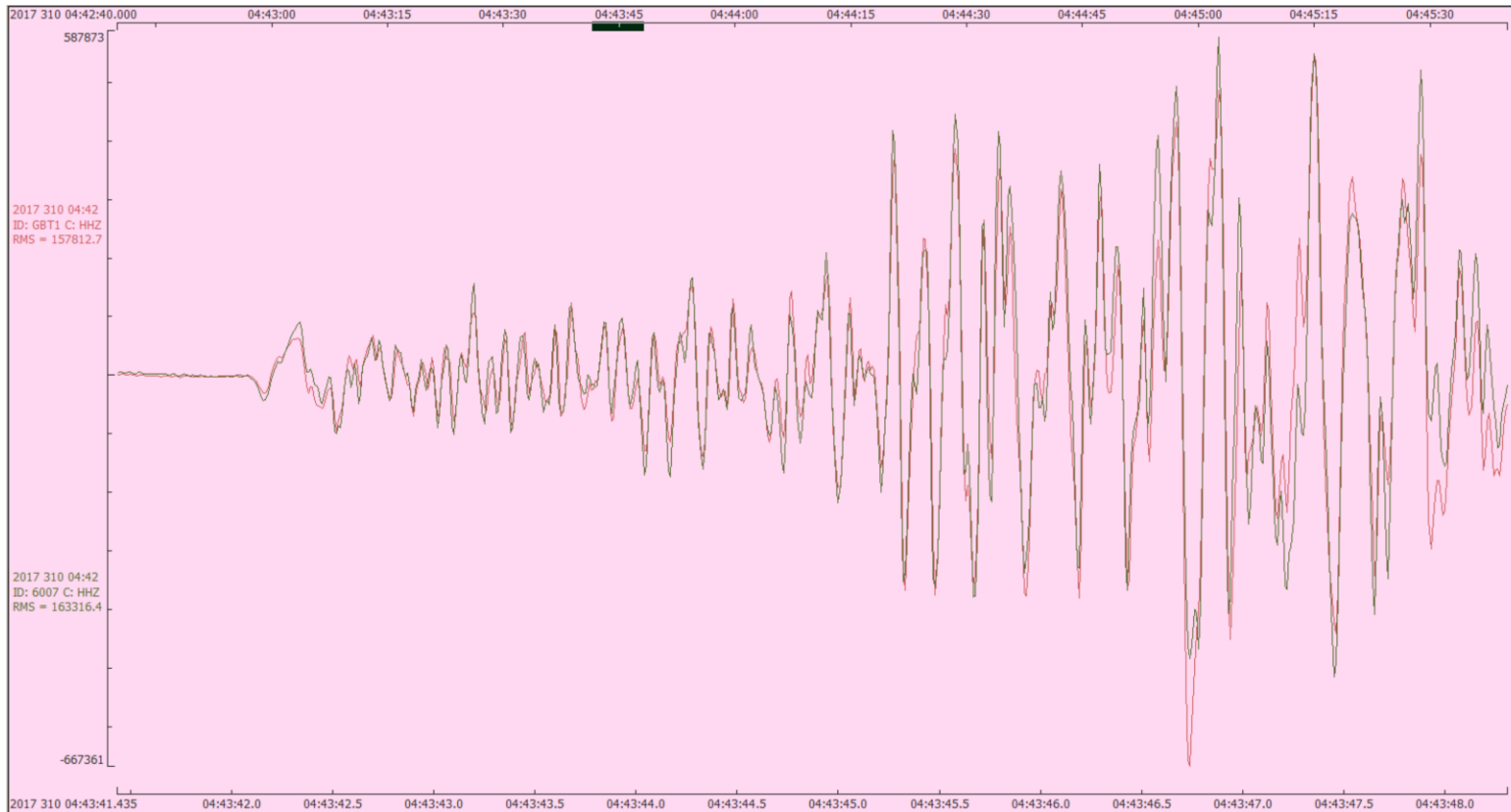
## Geobit Instruments

Monitoring the earth

- ✓ Products installation
- ✓ Full training
- ✓ After sales support

# Sensor Performance

- Earthquake 1: ML=3.5, D=25km



## Geobit Instruments

Monitoring the earth

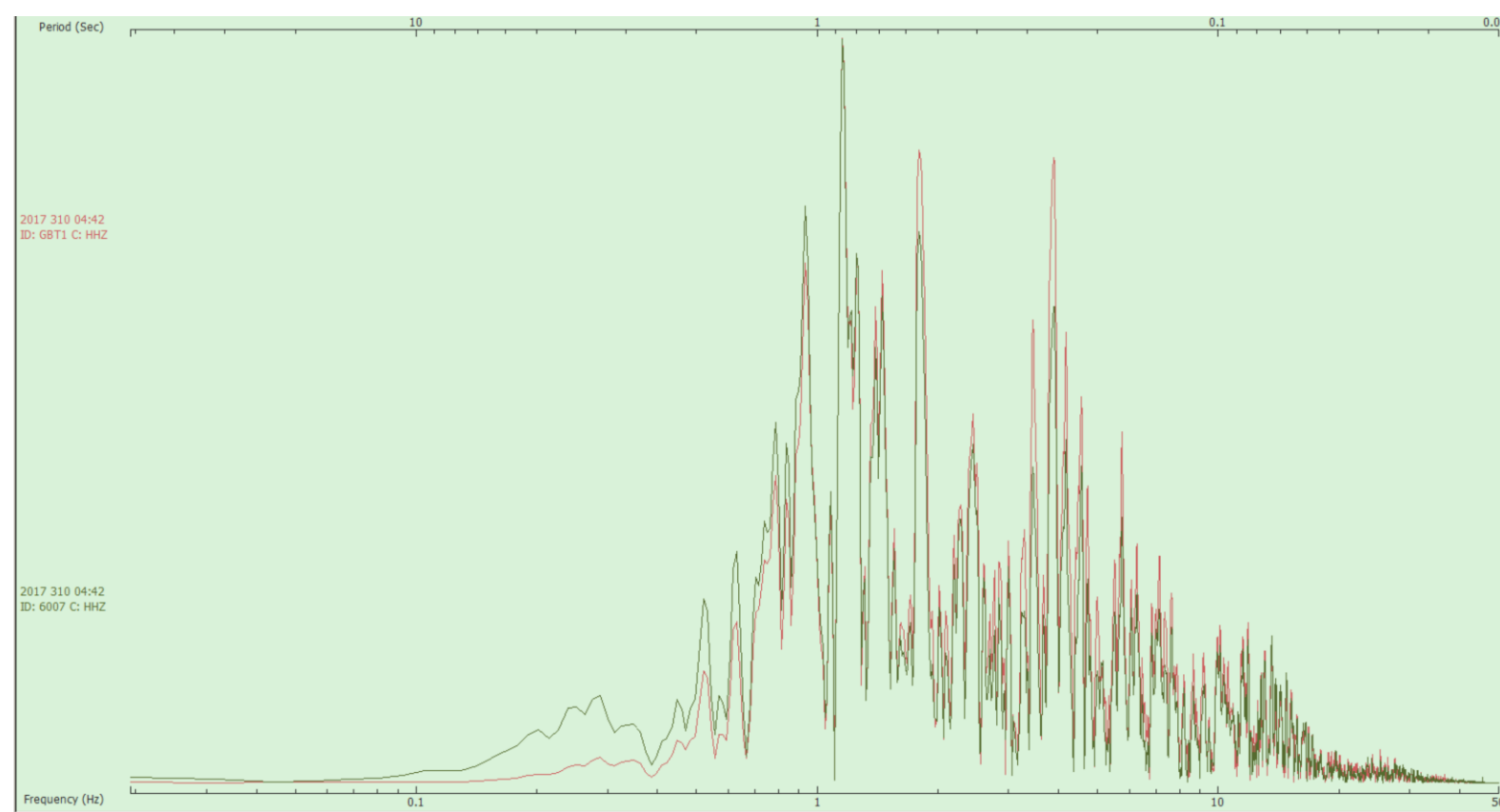
RAW DATA plot:

-Top: Guralp 3T/DM24

-Bottom: GEObit C100/SRI32

# Sensor Performance

- Earthquake 1: ML=3.5, D=25km



## Geobit Instruments

Monitoring the earth

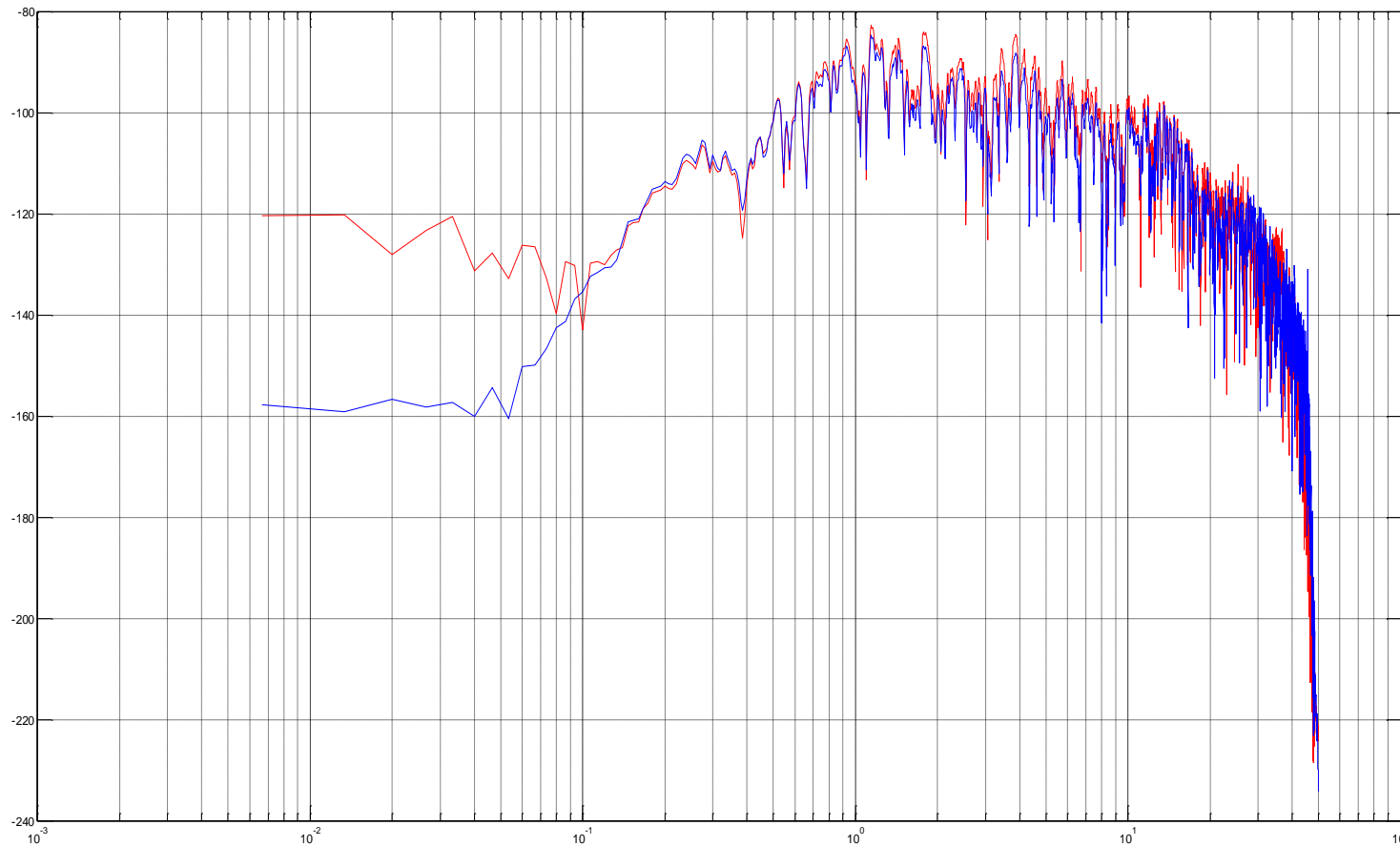
RAW DATA spectrum:

-Green: Guralp 3T/DM24

-Red: GEObit C100/SRi32

# Sensor Performance

- Earthquake 1: ML=3.5, D=25km



## Geobit Instruments

Monitoring the earth

Signal PSD

-Blue: Guralp 3T/DM24

-Red: GEObit C100/SRi32

# Sensor Performance

- Earthquake 2: ML=3.4, D=10km



## Geobit Instruments

Monitoring the earth

RAW DATA plot:

-Top: Guralp 3T/DM24

-Bottom: GEObit C100/SRi32

# Sensor Performance

- Earthquake 2: ML=3.4, D=10km

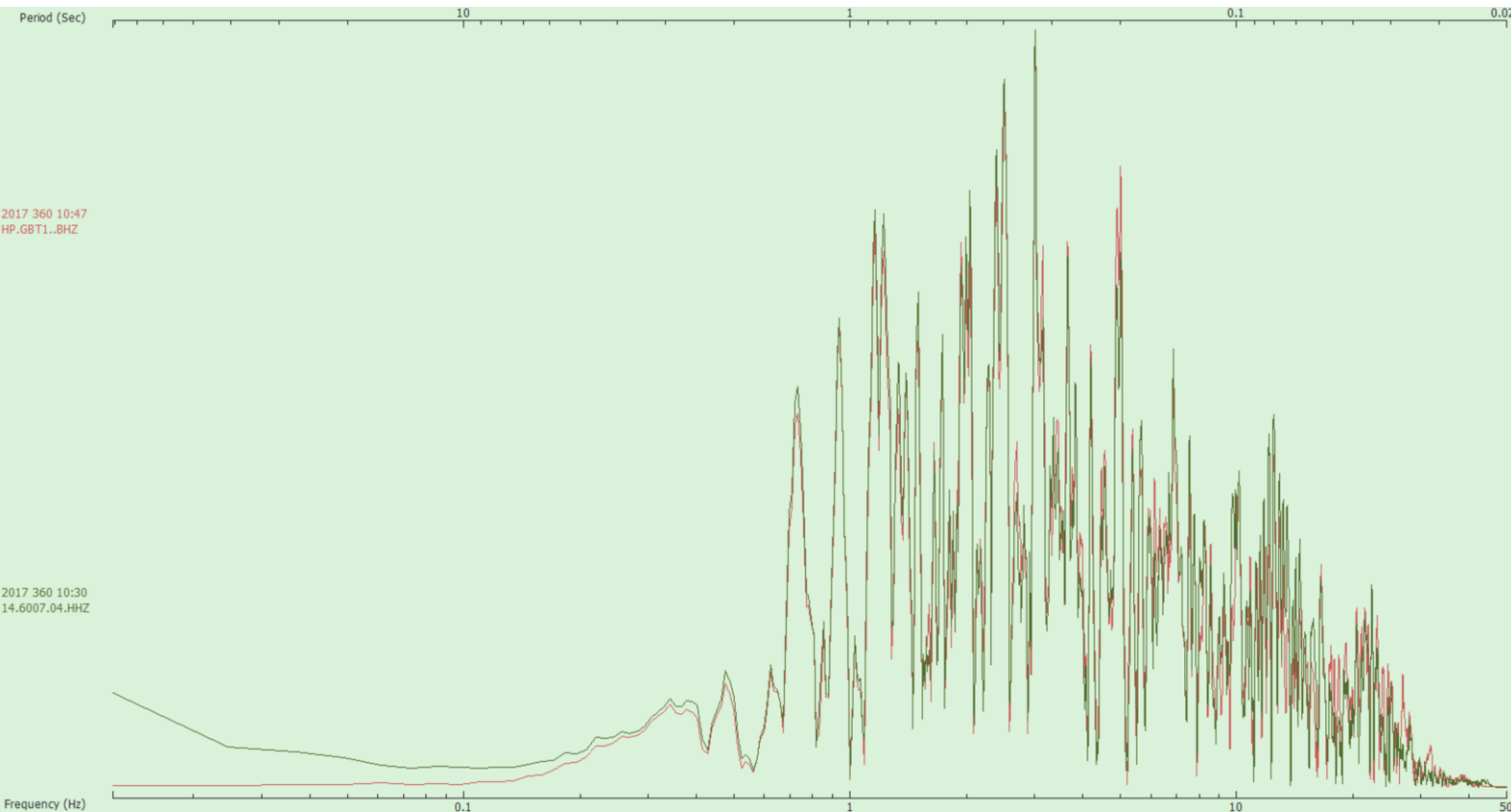
## Geobit Instruments

Monitoring the earth

RAW DATA spectrum:

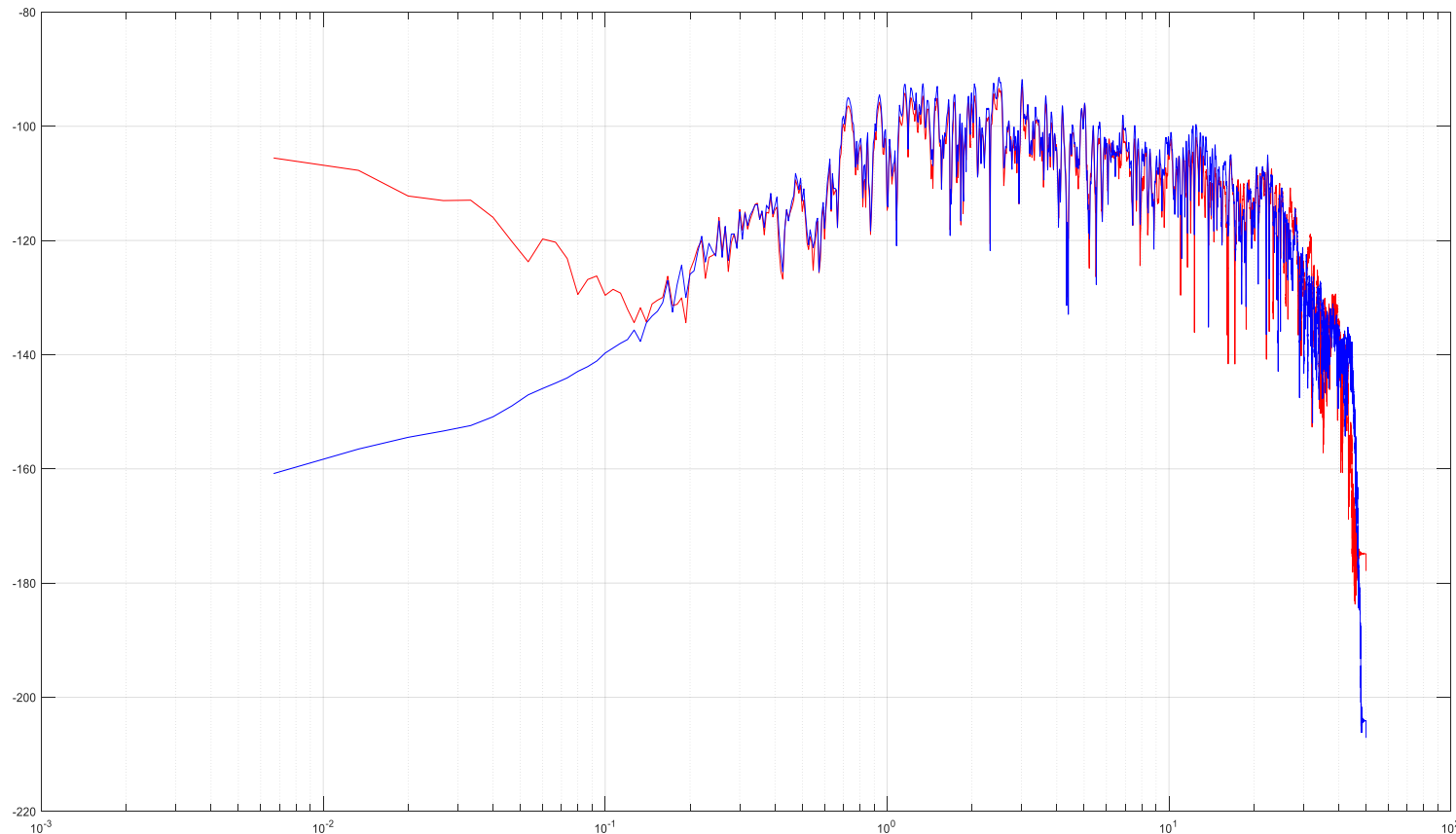
-Green: Guralp 3T/DM24

-Red: GEObit C100/SRi32



# Sensor Performance

- Earthquake 2: ML=3.4, D=10km



## Geobit Instruments

Monitoring the earth

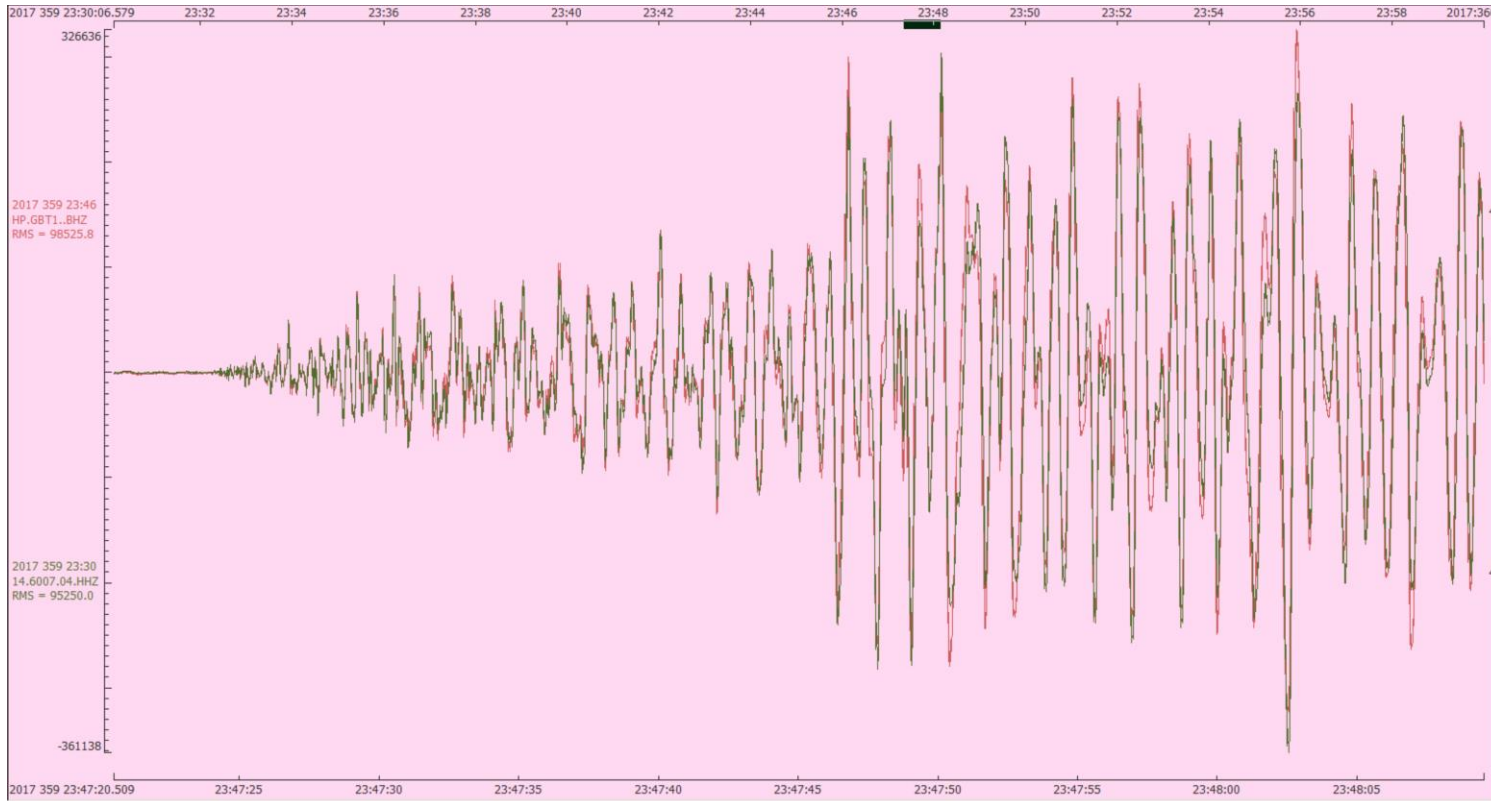
Signal PSD

-Blue: Guralp 3T/DM24

-Red: GEObit C100/SRi32

# Sensor Performance

- Earthquake 3: ML=4.7, D=130km



## Geobit Instruments

Monitoring the earth

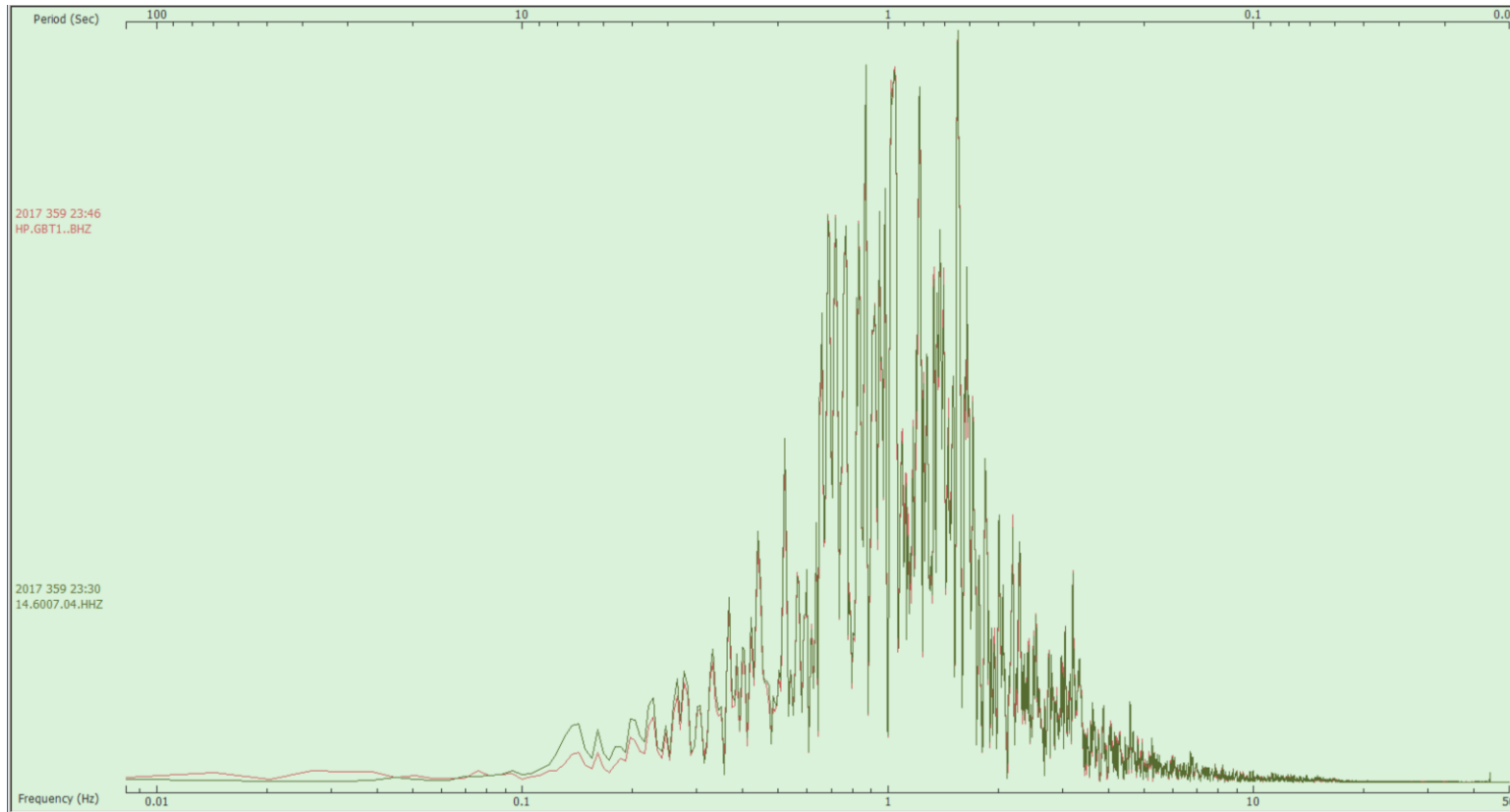
RAW DATA plot:

-Green: Guralp 3T/DM24

-Red: GEObit C100/SRi32

# Sensor Performance

- Earthquake 3: ML=4.7, D=130km



## Geobit Instruments

Monitoring the earth

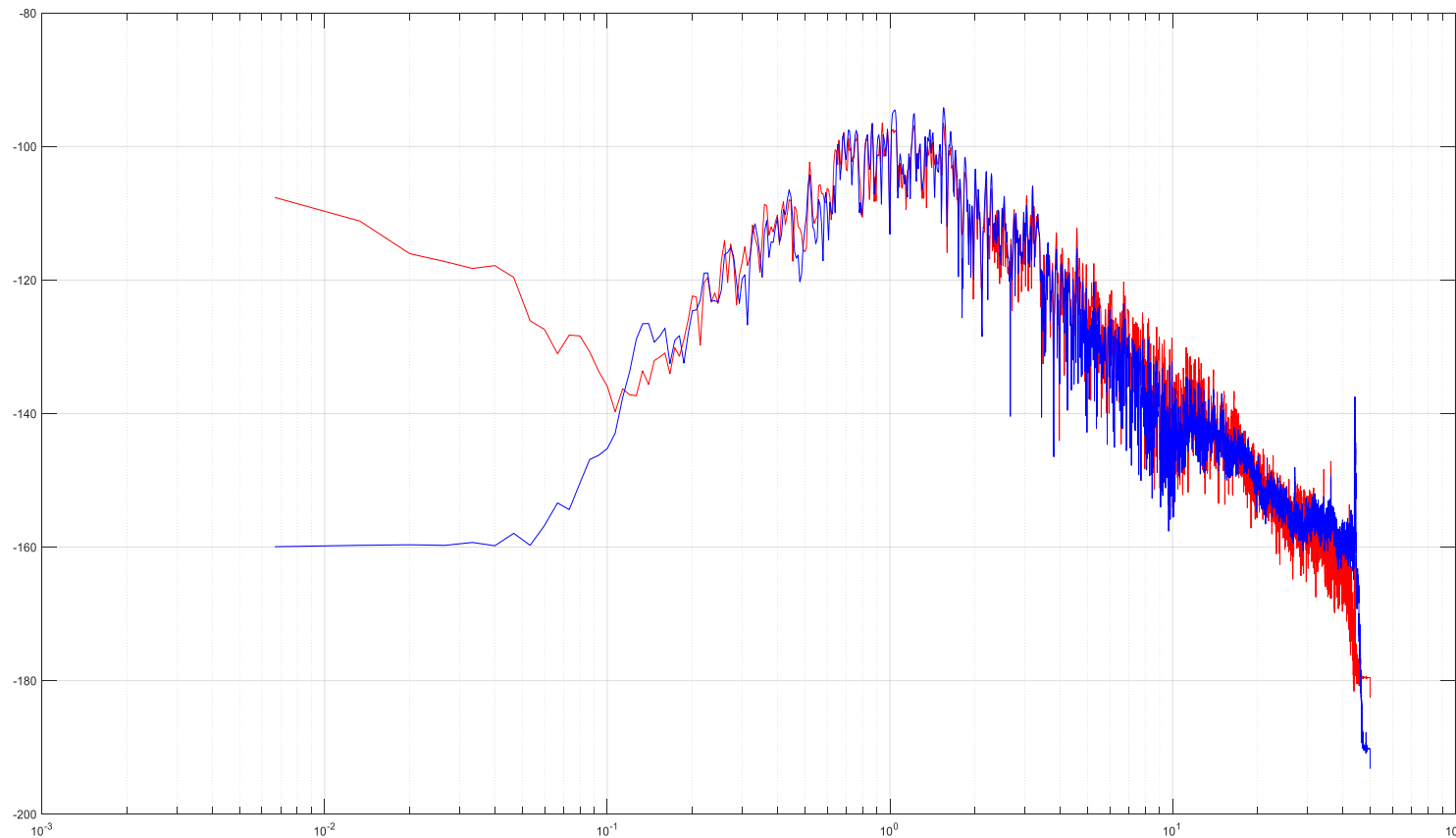
RAW DATA spectrum:

-Top: Guralp 3T/DM24

-Bottom: GEObit C100/SRi32

# Sensor Performance

- Earthquake 3: ML=4.7, D=130km



## Geobit Instruments

Monitoring the earth

Signal PSD

-Blue: Guralp 3T/DM24

-Red: GEObit C100/SRi32

# Sensor Performance

Testing the GEOtinyMK2 next to a Guralp 3T/DM24



## Geobit Instruments

Monitoring the earth

✓ Side-by-Side testing Geobit VS Guralp

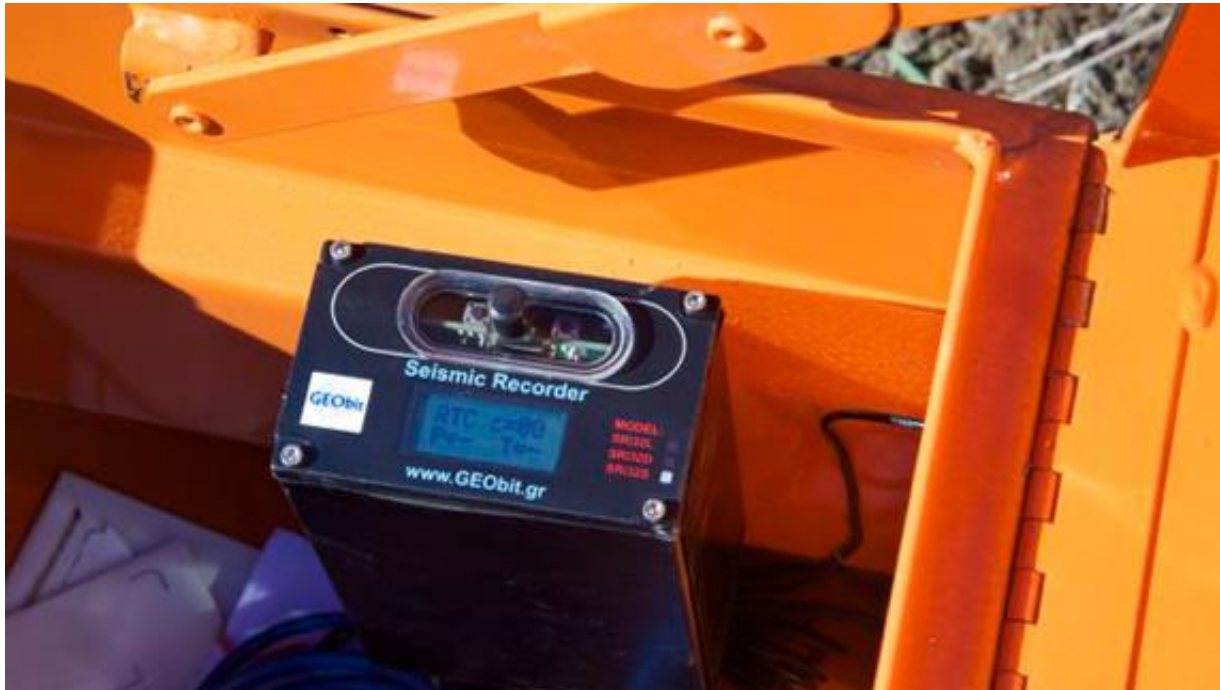
# Installation Case



PAN INDIA  
CONSULTANTS

- ✓ ONGC VADODARA GUJRAT
- ✓ BHU VARANSHI
- ✓ ISM DHANBAD

# Installation case



## Geobit Instruments

Monitoring the earth

- ✓ BHU Varansi
- ✓ Induced seismicity  
Monitoring Network

# Valuable Customers:

- ONCG India
- BHU Varansi
- ISM Dhanbad



## Geobit Instruments

Monitoring the earth

Thanks to all our customers for  
trusting GEObit-instruments



Pan India Consultants Pvt  
Ltd.

**Thank you !**

**धन्यवाद**