

Z100[®]



Typical Node Specifications

Seismic Data Channels: 4

ADC Resolution: 24 bits

Sample Interval: 0.5, 1, 2, 4 milliseconds

Preamplifier Gain

0 dB to 36 dB in 6 dB steps

Anti-Alias Filter

206.5 Hz (82.6% of Nyquist) @ 2 ms,
Linear Phase or Minimum Phase

DC Blocking Filter

1 Hz to 60 Hz, 6 dB/Octave, or OUT

Operating Temperature Range

-10 °C to +60 °C

Operating Life (100% Charge)

30 days @ 2 ms sample interval

Battery

Charging Temperature Range
+7.5 °C to +40 °C

Recharge Time: < 8 hours

Acquisition Channel

(2 ms sample interval, 25 °C, 31.25 Hz,
internal test, unless otherwise indicated)

Total Harmonic Distortion
0.0002% @ 12 dB gain, -3 dB Full Scale

Equivalent Input Noise

0.8 μ Vrms @ 0 dB

0.2 μ Vrms @ 12 dB

0.1 μ Vrms @ 24 dB

0.1 μ Vrms @ 36 dB

Full Scale Input Signal

2500 mV peak @ 0 dB

625 mV peak @ 12 dB

156 mV peak @ 24 dB

39 mV peak @ 36 dB

Gain Accuracy: 0.50%*

Dynamic Range

127 dB @ 0 dB Preamplifier Gain

Crossfeed

<-100 dB Geophone Channels

<-80 dB Hydrophone Channel**

Common Mode Rejection Ratio

>+90 dB Geophone Channels

>+40 dB Hydrophone Channel**

DC Offset

<10% of Input Noise with DC Blocking

Filter IN

Timing Accuracy

CSAC clock

Self Test Features

Internal Noise (preamp input terminated)

Internal THD

Internal Gain Accuracy

Internal CMRR

Internal Crossfeed

Internal Impulse

Sensor Impedance

Sensor Impulse

Sensors

Geophone

3 orthogonal, omni directional,

15 Hz @ -3 dB, 70% damped

0.57 V/in/s (22.4 V/m/s)

Hydrophone

3.4 Hz @ -3 dB, 8.9 V/Bar

Orientation

$\pm 1.5^\circ$ tilt indication

$\pm 5^\circ$ azimuth (at Latitudes within $\pm 50^\circ$
of the Equator)

Physical

Weight: 26 lb (11.8 kg) in air,

12.3 lb (5.6 kg) in water

Dimensions: 12 in (30.48 cm) diameter by

4 in (10.16 cm) high

Operating Depth: 300 meters

* Does not include high-impedance low-cut filter for directly coupled hydrophone interface

** Channel includes high-impedance low-cut filter for directly coupled hydrophone interface

All specifications relate to Node Part Number 221.8072.0001 only.
FairfieldNodal reserves the right to change specifications without notice
to provide the best possible product.

Drawing Number 601.0015.0001 Rev. -
Z100 Node Preliminary Specifications Sheet

August 2016