

ZLAND 1C



Typical Node Specifications

Seismic Data Channels: 1

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 @ 2ms (82.6% of Nyquist),
Selectable - Linear Phase or Minimum Phase

DC Blocking Filter

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

Operating Temperature Range

-40 °C to +60 °C

Operating Life

40 days (960 hours) Continuous @ 2ms,
25 °C

70 days Segmented (12 hours ON/
12 hours SLEEP), 25 °C

Acquisition Channel

(@ 2ms 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

0.75 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

Common Mode Rejection Ratio

>110 dB

DC Offset <10% of Input Noise with DC

Blocking Filter IN

Timing Accuracy

\pm 10 μ seconds GPS Disciplined

Instrument Tests

Internal Noise (preamp input terminated)

Internal THD

Internal Gain Accuracy

Internal CMRR

Internal Impulse

Sensor Impedance

Sensor Step Response

Sensor DC Resistance

Sensor

Internal Geophone, Single, Vertical
10 Hz, 70% damped, 2 V/i/s (78.7 V/m/s)
5 Hz - 70% damped, 1.95 V/i/s (76.7 V/m/s)
External input via optional pigtail

Battery

Type: Rechargeable Li-Ion

Charging Temperature Range

+5 °C to +40 °C

Recharge Time: <3 hours

Physical

Weight: 4.0 lb (1.8 kg), including spike

Dimensions: 4.6 in (11.7 cm) diameter by
5.7 in (14.5 cm) high

Detachable Spike: 4.6 in (11.7 cm) long,
detachable

FairfieldNodal reserves the right to change specifications without notice to provide the best possible product.

August 2016

fairfieldnodal.com

ZLAND 3C



Typical Node Specifications

Seismic Data Channels: 3

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 @ 2ms (82.6% of Nyquist),
Selectable - Linear Phase or Minimum Phase

DC Blocking Filter

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

Operating Temperature Range

-40 °C to +60 °C

Operating Life

35 days Continuous (@ 2 ms, 25 °C)

60 days Segmented
(12 hours ON/12 hours sleep @ 2 ms, 25 °C)

Acquisition Channel

(@ 2ms 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
0.75 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

DC Offset <10% of Input Noise with DC
Blocking Filter IN

Gain Accuracy: 0.50%

Dynamic Range
127 dB @ 0 dB Preamplifier Gain

Common Mode Rejection Ratio
>110 dB

Timing Accuracy
 ± 10 μ seconds GPS Disciplined

Instrument Tests

Internal Noise (preamp input terminated)

Internal THD

Internal Gain Accuracy

Internal CMRR

Internal Impulse

Sensor Impedance

Sensor Step Response

Sensor DC Resistance

Sensor

3 Geophones, Orthogonal Configuration

10 Hz – 70% damped,
2 V/i/s (78.7 V/m/s)

5 Hz – 70% damped,
1.95 V/i/s (76.7 V/m/s)

Battery

Type: Rechargeable Li-Ion

Charging Temperature Range
+5 °C to +40 °C

Recharge Time: <4 hours

Physical

Weight: 6.2 lb (2.8 kg), including spike

Dimensions: 4.6 in (11.7 cm) diameter by
6.4 in (16.3 cm) high

Detachable Spike: 4.6 in (11.7 cm) long,
detachable

FairfieldNodal reserves the right to change specifications without notice to provide the best possible product.

August 2016

fairfieldnodal.com