

# Z3000



## Typical Node Specifications

### Seismic Data Channels: 4

**ADC Resolution:** 24 bits

**Sample Interval:** 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

### 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)

Up to 180 days

### Battery

Charging Temperature Range  
+3 °C to +40 °C

Recharge Time: < 30 hours

### Acquisition Channel

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

Total Harmonic Distortion  
0.0003% @ 12 dB gain, -3 dB Full Scale

Equivalent Input Noise

1.0  $\mu$ Vrms @ 0 dB

0.4  $\mu$ Vrms @ 12 dB

0.3  $\mu$ Vrms @ 24 dB

0.3  $\mu$ 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

120 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

### Sensors

Geophone

3 orthogonal 10 Hz @ -3 dB, 70%  
damped 1.5 V/in/s (59.1 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: 213 lb (97 kg) in air, 110 lb (49 kg)  
in water

Dimensions: 21 in. diameter by 10.5 in. high

Operating Depth: 3000 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 221.6605.0003 only.  
FairfieldNodal reserves the right to change specifications without notice to provide the  
best possible product.

Drawing Number 601.0004.0003 -  
Z3000 Node (Version 3) Specification Sheet

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