



**SPECIFICATIONS**  
**Z700 NODE (REMOTE DATA ACQUISITION UNIT)**

OPERATING DEPTH\* 700 meters  
 WEIGHT IN AIR 65 lb (30 kg)  
 WEIGHT IN WATER 40 lb (18 kg)  
 SIZE 17 inches diameter by 6 inches high

OPERATING TEMPERATURE RANGE\* -10 to +60 degrees C (Battery Charging: 0 to +45 degrees C)  
 BATTERY TYPE Rechargeable Li-Ion  
 OPERATING LIFE\* Maximum 15 days  
 DATA STORAGE 8, 16 or 32GB NAND Flash Memory

Signal Conditioning Specifications @ 2ms, 25°C, 31.25Hz, internal test, unless otherwise indicated:

SEISMIC DATA CHANNELS 4  
 ADC RESOLUTION 24 bits  
 SAMPLE INTERVALS 0.5\*\*\*, 1\*\*\*, 2, 4 milliseconds  
 PREAMPLIFIER GAIN 0, 12, 24, 36 dB  
 LOW-CUT & DC OFFSET FILTER OUT to 60Hz in 1Hz increments, 6dB/octave  
 ANTI-ALIAS FILTER Fixed by Sample Interval (214.5Hz @ 2ms), Linear Phase  
 TOTAL HARMONIC DISTORTION 0.0006% @ 12dB gain, -3dB Full Scale

EQUIVALENT INPUT NOISE  
 (Channel Inputs Terminated)

GAIN dB	GEOPHONES uVrms	HYDROPHONE** uVrms
0	1.8	1.8
12	0.6	1.5
24	0.4	1.5
36	0.4	1.5

DC OFFSET <10% of Input Noise with DC Offset Filter enabled  
 FULL SCALE INPUT SIGNAL 2500 mV pk @ 0dB  
 625 mV pk @ 12dB  
 156 mV pk @ 24dB  
 39 mV pk @ 36db

DYNAMIC RANGE 120dB @ 0dB Preamp Gain  
 CROSSFEED Geophone Channels: < -100dB, Hydrophone\*\*: < -80dB  
 COMMON MODE REJECTION RATIO Geophone Channels: >90dB, Hydrophone\*\*: >40dB  
 GAIN ACCURACY, CHANNEL TO CHANNEL 0.50%

TIMING ACCURACY\* Corrected Post-Acquisition: +/- 1ms (or one half sample interval)  
 Uncorrected: +/- 5 ms at 15 days

SENSOR CONFIGURATION 1 Hydrophone, 3 Orthogonal Geophones

GEOPHONE TYPE Oyo-Geospace X-Phone-LT Omniphone  
 GEOPHONE SENSITIVITY\* 0.570 V/in/sec  
 GEOPHONE LOW-CUT\* 15Hz (-3dB)

HYDROPHONE TYPE High Tech HTI-96-MIN  
 HYDROPHONE SENSITIVITY\* 8.9 V/Bar  
 HYDROPHONE LOW-CUT\* 10Hz (-3dB)

TILT INDICATION +/- 1.5°  
 AZIMUTH INDICATION +/- 5° (at Latitudes within +/- 50° of the Equator)

SELF-TEST FEATURES Internal Noise (preamp inputs terminated)  
 Internal THD  
 Internal Gain Accuracy  
 Internal CMRR  
 Internal Crossfeed  
 Internal Impulse  
 Sensor Impedance

\*Not fully verifiable at acceptance testing prior to system shipment.

\*\*Channel includes high-impedance low-cut filter for directly-coupled Hydrophone interface.

\*\*\*0.5 & 1 msec sample intervals are not available on exported equipment.

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