

Sigma 3+ Recording System

			Sigma 3-3	Sigma 3-3+
Electronics	Input Channels		3	3
	PreAmp Gains		Low x1 (0 dB) High x16 (24 dB)	Low x1 (0 dB) High x16 (24 dB)
	Maximum Input	Low Gain	5 volts P2P	5 volts P2P
		High Gain	0.313 volts P2P	0.313 volts P2P
	Typical Dynamic Range @500sps	Low Gain	126 dB	126 dB
		High Gain	122 dB	122 dB
	Typical Harmonic Distortion @500sps	Low Gain	0.0001%	0.0001%
		High Gain	0.0001%	0.0001%
	Typical Noise Floor @500sps	Low Gain	0.8 uVolts RMS	0.8 uVolts RMS
		High Gain	0.08 uVolts RMS	0.08 uVolts RMS
	Sample Rates		125, 250, 500, 1000, 2000 & 4000 sps	125, 250, 500, 1000, 2000 & 4000 sps
	Sample Intervals		8000, 4000, 2000, 1000, 500 & 250 µSecs	8000, 4000, 2000, 1000, 500 & 250 µSecs
	Low Cut Filters		Digital	Digital
Features	High Curt Filter		85% Nyquist	85% Nyquist
	Bandwidth		DC to 85% Nyquist	DC to 85% Nyquist
	Maximum Trace Length		Continuous Recording	Continuous Recording
	Input Impedance		20 kOhm	20 kOhm
	External USB		Ruggedized 19-pin	Ruggedized 19-pin
	Mesh Radio Network		Standard	Standard
	100Base-Tx Ethernet		Ruggedized 10-pin	Ruggedized 10-pin
	Internal Memory		8 Gbytes	8 Gbytes
	Power Requirement		0.4 watts/channel	0.4 watts/channel
	Voltage Requirement		9-28 volts	9-28 volts
	Case Type		ABS on Carbon Fiber	ABS
	Size (volume 60% less)		292x337x102mm 11.5x13.25x4 in	271x286x55mm 10.7x11.3x2.2 in
	Weight (40% less)		5 lbs (2.3 kg)	3 lbs. 2 oz. (1.4 kg)
	Temperature Range		-40 C to 80 C	-40 C to 80 C
Physical				



Original Sigma 3



New Sigma 3+

Sigma 3+ Recording System

The Robust & Versatile Nodal Seismograph

Sigma 3+ Improvements

- New Streamlined Case Design
- Smaller Size (60% less)
- Less Weight (40% less)
- Same excellent performance as Sigma Box

System Features

- Continuous Recording Standard - For Monitoring and Autonomous Operation
- Mesh Radio Network - A low-power network for deployment, plus command and control, of nodes
- Cable, Wi-Fi, or Cellular Ethernet - Provides "in the field" data offloading while recording
- Hot-Swap External Storage Option - For collecting data without interrupting operation
- Hot-Swap Battery Option - For changing batteries without interrupting operation
- Battery Power Output - For active sensors such as accelerometers and broadband sensors
- Internal GPS - For clock discipline and location information
- VHF/Wire Timing Option - For mining and other underground projects without GPS
- Rugged IP67 Case

Available Software

- Active Source Acquisition
- Event Monitoring (Local or Remote)
- Long-Term Continuous Recording

Acquire Active Data

- Vibroseis w/ Force 3
- Dynamite w/ BoomBox 3
- Impulsive w/ RTM 3

Acquire Passive Data

- Hydraulic Fracturing Monitoring
- Surface Wave Acquisition
- Long-term Permanent Monitoring
- Earthquake Monitoring

Sigma 3+ . . . The sum of all cableless experience

