

# SPECIFICATIONS

# 508<sup>XT</sup>

## Central Unit

	SCI-508	SCI LITE-508
<b>Functions</b>	<ul style="list-style-type: none"><li>• Shooting system management</li><li>• Aux channels recording</li><li>• GPS synchronisation</li><li>• Network management</li></ul>	
<b>Operating voltage</b>	110/220 VAC, 50/60 Hz	10.5V – 15V
<b>Power consumption</b>	10 W	5 W with a single transverse
<b>Operating temperature</b>	0 °C to 45 °C (32 °F to 113 °F)	-40°C to 70 °C (-40 °F to 158 °F)
<b>Operating conditions</b>	Altitude < 2000 meters	-
<b>Dimensions (HxWxD)</b>	2U 19" rackable, 88.9 x 482.6 x 400 mm (3.5 x 19 x 15.7 in.)	158 x 218 x 342.4 mm (6.2x8.6x13.5 in.)
<b>Weight</b>	4 kg (8.82 lbs)	

## SMX-508

<b>Functions</b>	Multi transverse management (up to 12)
<b>Operating voltage</b>	110/220 VAC, 50/60 Hz
<b>Power consumption</b>	0.2W + 2.5W per TFOI connected
<b>Operating temperature</b>	0 °C to 45 °C (32 °F to 113 °F)
<b>Operating conditions</b>	Altitude < 2000 meters
<b>Dimensions (HxWxD)</b>	2U 19" rackable, 88.9 x 482.6 x 400 mm (3.5 x 19 x 15.7 in.)
<b>Weight</b>	4.5 kg (9.92 lbs)



# Field Equipment

CX-508		
	CX-508	TZ CX-508
Functions	<ul style="list-style-type: none"> <li>Supply clock and power to connected FDU/DSU</li> <li>Store data locally (32 GB memory)</li> <li>Transmit data to CU via network with error recovery</li> </ul>	
Operating voltage	10.5 - 15 V DC	
Line data rate	10 - 20 - 40 Mbps	
Maximum number of channels per line	2,400 @2 ms real-time	
Transverse data rate	1 Gbps	
Maximum number of channels per transverse	100,000 @2 ms real-time	
Power consumption	<ul style="list-style-type: none"> <li>Line only : 3 W in acquisition</li> <li>With transverse : 7 W in acquisition</li> </ul>	
Dimension (HxWxD)	158 x 218 x 342.4 mm (6.2x8.6x13.5 in.)	
Operating temperature	-40 °C to 70 °C (-40 °F to 158 °F)	
Operating type	Onshore	Transition Zone / Offshore
Weight (w/o batterie)	3.8 kg / 8.38 lbs	11 kg / 24.25 lbs with cage
Waterproofness	Up to 15 m	Up to 25 m

FDU-508		
	FDU-508	TZ FDU-508
Functions	<ul style="list-style-type: none"> <li>Data filtering, compression &amp; time stamping</li> <li>Data transmission with CRC control</li> <li>24 bits A/D conversion</li> <li>Instrument tests : noise, gain, phase, distortion</li> <li>sensor tests : resistance, tilt, leakage, noise</li> </ul>	
Sample rate	4, 2, 1, 0.5 ms	
Time standard	Synchronous to GPS clock	
Input impedance differential mode	20 kΩ // 77 nF	
Full scale	1.6 V RMS (0dB), 400 mV RMS (12 dB)	
Noise (3-200 Hz)	450 nV RMS (0dB), 145 nV RMS (12 dB)	
Instant dynamic range	130 dB	
System dynamic range	140 dB	
Distortion	-110 dB	
Gain accuracy	< 0.1 %	
Phase accuracy	< 20 μs	
Low cut filter	Selectable : (None, 0.15625 Hz, 0.3125 Hz, 0.625 Hz, 1.25 Hz, 2.5 Hz)	
High cut filter	0.8 FN linear or minimum phase	
Interval between FDU	Up to 70 m	
Power consumption	Acquisition : 105 mW / Standby : 55 mW	
Operating temperature	-40 °C to 70 °C (-40 °F to 158 °F)	
Operating type	Onshore	Transition Zone / Offshore
Weight	0.470 kg / 1.04 lbs	1.235 kg / 2.20 lbs
Dimension (HxWxD)	86.2 x 76 x 248 mm (3.4x3.0x9.7 in.)	125 x 76 x 400 mm (4.9x3.0x15.8 in.)
Waterproofness	Up to 5 m	Up to 25 m <sup>(1)</sup>

(1) with specific handling care above 15 m

## DSU1-508

<b>Operating type</b>	Onshore
<b>Functions</b>	<ul style="list-style-type: none"><li>• Data filtering, compression &amp; time stamping</li><li>• Data transmission with CRC control</li><li>• Acceleration measurement</li><li>• Instrument tests : gain, phase, distortion</li><li>• Sensor tests : noise, distortion, tilt</li></ul>
<b>Sample rate</b>	4, 2, 1, 0.5 ms
<b>Time standard</b>	Synchronous to GPS clock
<b>Bandwidth</b>	0-800 Hz
<b>Full scale</b>	5 m/s <sup>2</sup>
<b>Noise (10-200Hz)</b>	15 ng/√Hz
<b>System dynamic range</b>	128 dB
<b>Distortion</b>	-90 dB
<b>Gain accuracy</b>	< 0.25 %
<b>Phase accuracy</b>	< 20 μs
<b>Power consumption</b>	Acquisition : 85 mW / Standby : 55 mW
<b>Weight</b>	0.485 kg / 1.07 lbs
<b>Dimension (HxWxD) (with spike)</b>	176.8 x 76.4 x 248 mm (6.9x3.0x9.7 in.)
<b>Operating temperature</b>	-40 °C to 70 °C (-40 °F to 158 °F)
<b>Waterproofness</b>	Up to 5 m

## ERB-508

<b>Functions</b>	<ul style="list-style-type: none"><li>• Wireless data transfer between CX-508</li><li>• Can be used instead of a line or transverse</li></ul>
<b>Transmission rate</b>	100 Mbps
<b>Range</b>	<ul style="list-style-type: none"><li>• Up to 1 km using the included tripod</li><li>• Up to 15 km using a higher mast</li></ul>
<b>Voltage</b>	12 V
<b>Power consumption</b>	10 W on each side
<b>Operating temperature</b>	-40 °C/+60 °C (-40 °F/+140 °F)
<b>Operating conditions</b>	IP67



LRC-508		
	LRC-508	TZ LRC-508
<b>Operating type</b>	Onshore	Offshore on a buoy
<b>Functions</b>	<ul style="list-style-type: none"> <li>• Wireless QC transfer between CX-508</li> <li>• QC Mesh radio network</li> </ul>	
<b>Transmission rate</b>	1,2 Kbps	
<b>Range</b>	Up to 1 km	
<b>Voltage</b>	12 V	
<b>Power consumption</b>	<ul style="list-style-type: none"> <li>• Continuous transmission at full power: 2 W</li> <li>• Reception mode: 0.4 W</li> </ul>	
<b>Operating temperature</b>	-40 °C to 70 °C (-40 °F to 158 °F)	
<b>Operating conditions</b>	IP68	

## Peripherals

FT-508	
<b>Functions</b>	Troubleshooting complete lines of field units ( FDU-508 & DSU-508)
<b>Instrument tests</b>	<ul style="list-style-type: none"> <li>• Noise</li> <li>• Gain</li> <li>• Phase</li> <li>• Distortion</li> <li>• Pulse</li> <li>• CMRR</li> </ul>
<b>Field Tests</b>	<ul style="list-style-type: none"> <li>• Noise</li> <li>• Resistance</li> <li>• Tilt</li> <li>• Tilt model</li> <li>• Leakage</li> <li>• Impulse</li> <li>• Distortion</li> </ul>
<b>Capacity</b>	1 line of 3000 FDU-508 or DSU-508 maximum
<b>Operating temperature</b>	-20 °C/+50 °C ( -4 °F/+122 °F)
<b>Operating conditions</b>	IP65

DH-508	
<b>Functions</b>	Harvest of seismic and test data of a single CX-508 or a complete autonomous line
<b>Capacity</b>	~2000 ch @ 2ms for 12 h of continuous acquisition
<b>Operating temperature</b>	-20 °C/+50 °C ( -4 °F/+122 °F)
<b>Operating conditions</b>	IP65

Channel capacity between CX-508		
Distance between RPs	FDU-508	DSU1-508
13.75 m /45 ft	96	106
27.5 m /90 ft	80	92
55 m /180 ft	64	74
70 m /230 ft	60	68



Line cable		
	Land cable	TZ cable
Operation type	Onshore	Transition Zone / Offshore
Maximum length	–	–
Weight	43 kg/km	83 kg/km
Breaking strength bulk cable	150 daN	350 daN
Breaking strength with connectors	120 daN	300 daN
Waterproofness	Up to 5 m	Up to 25 m <sup>(1)</sup>

Transverse cable		
	TFOI-508	TZ TFOI-508
Operation type	Onshore	Transition Zone / Offshore
Maximum length	2 km	2 km
Weight	45 kg/km	140 kg/km <sup>(2)</sup>
Breaking strength bulk cable	300 daN	300 daN
Breaking strength with connectors	170 daN	300 daN <sup>(2)</sup>
Waterproofness	Up to 15 m	Up to 25 m <sup>(1)</sup>

(1) with specific handling care above 15 m

(2) with stainless steel cable

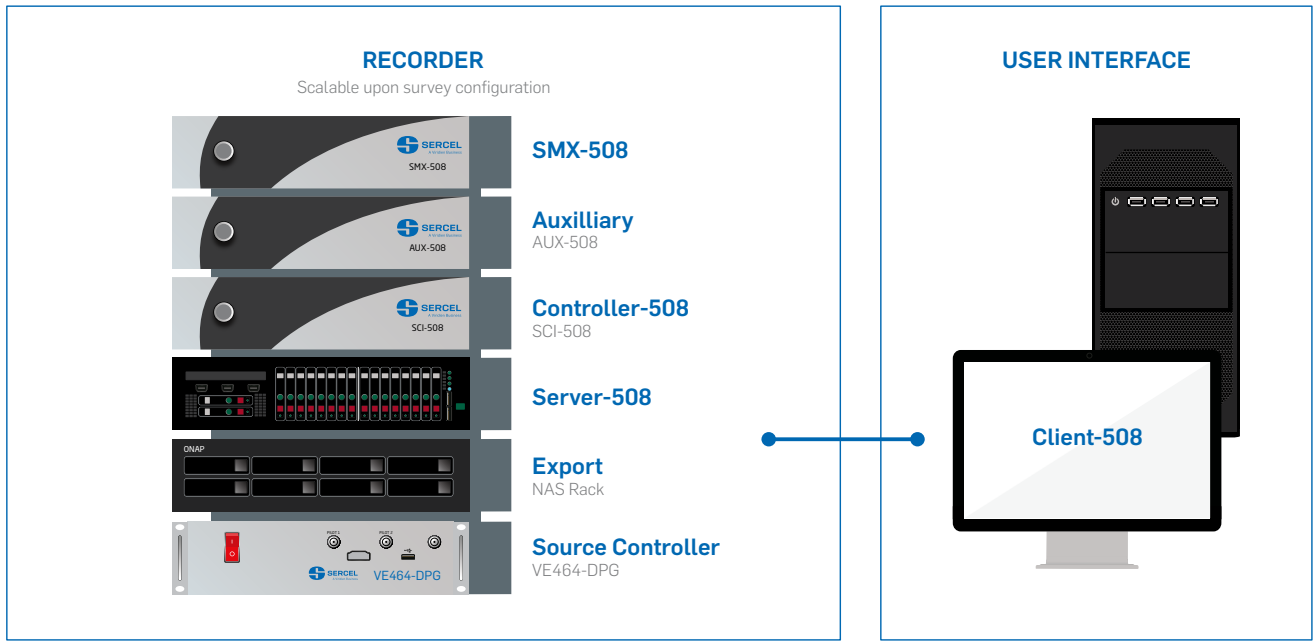
## Energy Packs

	TZ Energy Pack 182AH	TZ Energy Pack 364AH
Energy	2640 Wh	5320 Wh
Capacity	182 Ah	364 Ah
Nominal Voltage	14,6 V	14,6 V
Max. intensity for charge and discharge	20 A	20 A
Typical duration for complete charging	10 hours	20 hours
Dimensions	355 x 255 x 180 mm	355 x 405 x 180 mm
Weight ( in air)	28 kg	49 kg
Weight ( in water)	14 kg	26 kg

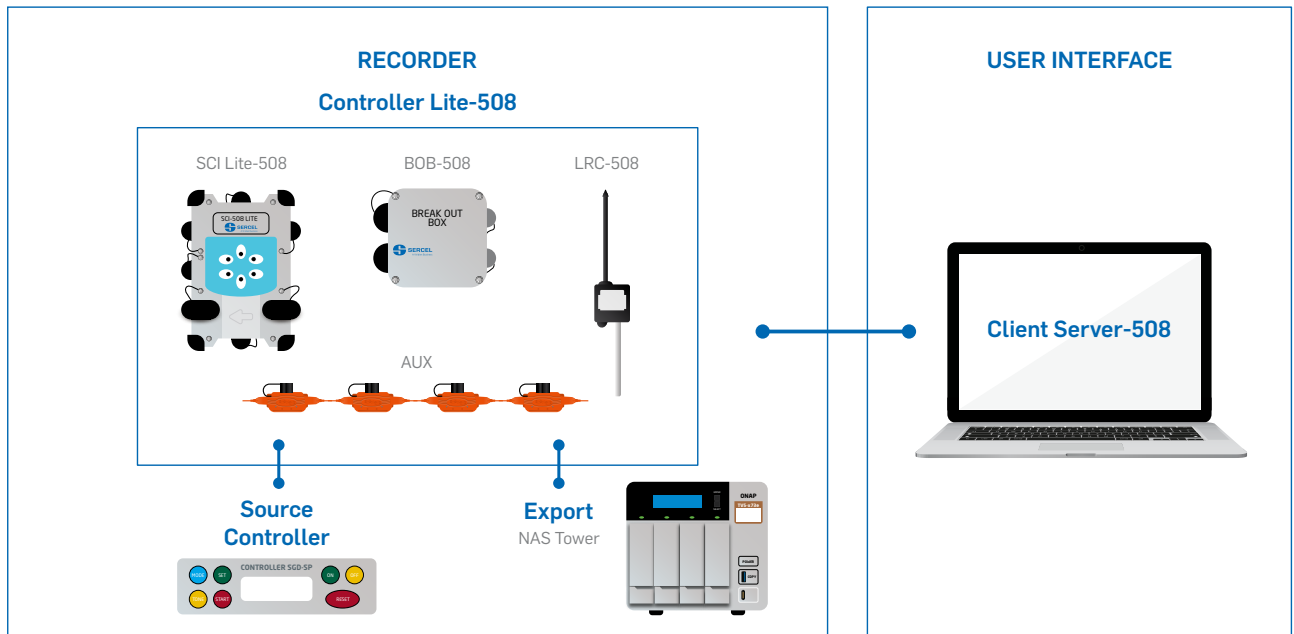
Note: Sercel reserves the right to change its specifications without prior notice.  
All specifications are typical at 25 °C



## System architecture 508<sup>XT</sup>



## System architecture 508<sup>XT</sup> Lite



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