



**Baykal-8.
Technical Description.**

LLC R-sensors

Description

The mobile high-resolution seismic signal recorder “Baikal-8” is the autonomous seismic station which can be used to record external seismic or other sensors signals in wide frequency band with high accuracy and synchronization with UTC.

The device can be used for operational and long-term seismic and geophysical measurements in real field conditions in a wide range of temperatures. Large nonvolatile (NVRAM) memory volume, built-in high-stability generator and a GPS module, high-quality analog-digital tract provide excellent operational characteristic for solving a wide class of problems. Ethernet support allows to use the standard solutions for connecting several devices into the network. Wireless data transmission can be achieved using wireless-ethernet routers. FTP and SeedLink support makes possible to use the standard software for remote data retrieval. MiniSEED format is supported.

Technical characteristics

Parameter	Unit	Value
Channels number		6 (3 optional)
Data width	bit	24
Inputs type		Differential
Input impedance		44KOhm 4700pf
Sampling frequency (FD)	samples/sec	100, 200, 500, 1000, 2000 10,20 - optional
Frequency band(-3dB) ^{*3}	Hz	0 - 370
Gain (G)		1, 2, 4, 8, 16, 32, 64
Maximum input voltage with G=1	V	± 2.5
Conversion coefficient With G=1 With G=16	nV/discrete	301.0 ± 0.4% 18.8 ± 1%
Normalized noise: G=1; FD=100 G=1; FD=1000 G=16; FD=100	uV	< 1.0 < 1.2 < 0.2
Effective precision G=1; FD = 100 G=1; FD=1000 G=16; FD=100	bit	>21.5 >21.0 >21.0
NVRAM type		MicroSD
NVRAM capacity	GB	8 Up to 64 (optional)
Data format		MiniSEED
Built-in generator stability (-20 - +60 °C)		± 3 * 10 ⁻⁷
Synchronization accuracy External GPS Built-in GPS	usec	± 2 ± 1

Device input voltage	V	10 – 28 DC
External active sensors voltage		+5V(100 mA) -5V(100 mA)
Device-PC communication interfaces		USB, Ethernet(TCP/IP Protocol Stack)
Ethernet protocols		FTP, Seedlink
Operational temperatures	°C	-30 ÷ +60