

EEG headset comparison

СРАВНЕНИЕ БЕСПРОВОДНЫХ ЭЭГ НЕЙРОИНТЕРФЕЙСОВ

Trade mark and Company	Mitsar EEG-SmartBCI MITSAR Russia	Enobio Neuroelectronics Spain	LiveAmp Brain Products Germany	B-AlertX24 Advanced Brain Monitoring USA	g.Nautilus-PRO g.Tec Austria	Quick-Dry Cognionics USA	DSI 24 Wearable Sensing USA
Number of channels	24/32	20/32	16/32	24	16/32	24/30	24
Accelerometer	Yes						No
Impedance check	Real-time with EEG acquisition	Real-time with EEG	Yes	Yes (Initiated by host computer using bi-directional link)	Yes (Performed with 10 Hz)	Real-time with EEG acquisition	No
ADC	24 bit						16
Input range	± 310 mV	-	± 341 mV	-	± 187,5 mV	-	± 10 mV
Input noise	≤ 1,2 μV p-p	≤ 4,0 μV p-p	≤ 2,0 μV p-p	2,0-3,0 μV p-p	≤ 4,0 μV p-p	≤ 4,0 μV p-p	≤ 3,0 μV p-p
Frequency range	DC(0)-70 Hz			0,1-100 Hz	DC(0)-200 Hz	DC(0)-131 Hz	0,03-150 Hz
Hardware sampling rate	2000 Hz filtered down 250 Hz	500 Hz	100/500/250 Hz	256 Hz	500/250 Hz	500/1000 Hz	300 Hz
Onboard storage	Micro SD up to 32 Gb	Micro SD	Micro SD up to 32 Gb	No		Micro SD	No
Communication	Bluetooth 3.0		Bluetooth 4.0	Bluetooth			
Wireless range	≥ 10 m						
Internal power	Built-in Li-poly battery (1000 or 2000 mAh)	Built-in Li-ion battery	Built-in rechargeable battery	2 x Li-ion batteries	Built-in Li-ion battery	Dual, hot-swappable, removable Lithium-Ion	-
Uninterrupted operating time	Up to 20 hours (wireless) Up to 24 hours SD-card (battery 2000 mAh)	Up to 14 hours	Up to 3 hours (wireless) Up to 4,5 hours SD-card	Up to 6 hours – wireless up to 16 hours SD- card	Up to 10 hours	Up to 8 hours – wireless up to 16 hours SD-card	-

Electrodes	Wet(MKSCap, Disk, ElectroCap, Waveguard), Grid/Strip	Wet/Dry		Dry	Active, wet and dry	Dry	
Triggering	Wireless (Smart Synchro)	No	Yes (built-in)	Optional		Wireless	Yes
Photo-Phono stimulator	Smart Synchro (glass MitsarPhoto1, built in phono)	No					
Weight	55 g (battery 1000 mAh) 75 g (battery 2000 mAh)	65 g	60 g	110 g	200 g	530 g with dry electrodes	600 g with dry electrodes
Dimensions	65x55x18 mm (battery 2000mAh)	65x85x20 mm	83x51x14 mm	5"(L) x 2.25" (W) x 1" (H)	80 (L) x 60 (W) x 27 (H) mm	-	-
Medically certified	CE	CE/FDA	No		CE/FDA	No	