

EEG Headgear

Consumer and research purpose headgear are mentioned here. This is a descriptive comparison of the headgear that can be used in our project to capture the raw brainwave signals.

Requirements:

1. Headgear with 10-20 international placement system
2. Dry Electrodes (EEG sensors)
3. 8-16 channel sampling capability
4. Software compatibility and documentations
5. Amplification circuit
6. Transceiver (capability of wireless connectivity)

Targeted headgear:

1. EMOTIV EPOC X 14 Channel Mobile Brainwear
2. DSI 24 by wearable sensing
3. DSI 7 by wearable sensing
4. OpenBCI Ultracortex "Mark IV"

Comparison of the cited products are based on the mentioned requirements as well as availability according to delivery in India.

Product	Emotiv EPOC X	Emotiv EPOC FLEX	DSI 24	DSI 7	Ultracortex MARK 4
Features					
Link	https://www.emotiv.com/product/emotiv-epoc-x-14-channel-mobile-brainwear/#tab-description	https://www.emotiv.com/product/emotiv-epoc-x-14-channel-mobile-brainwear/#tab-description	https://wearablesensing.com/products/dsi-24/	https://wearablesensing.com/products/dsi-7-wireless-dry-eeg-headset/	https://docs.openbci.com/AddOns/Headwear/MarkIV/
EEG sensors	Saline soaked felt pads	Saline OR Ag/AgCl + Gel	Dry (comb) Sensors	Dry (comb) Sensors	Dry (comb) Sensors
Number of EEG sensors	14 + 2 (reference)	14 + 2 (reference)	19 + 2 (reference)	7 + 2 (references)	6 or 14 + 2 (reference) (extras can be installed)
Channels	14	Upto 32 channels	24	7	Cyton - 8 Cyton + Daisy - 16 Ganglion - 8
Resolution	14 or 16 bits per channel	14 bits per channel	16 bits per channel	16 bits per channel	Cyton - 24 bit channel Cyton + Daisy - 24 Ganglion - 24
Wireless	Bluetooth	Bluetooth	Bluetooth	Bluetooth	Bluetooth
Sensor location	Fixed	Configurable	Movable	Semi-fixed	Fixed
Cost	\$849.00	\$1699.00+	\$22,400.00	\$16,049.00	\$1,499.00