# Tender document
# Department of BSBE
# Indian Institute of Technology Kanpur
# Kanpur (UP) 208016 India

**Enquiry No: IITK/BSBE/AR/22-23/170622**

**Sub.: Inquiry for TACS**

**Inquiry date:20/06/2022**

**Last date:30/06/2022**

**Opening date:01/07/2022**

**Kindly quote your (Technical bid and price bid separately) are invited for the above-mentioned laboratory product as per the technical specifications given below:**

**It is to request you to send the details on the given email: arjunr@iitk.ac**

## Terms and Conditions:

1. Maximum discount on the product should be offered.

2. Quotations should be valid for minimum 90 days, or more.

3. Complete bank details should be submitted.

4. Delivery should be FOB,CIF & DAP

5. IIT Kanpur is fully exempted from payment of GST on imported goods against our DSIR certificate.

6. IIT Kanpur is partially exempted from payment of customs duty and exemption certificate will be provided.

7. Manufacturer authorization certificate from principal company is required if you are a distributor.

8. Include proprietary item certificate, if applicable.

9. The Institute reserves the right of accepting or rejecting any quotation without assigning any reason thereof.

10. All prices should be mentioned including delivery and installation to IIT Kanpur.

11. Payment terms should be $10,000(US dollars) in Advance & 30% after the delivery of the material.

# Technical Specifications for TACS

## Hardware

- **Number of channels:** 32 channels
- **Communication:** Wi-Fi IEEE 802.11 g or USB
- **Rechargeable system using Li-Ion battery:** Yes
- **Device dimensions:** 163 mm x 79 mm x 70 mm
- **Device weight:** 226 g
- **Operating time (WiFi communication):** 4.0 hours (combined t S-EEG).
- **Operating time (USB communication):** 5.5 hours (combined t S-EEG)

## Hardware: tES Specifications

- **Sampling rate:** 1000 S/s
- **Frequency range:** 0 to 250 Hz (tACS) and 0 to 500 Hz (tRNS)
- **Configurable bandpass filter for tRNS:** Yes
- **Available stimulation techniques:** tDCS, tACS, tRNS, custom waveforms, temporal interference
- **Parameterizable sham protocols:** Yes
- **Maximum current per channel:** ± 2mA
- **Max total injected current (by all electrodes, any time):** 4mA
- **Current accuracy:** 1%
- **Current resolution:** 1 A
- **Current configurable independently for each channel:** Yes
- **Configurable Ramp-up and Ramp-down times:** Yes
- **Impedance pre-check and continuous monitoring:** Yes
- **Abort functionality:** Abort button, auto-abort on disconnection / high impedances
- **Voltage:** ± 15 V per electrode (30 V potential difference)

## Hardware: EEG Specifications

- **Bandwidth:** 0 to 125 Hz (DC coupled)
- **Sampling rate:** 500 S/s
- **Dynamic range:** 24 bits – 0,05 microvolt (uV)

- **Measurement Noise:** < 1 µV RMS
- **Input impedance:** >1 G
- **CMRR**: -115 dB
- **MicroSD card for offline recording:** Yes

## Hardware: Accelerometer Specifications

- **Axes number:** 3
- **Sampling rate:** 100 S/s

## Software

- **Custom bipolar, high-definition, 4x1 or multi-channel montage design:** Yes
- **Optimized Stimweaver montages import:** Yes
- **Advanced Visualization of tES Field Distribution:** Yes
- **Double-blind study mode:** Yes
- **Multi-step tES-EEG protocols:** Yes
- **Custom EEG-driven closed-loop Tes:** Yes

## Software: EEG Specifications

- **File output Proprietary:** NEDF or EDF+ & ASCII file formats
- **Real-time EEG monitoring:** Yes
- **Scalp and cortical mapping of brain activity:** Yes
- **Spectrum, spectrogram and band power plots:** Yes
- **Raw data streaming output:** Lab Streaming Layer (LSL) outlets or TCP/IP port
- **EEG markers sources:** Lab Streaming Layer (LSL) inlets, TCP/IP, keyboard, TTL triggers
- **Timestamp synchronization for precise hyperscanning:** Yes
- **Compatible with Windows Vista/7/8/10 and Mac OS X (> Snow Leopard):** Yes
- **3rd party EEG software compatibility:** OpenVibe, BCI2000, NeuroGuide (via Lab Streaming Layer)
- **Offline EEG analysis:** MatLab (EEGLAB Plugin), Python (NEPy library)

## Headset

- **Available headcaps:** 6 sizes 42/46/49/54/57/60cm
- **Custom montages:** Headcaps available with 39 or 64 of 10-10 EEG system positions
- **Like 32 x NG Pistim**
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