

TENDER NOTIFICATION

Integrated 256-channel wireless data acquisition system for primate neurophysiology

Tender Announcement : Monday, March 12 2018
Deadline for submission : 5:00 PM IST, Monday, March 26 2018

Quotations are invited for an “Integrated 256-channel wireless data acquisition system for primate neurophysiology” with the technical specifications given below on a CIP Bangalore basis. The quotation should clearly indicate the terms of delivery, delivery schedule and payment terms. **The bidder must submit a technical bid and financial bid separately in sealed envelopes clearly marked as such.** Both bids should be duly signed and submitted to the following address on or before the deadline above.

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Technical Specifications

The system should be an integrated 256-channel wireless data acquisition system manufactured by a single company capable of recording and remotely monitoring neural activity (single units and local field potentials) in freely moving non-human primates. The system should consist of the following components:

- 1. Headstage & Onsite Data Logger / Wireless Transmitter-Receiver:** The system should contain a headstage with an onsite data logger or wireless transmitter-receiver unit with small form factor capable of recording at least 256 channels with the following characteristics: headstage weight less than 5 grams, 8 hours of continuous recording at a minimum of 25 kHz/channel sampling rate, a minimum range of 4m and capable of wired recordings with suitable accessories/converters. Physical dimensions (size & weight) of the transmitter/headstage unit must be specified.
- 2. Head motion tracking unit:** The system should contain a 9-axis head motion sensor with at least 16 bipolar inputs (for EEG/EMG), and audio input, all recorded and synchronized with the neural data.
- 3. Electrode Connectors:** The headstage must be configured with suitable input connectors compatible with 256-channel NeuroNexus Matrix Arrays.
- 4. Wireless Monitoring:** The system should be capable of wirelessly monitoring any neural data channel and be able to switch channels online during recording with a range of at least 4m.
- 5. Data acquisition system controller:** The system should be capable of acquiring at least 256 channels of wideband neural data with 32 channels of auxiliary analog input and 32

channels of auxiliary digital input, auxiliary analog output for audio monitoring, and record synchronized video camera input. The system should be upgradable to at least 1024 channels in a wired configuration.

6. **Data acquisition software:** The system should contain neuronal data acquisition software for at least 256 channels with the ability to separate wideband data into extracellular single units and local field potentials. It should allow selection of different references for spike and LFP recordings from the same channel, and be capable of performing online spike sorting.
7. **Online & Offline MATLAB API:** A MATLAB API should be provided for accessing real-time spike data and auxiliary analog and digital inputs and also accessing recorded data.
8. **Video camera and tracking software:** The system should contain 4 video cameras with high-resolution images captured with at least 60 frames/second, with ability to capture video synchronized with neuronal data. The system should be upgradable to at least eight cameras.
9. **Warranty & Technical Support:** The system should be covered by a suitable warranty and lifetime technical support must be provided. The quote must include on-site installation and training.