

**TECHNICAL BID PROFORMA****Item Name: “Wireless EMG and IMU System” Bidder Eligibility Criteria:**

| 1.0 | Bidder Eligibility Criteria-I<br>(Public Procurement – Preference to Make in India)  | Class I /<br>Class II         | Local<br>Content<br>value | Reference,<br>Page No. |
|-----|--|-------------------------------|---------------------------|------------------------|
| I   | Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16 <sup>th</sup> September 2020 and other subsequent orders issued therein.   |                               |                           |                        |
| 2.0 | Bidder Eligibility Criteria-II   | Complied /<br>Not<br>Complied | Reference<br>Page No.     | Remarks, If any        |
| 1   | The bidder/OEM should have supplied the quoted item to IITs, NITs, IISERs, CSIR Labs or other Govt. R&D organizations and reputed organizations in the last 5 years, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers and it will be part of technical evaluation. |                               |                           |                        |
| 2   | The bidder should have 48 lakhs turnover in any one of the last 3 Financial Year.  |                               |                           |                        |

**3.0 Technical Compliance:**

| S.No                   | Specification  | Complied<br>/ Not<br>Complied | Reference<br>Page No. |
|------------------------|--|-------------------------------|-----------------------|
| <b>Hardware System</b> |  |                               |                       |
| 1.                     | <b>No of channels:</b> Minimum of 16 channels wireless mode of EMG Data Acquisition system                       |                               |                       |
| 2.                     | IMU sensor must be able to read Accelerometer 3 axis, Gyroscope 3 axis and transfer data wirelessly.             |                               |                       |
| 3.                     | Ability to acquire the myoelectric activity and IMU data simultaneously.   |                               |                       |
| 4.                     | The system should transfer the EMG signal along with IMU signals.  |                               |                       |
| 5.                     | <b>ADC resolution:</b> Minimum of 16 Bits.   |                               |                       |
| 6.                     | <b>Sampling Frequency:</b> Minimum of 1KHz or higher.  |                               |                       |
| 7.                     | <b>Signal Acquisition:</b> The system should be able to detect and amplify weak electrical signals from muscles. |                               |                       |
| 8.                     | <b>Wireless communication:</b> RF/ Bluetooth/Wifi etc...   |                               |                       |

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| 9.  | <b>Wireless Acquisition Range:</b> At least 15 meters.  |  |  |
| 10.   | <b>Operation:</b> At least 8 hrs of continuous acquisition.   |  |  |
| 11.   | Both(IMU & EMG) sensors should have minimal inter-sensor delay in milliseconds.   |  |  |
| 12.   | Should supply a charging/transmitting console that communicates with the utility software.  |  |  |
| 13.   | <b>Status:</b> Should automatically recognize the sensor status for charging, Acquisition and signal strength.  |  |  |
| 14.   | <b>Power Options:</b> Charging powered via a computer USB port and/or external source using AC power adapter. The AC power adapter, if provided, should be compatible to standard Indian power system specifications (230 V AC, 50 Hz frequency). |  |  |
| <b>Software System</b>  |   |  |  |
| 15.   | The real-time visualization of the acquired signals allows for biofeedback and monitoring applications.   |  |  |
| 16.   | Software should have various analytical metrics.  |  |  |
| 17.   | <b>Software utility:</b> Data Acquisition, display, and analysis  |  |  |
| 18.   | <b>Real-time viewing:</b> At least 8 of the 16 channels should be displayed in an instant.  |  |  |
| 19.   | <b>Data Storage:</b> Ability to store data to externally connected devices.   |  |  |
| 20.   | Single-user software license for lifetime validity.   |  |  |
| 21.   | Software should have an upgrade facility to capture the video along with the EMG and IMU signals.   |  |  |
| 22.   | <b>Export formats:</b> Binary/MATLAB/.Wav/.Text/.csv etc...   |  |  |
| 23.   | <b>Compatibility:</b> Windows/MAC/Linux system.   |  |  |
| 24.   | Software should be compatible with a wide range of motion capture systems available in the market.  |  |  |
| 25.   | Should have an analog output option to integrate with 3 <sup>rd</sup> party devices.  |  |  |
| <b>Certification</b>  |   |  |  |
| 26.   | <b>Certification:</b> US FDA/ISO/EUROPEAN IEC certificates/class II a/ or other equivalent to be provided.  |  |  |
| 27.   | Each quotation of Wireless EMG and IMU System should also include a catalog, containing the technical specification of the System offered, failing which the offer is liable to be rejected..   |  |  |
| <b>Other Terms and Conditions</b>                             |   |  |  |
| Warranty - 1 year Standard Warranty from Date of Installation |   |  |  |

|                                      |  |  |
|--------------------------------------|--|--|
| Extended Warranty: 2 Years(Optional) |  |  |
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**SIGNATURE OF BIDDER ALONG WITH  
SEAL OF THE COMPANY WITH DATE**