



Dear Sir / Madam,

CDAC Mohali is currently inviting expression of interest for '**Transfer of Technology**' (ToT) of its indigenously developed, '**e-Stetho:CDAC's electronic stethoscope**'.

The product is an electronic stethoscope with excellent audio characteristics. The unit is available in two versions. Both the units are available for physical inspection and demo at CDAC, Mohali (address given below) on any working day.

- **Mk-I ARS**

- This is an electronic amplifying and recording stethoscope (ARS), suitable for direct auscultation with wired headphones or for 'record and forward' applications (using recording on PC/laptop via USB port).

- **Mk-II BTS**

- This is a Bluetooth stethoscope (BTS), suitable for auscultation with a good quality A2DP headphone within a radius of about 7m. This can be very suitable for Covid-safe auscultation across the room.

The technology for each of the versions is being offered on '**non-exclusive**' and '**as is where is**' basis. Interested parties may seek ToT of one or both the versions by applying on prescribed format before 17th Dec 2020. Eligible applicant(s) shall be transferred the technology (with sample unit, complete documentation and support for manufacturing) at extremely nominal charges. The applicants should then productionise and sell the product as per their plans. (The physical appearance or packaging of the unit may be upgraded by transferee as per market needs/ terms of the agreement).

No fees or commitments required for Expression of interest. Apply and be a partner to game-changing technologies.

For more details and the format, please visit:

(the banners on the <https://www.cdac.in>)

Or contact Mrs. Brijinder at 0172-6619073 or brijinder@cdac.in

Applications may be sent to:

Executive Director

Centre for Development of Advanced Computing (C-DAC)

A 34, Phase VIII Industrial Area,

Mohali, Punjab, INDIA

With Best wishes.



CDAC's e-Stetho Mk-I ARS

Amplifying & Recording Stethoscope


Stethoscope is a diagnostic instrument used by various health care professionals to listen to the sounds of patient's heart, lungs, abdomen, etc. It is an important tool for initial non-invasive examination of the patient. Careful listening of the sounds is imperative for detecting subtle manifestations of various abnormalities. In order to facilitate this particular examination, CDAC-Mohali has developed a high-fidelity Digital Electronic Stethoscope. It is designed for direct auscultation with a wired headphone and recording of body sounds on a computer.


Salient Features


- Convenient handheld chest-piece.
- Diaphragm based pickup for auscultation.
- Wide band pickup enabling better auscultation.
- Amplify the barely audible sounds and murmurs of heart.
- Excellent ambient noise immunity for cardiac auscultation
- Electronics designed around ARM microcontroller
- Sound output on connected (wired) headphones or USB port.
- Supported by PC application for acquiring / recording audio waveform.

Brief Specifications

- Audio Amplification : 30dB (fixed)
- Sampling rate: 4kHz
- Frequency response: 16 Hz to 800 Hz
- Power supply: 3.7 V rechargeable Li-polymer Battery
- Battery life: 8 hours (approx) listening time

 **CDAC, Mohali**
A-34, Indl area, Ph-8,
Mohali - 160060

 0127-6619073

 brijinder@cdac.in

 www.cdac.in

Mk-I ARS
Amplifying &
Recording
Stethoscope



e-Stetho

CDAC's Digital Stethoscope

BTS for COVID-safe Auscultation

Stethoscope is a diagnostic instrument used by various health care professionals to listen to the sounds of patient's heart, lungs, abdomen, etc. It is an important tool for initial non-invasive examination of the patient. Careful listening of the sounds is imperative for detecting subtle manifestations of various abnormalities. This requires physician to be in close proximity with the patient. Everybody wishes to avoid that in this COVID era.

Fear no more! CDAC brings you a Bluetooth stethoscope. Simply use any good Bluetooth headphone and auscultate across the room. This high-fidelity Digital Electronic Stethoscope is designed for contactless clinical auscultation at about 2-5 meter distance.



CDAC, Mohali
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160060



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www.cdac.in

Mk-II BTS

BlueTooth
Stethoscope

Salient Features

- Convenient handheld chest-piece
- Diaphragm based pickup for auscultation
- Wide band pickup enabling better auscultation
- Excellent ambient noise immunity for cardiac auscultation
- Uses advanced A2DP Bluetooth profile with custom stack
- Sound output on connected Bluetooth headphones

Brief Specifications

- Audio Amplification : 30dB (fixed)
- Sampling rate: 4kHz
- Frequency response: 16 Hz to 800 Hz
- Power supply: 3.7 V rechargeable Li-polymer Battery
- Battery life: 6 hours (approx)

Overview of the Transfer of technology procedure

The Technology for the two versions of stethoscope, briefed above, is planned to be transferred on non-exclusive basis. The procedure shall involve the following steps –

1. Call for Expression of interest (Eoi). The present document is to call Eois. The interested parties may inspect the prototype units on any working day.
2. An authorized TOT committee will analyze received Eoi's on the basis of Technical and financial position, capability and reputation of the applicants. The short listed applicants shall be asked for submission of their sealed price (financial) bids.
3. The TOT Committee shall screen and decide to offer TOT to one or more applicants based on price bid, capability and other criteria.
4. The selected Organizations/Entrepreneurs/Agencies will pay the TOT fees and sign the agreement for TOT. CDAC will then transfer the technology, hand over sample unit, all the supporting documents and will provide full technical support and training to the TOT partner.

The ToT package shall contain the following

1. Document(s) for physical design and fabrication along with block diagram and schematic level explanation of the system.
2. Bill of Materials of the total system.
3. Gerber files for PCB design.
4. Guidelines for assembly, testing and usage.
5. Source code of the software.
6. Training.
8. Handholding support for a period of 6 months

How to apply?

Interested Organizations/Entrepreneurs/Agencies may send expression of interest with their details by filling the questionnaire as per Annexure – A along with supporting documents to:

Executive Director

Centre for Development of Advanced Computing (C-DAC)

A 34, Phase VIII Industrial Area, Mohali (Near Chandigarh) Punjab ,INDIA

Phone: +91-172-6619000, 2237052-57

Fax: +91-172-2237050-51

Template for the EoI for Technology Transfer

A	<i>Company Profile</i>
1.	<i>Name of the Organization</i> <i>Website</i>
2.	<i>Details of the Contact Person</i> <i>Name:</i> <i>Address:</i> <i>Telephone :</i> <i>Fax:</i> <i>E-mail</i>
3.	<i>Year of Incorporation</i>
4.	<i>Type of Organization</i> <i>Public Sector/ Limited/Private Limited/ Partnership/ Proprietary/ Society/ Any other</i> <i>Whether 'Foreign Equity Participation (Please give name of foreign equity participant and percentage thereof)</i> <i>Names of Directors of the Board/ Proprietors</i> <i>Name and address of NRI(s), if any</i>
5.	<i>Category of the Firm Large/Medium/Small Scale Unit</i>
6.	<i>Address of the Registered Officer</i>
7.	<i>Number of Offices with Address (Excluding Registered Office :</i>

	India
	Abroad
8.	Certificate of Registration as a Manufacturing Unit
9.	Permanent Account Number (PAN No.)
10.	Sales Tax Number/VAT
11.	Status of ISO9001/ISO13485 Certificate

Kindly attach the following documents along with EoI:

1. Organization Brochure
2. Certificate of Registration / Incorporation
3. Certified copies of balance sheets for last three financial years
4. Permanent Account Number.
5. Write up on technical capabilities.
6. Three year business plan.
7. The list of machine tools /equipment's/software's/facilities available related with work to be furnished.
8. The manpower strength (Technical: Mechanical, Electrical, Electronics, Software & Non-Technical etc.) at various levels to be furnished

Technical:

- a. B.E./ B.TECH/PhD
- b. DIPLOMA
- c. SKILLED TECHNICIANS
- d. UNSKILLED

Non-technical:

9. For start-up companies, instead of three years balance sheets, future business plan for three years should be mentioned.

Note: Expression of interest should be stamped and signed by authorized signatory.