Packaging and Systems Facility (PASF) at Centre for Nanosciences-IISc

The Vision and Charter of PASF is to bring NanoTechnology to Life by offering Products , Solutions & Services from the Research Efforts at Centre for Nanosciences and Engineering –CeNSE IISc

Solutions and Services Offered

I. Analog and Digitial Board Design- Altium.

II. Firmware Development. –STM32/Arduino/Others

III. Mechanical Housing Design and Modelling- Solid Works

IV. 3D Printing –Bambu Carbon Fibre Printer.

V. Prototype Development and Transfer to Mass Production- Customised Hardware/FW/SW Development.

VI. Support TBI (Technology Business Incubation) & Startup's

VII. Packaging of Microelectronics such as Wirebonding, Wafer Dicing, Laser Welding, Flip Chip Bonding.

VIII. Design and Development of New Products based on Nanotechnology Research at CeNSE- IISc such as Gas Sensors, Pressure Sensors etc..

IX. Provide Advanced Packaging Solutions with Focus on Research and Development- New (Ansys- SW).

X. Semi Clean and Clean Room with ~2K Square Feet Area

Product Photos- Solar Array Silicon Assembly

Solar Array Assembly

- Magnet
- Top Structure
- Sample
- Aligner
- Base Structure
- Pogo Pin
- PCB
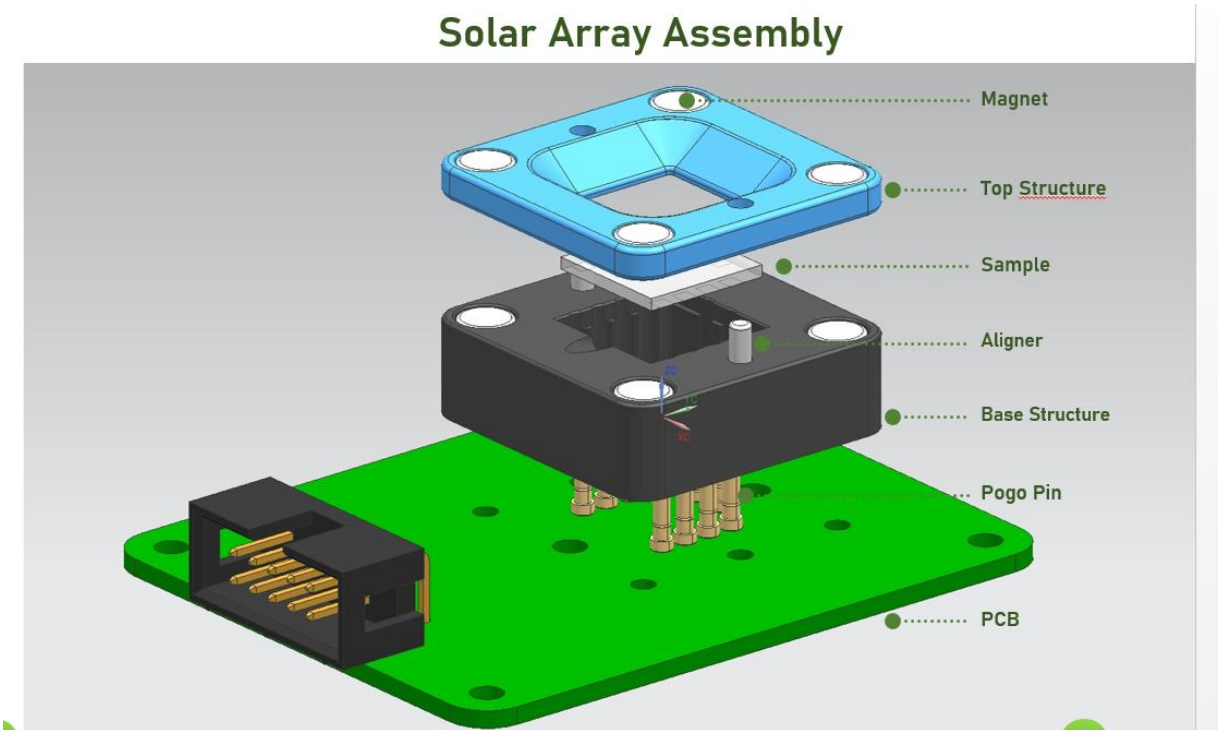
Systems Engineering Products and Services

Gas Sensors & Transmitters

- Senses Specific Gas Leakage such as H2, O2, NO2, N2H4.
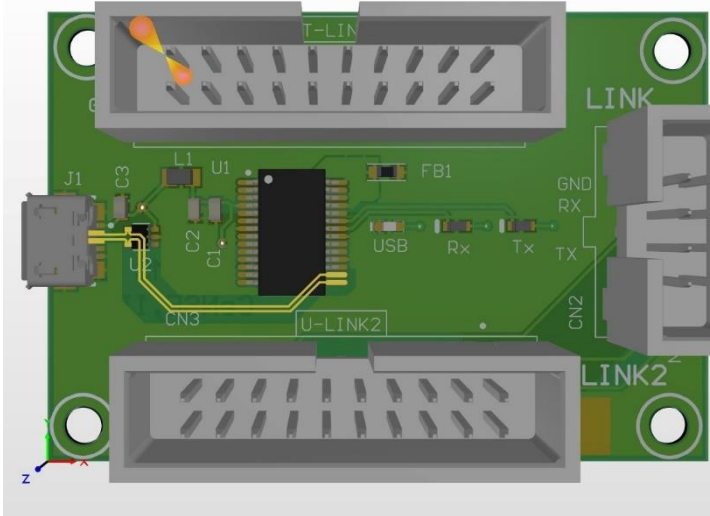- Provides 4-20ma.

H2S Monitoring Unit

- Monitors H2S- 0 to 500ppb
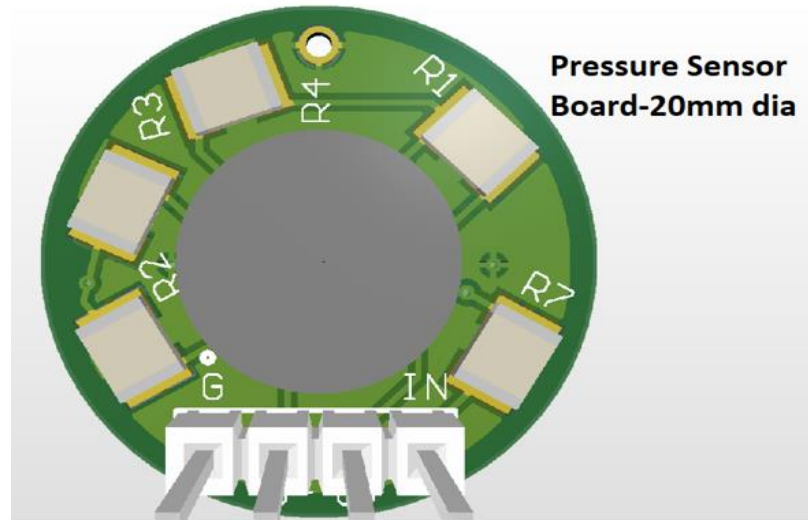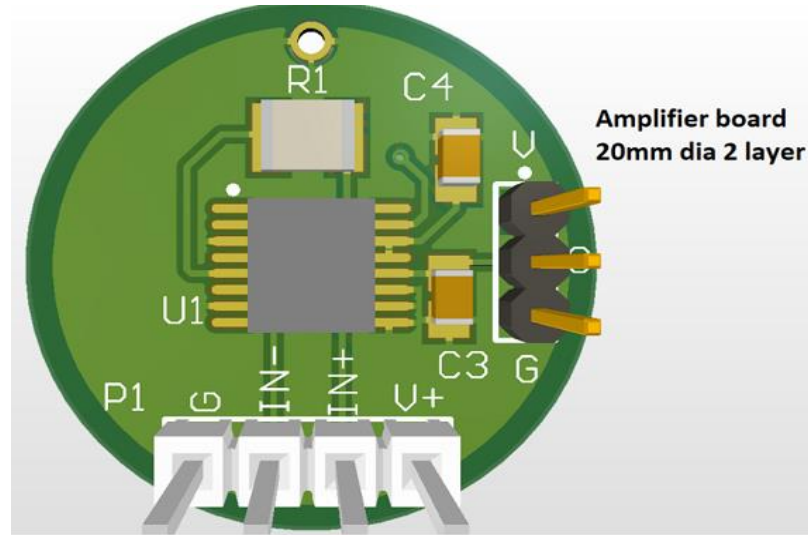- Provides 20 Hour Battery Back up operation

6 Channel Switch Multiplexer

- 6 Channel Multiplexer 0 to 2V, 0 to 10ma.
- Characterise Silicon Wafer and interfaces to Lake View Probe Station.

Systems Engineering & Packaging Lab Products and Services

UART to USB Converter

Pressure Sensor & Amplifier Boards

Amplifier board 20mm dia 2 layer

Pressure Sensor Board-20mm dia

Thermal Chamber Assembly

- 5V, 3.3V UART Compatible Inputs
- USB 2.0 Specifications Compliant

Systems Engineering & Packaging Lab Products and Services
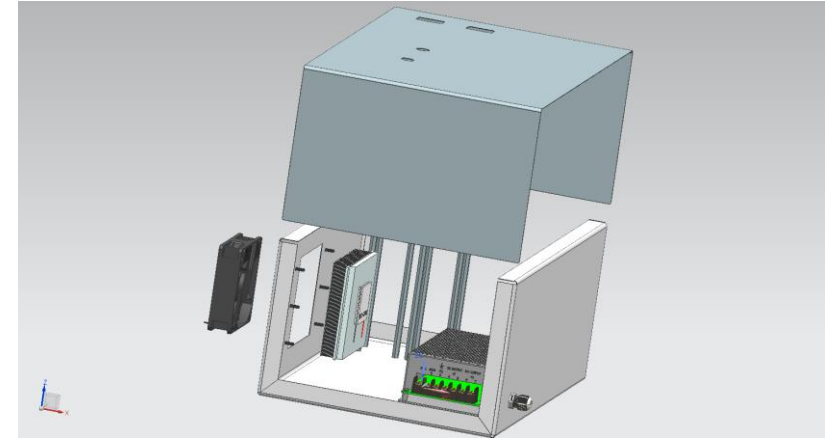
❖ Windtunnel Velocity Measurement with 15 Die Packaged

6 Element Die Mounting

- Monitors 6 Gases CO, CO2, NO2, O2, H2, N2H4
- 6 Individual Die
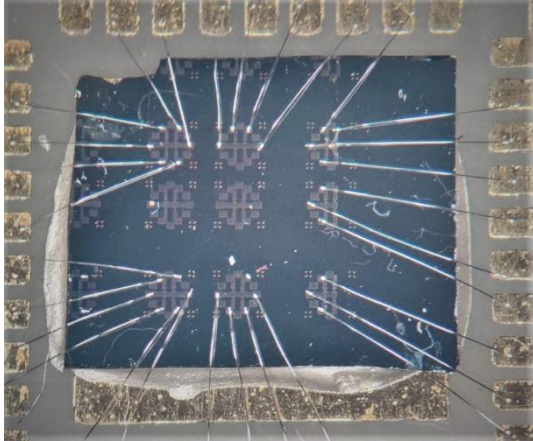
- Outer Package for Velocity Measurement

❖ Air Quality Monitor

- Monitors 6 Gases CO, CO2, NO2, SO2, RH, N2H4
- PM 2.5, PM10
- Real Time Data over Cloud

Systems Engineering & Packaging Lab Products and Services
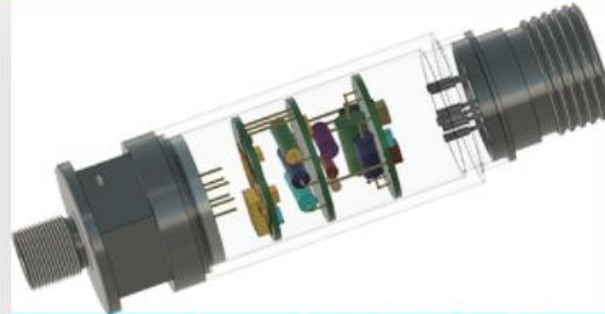

- **Pressure Transducers of Various Types and Ranges**

http://sysefandpackagingfacility.cense.iisc.ac.in/

PASF-TF 32 Design Services Tools

1. Hardware Design- Altium for Schematics, PCB Layout.

2. Firmware Development- STM32FXXX, Arduino Nano, Raspberry PI

3. Matlab Programming- Algorithm Development

4. Mech Design and 3d Modelling- Solid Works

For More Details Please Visit

http://sysefandpackagingfacility.cense.iisc.ac.in/
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