**HIGH SPEED TEMPERATURE DATA ACQUISITION SYSTEM**

|  |  |
| --- | --- |
|  | **Name of the equipment:** High speed temperature data acquisition system **Make & Model:**National Instruments,USANI CDAQ 9212 **I-Stem Registration ID-** **Category of Instrument**Thermal Systems Monitoring**Types of Analysis / Testing**Thermal Testing in R&D (Automotive, Aerospace, Electronics)**Application:** used for precise and high-speed temperature monitoring in applications such as battery testing, environmental chambers, industrial process control, and thermal profiling.**Description of Instrument**An 8-channel, high-accuracy, 24-bit thermocouple input module designed for high-speed temperature data acquisition in industrial and laboratory environments. |

**Booking Details**

**Contact Details**

|  |  |
| --- | --- |
| **Book through I-STEM:** <https://www.istem.gov.in/>**Slot Booking Link**I-STEM Slot Booking link for External User | **Booking available for**Internal and External Both**Requisition form for** InternalExternal |

|  |  |  |
| --- | --- | --- |
| **Faculty In-charge:** Dr. Murali KP**Email ID:**kpmurali@nitc.ac.in **Phone number:** 0495-2286414 | **Technical Staff:** Sanal PR (TA SG I) sanal@nitc.ac.in Jithin Krishna M (TA)jithinkrishnam@nitc.ac.in Jijeesh k (ST) jijeeshk@nitc.ac.in | **Department**MED**Office Email ID**medoffice@nitc.ac.in**Location**Material Science LabProduction Block**Lab Phone No**0495-2286450 |

**Features, Working Principle and Specifications**

|  |  |
| --- | --- |
| **Number of channels** |  **8 isolated thermocouple channels** |
| **ADC resolution** | 24 bits |
| **Type of ADC** | Delta-Sigma |
| **Sampling mode** | Simultaneous |
| **Voltage measurement range** | ±78.125 mV |
| **Temperature measurement ranges** | Works over temperature ranges defined by NIST (J, K, T, E, N, B, R, and S thermocouple types) |
| **Measurement sensitivity** | For k-type thermocouple 0.05oC |
| **Measurement Accuracy** | Isothermal terminal block up to 0.29 °C |
| **Noise rejection** | 50 Hz/60 Hz |
| **Maximum sample rate** | 95S/s/ch |
| **Control Mode** | PC Based -Dell Make |

**User Charges Rs. (GST Extra)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Internal** | **External Academic Institutes** | **National R&D Lab** | **Industry** |
| 100/- per hour | 300/- per hour + GST | 300/- per hour + GST | 300/- per hour + GST |