

# Technical Specifications for Long Range Laser Scanner

A 3D Laser Scanner digitally captures the geometry of physical objects using laser beams. 3D laser scanners create point clouds from the surface of an object.

## 1. Long Range Laser Scanner

- Should have integrated point cloud processing software included in the package
- Range (FOV) – Horizontal = 360deg, Vertical >270 deg
- Battery Type – Internal Rechargeable
- Integrated Camera for RGB Capture
- Ranging Accuracy – Less than equal to 4mm at 10m and 7mm at 20m
- Designed for indoor and outdoor use
- Integrated with WiFi
- Range at least greater than or equal 60m
- export formats:
  - Mesh: OBJ, PLY, WRL, STL, AOP, ASC, PTX, E57, XYZRGB
  - Point cloud: BTX, PTX, XYZ
  - CAD: STEP, IGES, X\_T
  - Measurements: CSV, DXF, XML
- Battery – 20 setups in one charge
- Should be computer operatable through point cloud processing applications (Preferable ReCap360, Context Capture, Point sense and any other)
- On-site warranty of two years and above
- Vendor should physically present a sample at IIT Madras for quality inspection, if required

The following specifications are preferred:

1. Light Weight Equipment
2. Storage for > 50 setups
3. Measurement Speed < 3min for full-dome scan
4. Integration with tablet or I-pad will be preferred.
5. Adjustable resolution settings.

## Technical Specifications

- The supplier/vendor must be an original equipment manufacturer or an authorized agent/dealer/seller of the item.

- Vendor should physically present a sample at IIT Madras for quality inspection, if required.
- The system should be delivered within 14-16 weeks from the opening of the letter of credit or issue of the purchase order, whichever is later.
- Costs and related information should be given only in the financial bid.
- The cost should include 24 months warranty of the overall system and CIF up to Chennai.
- Optional additional warranty for another 12 months should be quoted separately.
- The warranty shall commence only from the date of equipment installation at IITM.
- Prices quoted should be valid for at least 90 days.
- Item-wise break up of cost should be provided in the commercial bid for optional items and accessories..
- IIT Madras reserves the right to exclude some items from the purchase.
- The payment conditions consist of 90% LC at site and 10% after installation and Satisfactory training.
- The system should be installed and commissioned with no additional cost.
- Training at IIT Madras should be provided with no additional cost..
- Two copies of the system manual should be provided in CD form.

**Technical Bid should comprise of the following:**

- Detailed Technical brochure.
- Detailed technical write up explaining how each of the Technical Specifications are complied with.
- The list of multiple Institutions/R&D units/Industry where similar installations have been supplied in India/abroad including contact details (name of the person in-charge, email, and phone number) is to be provided.
- The vendor should guarantee round the clock technical support not only during the warranty period but even beyond through an annual maintenance contract. Demonstration of having provided such satisfactory technical support to customers shall be enclosed with the technical bid.