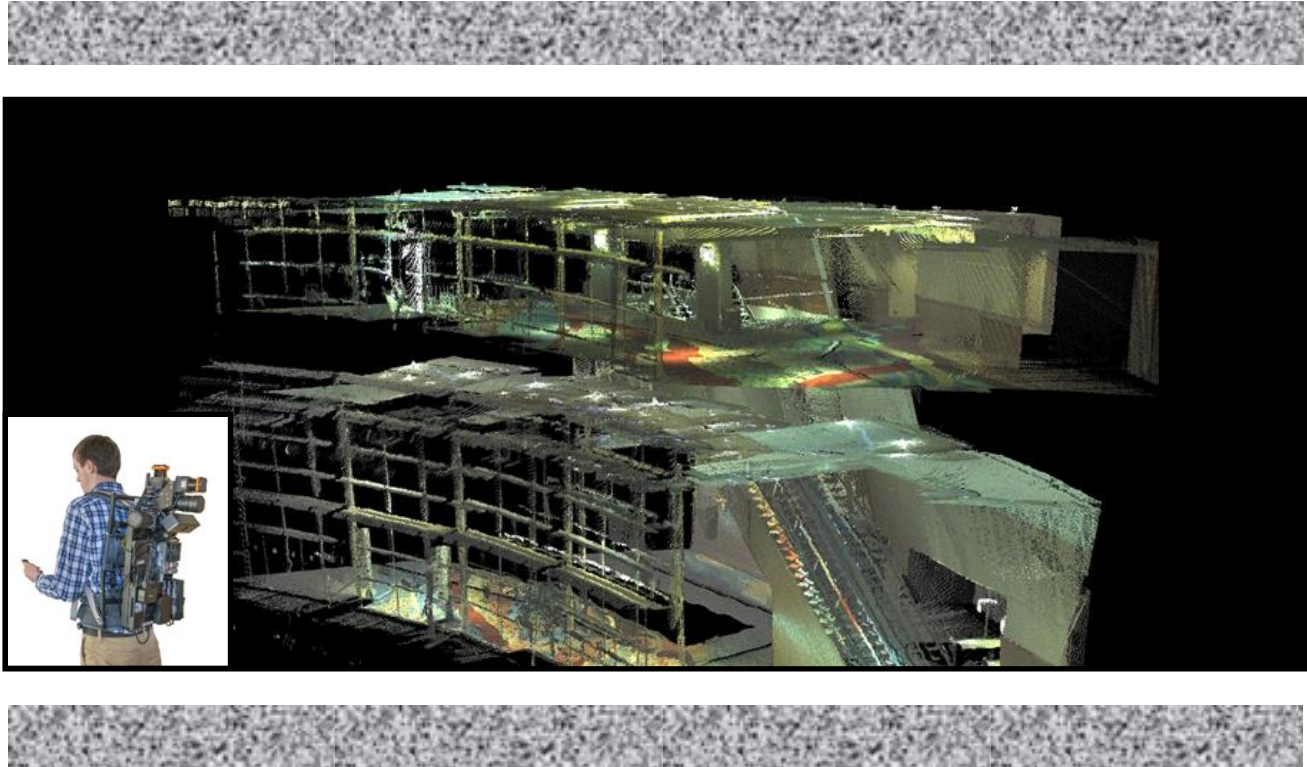


# Backpack Indoor Mobile Mapping Solution



## Architecture

- Document existing conditions
- Pre/ Conceptual design
- Historical preservation



## Construction (BIM)

- As-built BIM model
- Daily progress reporting
- Interference detection



## Commercial Real Estate

- Virtual 3D walkthroughs
- Tenant agreements, space planning, & utilization
- Asset/ Facility management
- Energy audits & appraisals

*Mapping Indoors One Step at a Time*

# Specifications

## CAMERA

**Number of cameras** Five (5)  
**Coverage** 360° x 340°, RGB

## SCANNER

**Type** Five (5) Hokuyo  
**FOV** 270°  
**Acquisition** 1000 pts./ sec.(ea.),  
 200,000 pts./ sec.  
**Frequency** 40 Hz  
**Range** 30 m (usable)

## EXPORT

**Formats** Point cloud (.las & .rcp), Mesh (.ply & .obj), Floor plan (.dxf, .svg, rvt)

## PLATFORM

**Frame material** Aluminum  
**Weight** 41 lbs/ 18.5 kg (w/ batteries & thermal cameras)

## PRODUCTIVITY

**Data produced:** 6 GB/ min. of walking

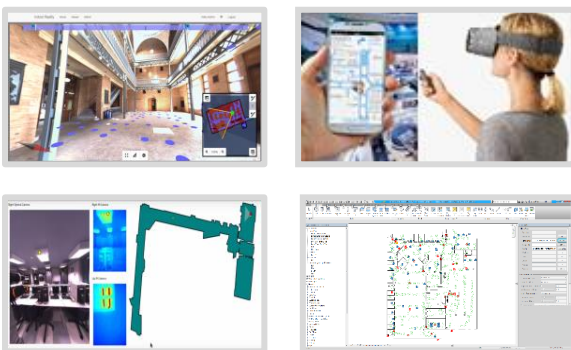
## ACCURACY

**Relative accuracy** 3 cm to 5 cm  
**Absolute position (SLAM-based w/o Control points)** 3 cm to 20 cm after for 75 min. walking.

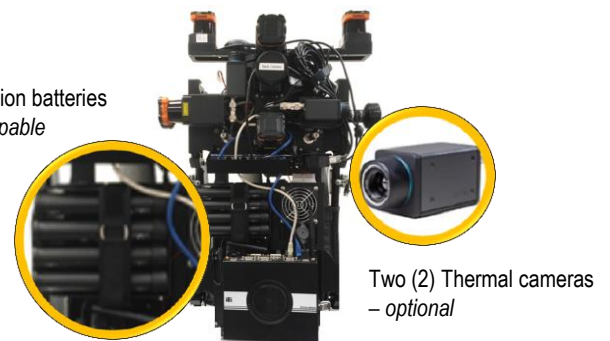
## BATTERY SYSTEM

**Operating Time** 3 Hrs. (typ.)  
**Batteries** Four (4) Li-ion

The **INDOOR REALITY** solution consists of two wearable hardware platforms (Backpack & Handheld Mobile Unit) for data capture in combination with a common Cloud-based software-as-a-service (SaaS) interface.



Captured data are uploaded, processed, and user notified when requested data products are created.



**IR1000T – Backpack Mapping System** w/ aluminum frame (shown without cover) includes: thermal cameras (2ea.), Li-ion batteries (4ea.), four bay Li-ion battery charger, & shipping cases (2ea.).