



CONSTELLATION STAR-VS

PRODUCT DATA SHEET

Model: STAR-VS



STAR - VITAL SIGNS

Star-VS detects breathing, heart rates, and coughing to monitor the wellness of individuals.



IR-UWB Radar Basics



Constellation Sensors detect macro (**Body Motion**) and micro-vibrations (**Resting Heart Rate & Respiration Rate**) emitted from inside and outside human body.

Radar Benefits



130° FOV
10M (33ft) Max Range



FDA 510(k) Cleared

For vital-sign monitoring using radar technology



Privacy Protected

No camera, no image, no sound (GDPR compliant)



Discrete Installation

Can be installed behind the wall or ceiling panel (Sense through ceiling/wall)



Health-risk Free

40x less power than a home Wi-Fi router (6.5 ~ 8 Ghz)



Network

Local intranet / Closed loop system / PoE / Wi-Fi / LTE / LPWAN



No Impact from Light/Temperature

Able to operate even in complete darkness or smoke



Continuous Scanning/Monitoring

No miss detection of occupancy



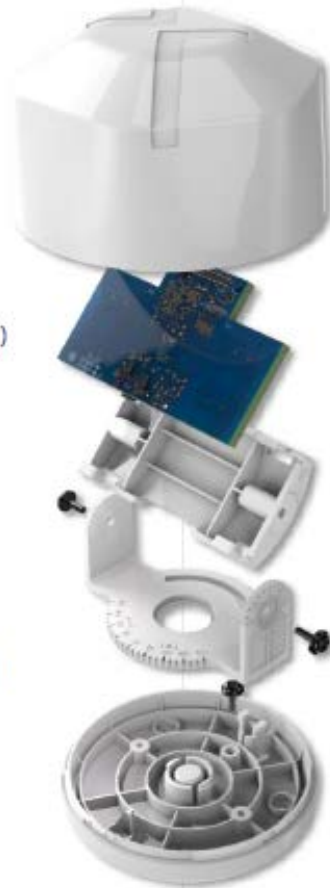
Power Consumption

700mW (5V 2.5A+)



Edge-Computing

Low cost to operate

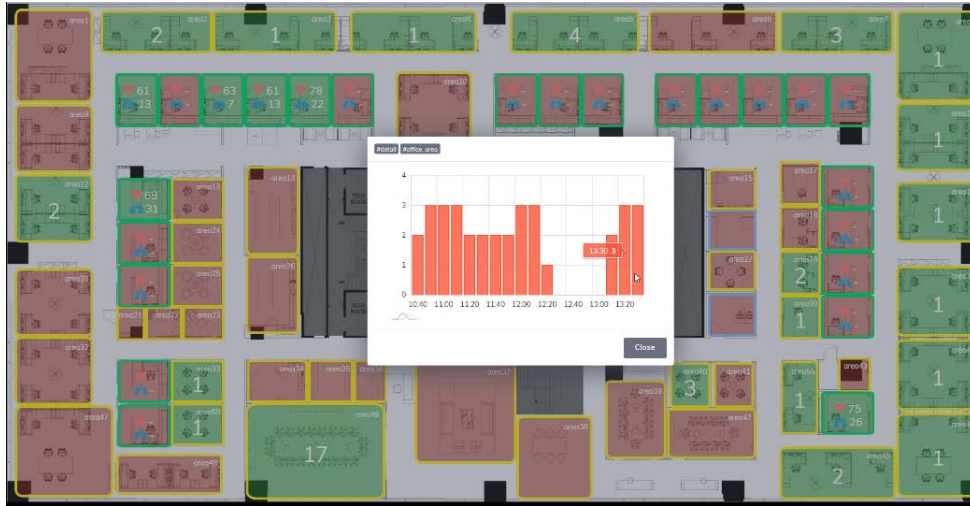




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SAMPLE DASHBOARDS

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Real-time people counting status
in open office space
"vacant"

Real-time people counting status
in open office space
"occupied by 4 people"

Real-time people counting status
in front of elevators
"total of 4 people are waiting"



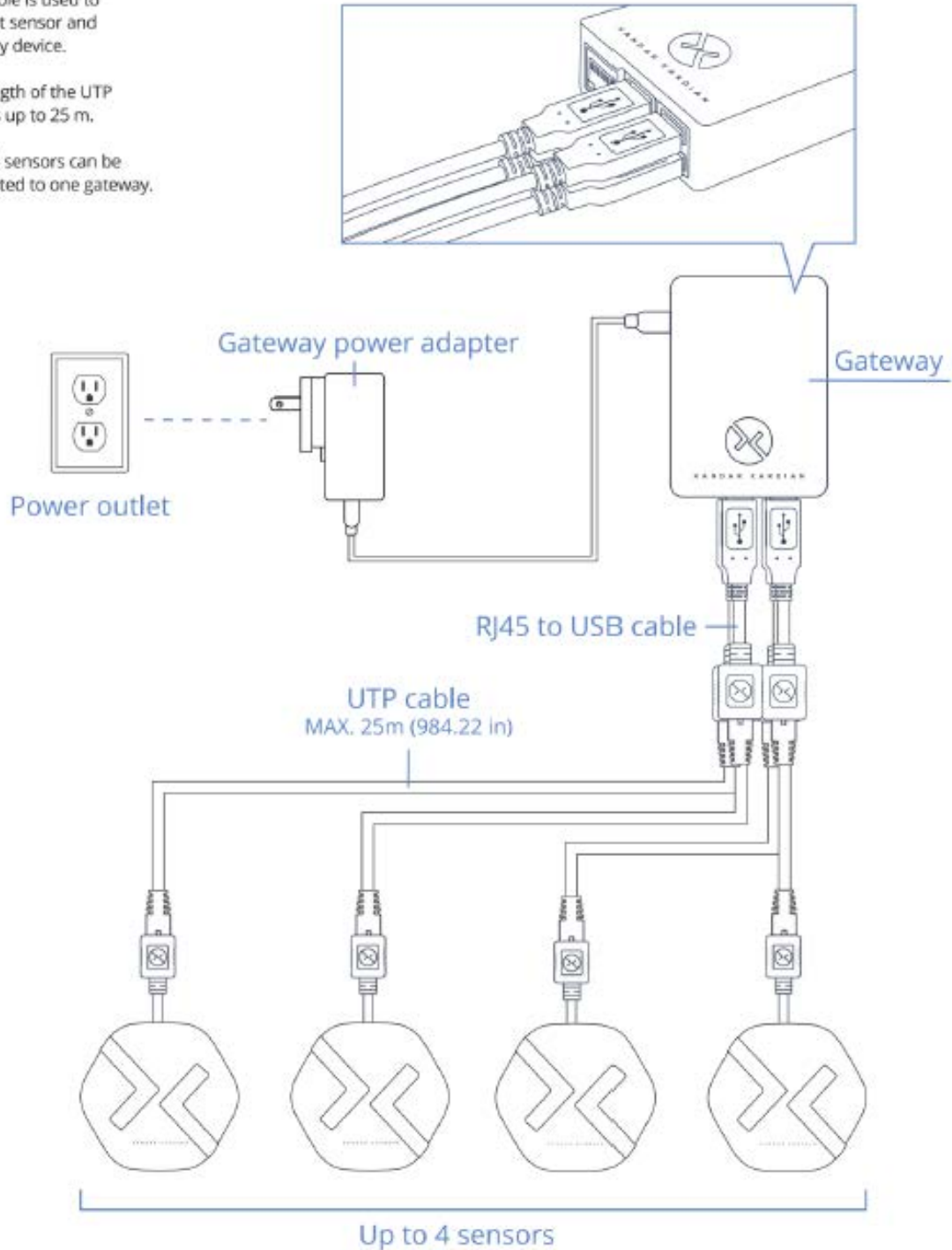
SAMPLE SYSTEM ARCHITECTURE

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4.2: OPTION 1: SENSOR AND GATEWAY

- UTP cable is used to connect sensor and gateway device.
- The length of the UTP cable is up to 25 m.
- Up to 4 sensors can be connected to one gateway.

FIGURE 4.2A: SENSORS WITH GATEWAY

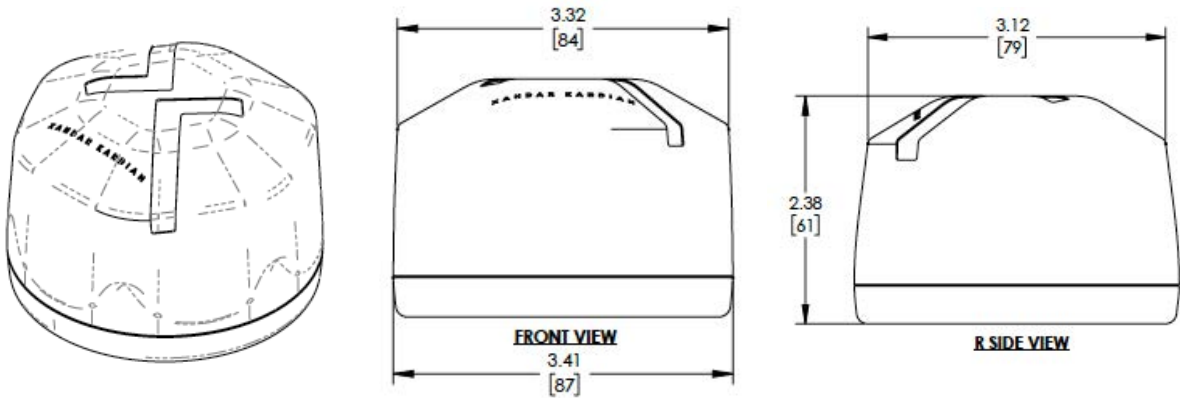




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CONSTELLATION TECHNICAL SPECIFICATIONS

TEMPERATURE & POWER	
Operating Temperature	-40°F- 85°F
Power Consumption	700mW
Supply Voltage	3.3-5.5V
RADAR	
Frequency	From 6.5 GHz to 8 GHz
	Impulse Radio Ultra-Wideband (IR-UWB) Radar Sensor
	Based on Micro to Macro Movement in Space
Interference Avoidance Technology	Built in Staggered Pulse Repetition Frequency (Staggered PRF) Technology
Penetration	Signals can penetrate wood or thin glass, not concrete or metal
Immunity to the environmental condition	Nearly unaffected by light dust, and humid condition
DIMENSIONS	
Weight	100g Including Case
Dimensions	85.0mm x 86.0mm x 61.0mm Including Case

POWERED BY XKCorp

Sales: 603.527.4187 · sales@orioneci.com · orionoss.com

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