Technical datasheet — Seetrus optical sensor

Sensor designed to measure attendance, passages and crowd density in key areas of events and large venues. Image processing happens on the device, in volatile memory, with no video recording.

Specification	Value	Details
Dimensions	**30 cm Ø × 10 cm (depth)**	Excluding rigging bracket and safety cable.
Weight	**5 kg (sensor unit)**	Add clamp and safety-cable weight depending on the structure.
Power	**Continuous 120 V AC — 24 W per sensor**	External 12 V DC supply. Continuous power required throughout deployment. 150 ft of extension cords supplied.
Network	**Non-PoE Ethernet recommended; Wi-Fi site-dependent**	Observed local throughput: 15 to 30 Mbps per sensor. Wired link recommended on stages and critical zones.
Mounting height	**Approx. 15 ft (4.5 m), variable**	On stage: downstage truss (1st and 2nd thirds) facing the audience, delay towers, gantries or poles.
Rigging	**C-clamps, straps or bolts + steel safety cable**	Dual retention for any temporary overhead or perimeter mount.
Installation	**30 to 60 minutes per sensor**	Once structure access, lift (venue-supplied if needed) and 120 V drop are ready.
Environment	**Indoor and temporary outdoor; low-light capable**	Sightline obstructions, extreme glare, dense stage haze or power cuts reduce coverage; assessed during scoping.
Processing	**On-device, in RAM; TLS transmission**	No video written to disk; no facial recognition; no age or gender estimation.

DATA FLOW

- Inside the sensor: frames are analyzed in RAM, then overwritten within milliseconds.
- On site: processing happens primarily locally on the venue network.
- External servers: TLS-encrypted aggregated counts consolidated on AWS Montreal (ca-central-1).
- The commercial website orangead.ca (Firebase, United States) is a separate system and receives no sensor data.

RESPONSIBILITY SPLIT

- Orangead: coverage plan, configuration, calibration, platform access and verified report.
- Venue / client: structure access, lift if required, continuous 120 V and agreed network, operational decisions.
- Outage: the zone switches to "Unavailable" with its last valid timestamp (never shown as zero); the gap is logged in the report.

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