tascent™

InSight® One
Intuitive, Accurate, Compact Dual Iris and Face Capture

InSight One

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Remarkably compact, highly intuitive, and uncompromising in biometric image quality, Tascent™ InSight® One represents the first of a new generation of iris recognition systems. InSight One captures high quality dual iris and face biometric images at a standoff distance of 0.5 to 1.0 meters, creating an experience that is both appealing to users and well-suited to a wide variety of applications where space may be at a premium.

It combines a customizable high-resolution graphic LCD, a fully automated capture process, and a large capture zone to collect high quality biometrics in a way that is easy-to-use with minimal instruction, even for non-technical or non-acclimated users.

Effortless User Experience
- 0.5 - 1.0 meter standoff distance
- Fully automated face and iris imaging
- On-demand face capture for multiple poses
- Under 2 second cycle time for dual-iris and face capture

Versatile System
- ISO Standards-based iris and / or face capture
- Supports connection to networked server or local PC with gigabit Ethernet and USB 2.0 interfaces
- On-board high resolution LCD and integrated LED illumination are fully configurable for custom messaging and internationalization

Well-suited for Enrollment or Authentication in:
- Consumer travel
- Border management
- Financial services
- e-Government
- Access control

InSight One's unique capabilities are the result of years of R&D that have gone into Tascent's InSight Duo and Tascent Mobile product families. By taking the patented technology that has enabled InSight Duo to achieve its standoff, automation, and image quality, and Tascent Mobile to achieve its form factor, speed of capture, and versatility across ambient environments, Tascent has been able to develop a completely new product that leverages the best of both.

Tascent InSight Duo
InSight Duo processes tens of millions of people each year in high throughput applications such as Gatwick Airport London, UK (shown above).

Tascent Mobile
Tascent Mobile enables high performance multimodal biometrics in a uniquely compact form factor, delivering iris, fingerprint, face, and voice enrollment and ID.

InSight One
Industrial Design Overview

InSight One's leading-edge biometric capability is matched by its modern industrial design. Its sleek exterior seamlessly integrates key user interfaces: White light and multi-color illumination enhance usability and face image quality, and a high resolution LCD enables multi-language text and customized graphics.

The all-aluminum enclosure and back mount come standard with a clean white and anodized silver power-coat finish. They also can be ordered with custom paint configurations to aesthetically match the surroundings and convey a true sense of integration. These design features combine to create a device that is both welcoming to users and appealing to architects and interior designers.

Front View

Back View

KEY DESIGN FEATURES

• Slim profile

• Customizable high-resolution LCD and integrates multi-color / white light LED

• Versatile mounting options including desktop stand, pole / e-Gate mount, and VESA adaptor

• Configurable mount seamlessly integrates with device enclosure

• Custom enclosure color options to match environment

InSight One
Applications

With its compact form factor, mid-range standoff distance, and high degree of automation, InSight One is well suited to a wide variety of deployment scenarios.

E-GATE, AUTOMATED IMMIGRATION & ACCESS CONTROL

Because of its very fast, highly automated image capture, InSight One is well-suited to e-Gate applications including automated boarding, expedited immigration, or other physical access control.

DESKTOP ENROLLMENT & VERIFICATION

For applications including Passport registration, visa screening, and VIP traveler registration, InSight One offers a convenient, comfortable way to capture high quality face and iris images. This can be controlled by a desktop application, web-based application, or mobile app.

IMMIGRATION COUNTER

Working with a wide range of user heights and in an automated way that makes it very easy for border management officers to operate, InSight One is a strong fit for immigration counter applications. With its consistently high quality image capture, InSight One can enable counters to be used for in-line enrollment of travelers into expedited traveler programs.

InSight One
Mounting Configurations

Tascent offers a variety of mounting options to enable tight integration of InSight One in desktop, pole / e-Gate, and kiosk applications. The device is fully self-contained, providing Ethernet and USB interfaces to integrate with networked, PC-connected, and embedded solutions.
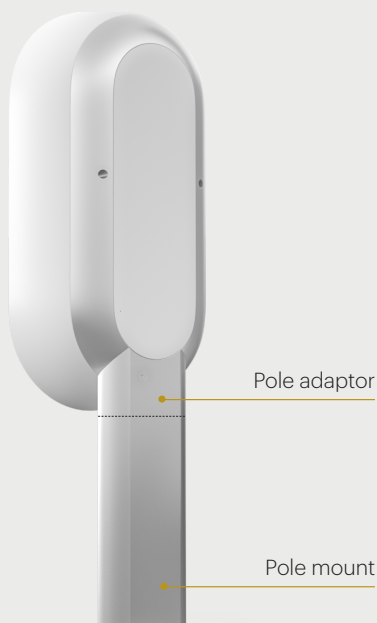
DESKTOP STAND

In this configuration, the desktop stand can be customized to the proper height based on the deployed environment.

Desktop stand

POLE / E-GATE

This configuration includes a mount adaptor that enables seamless integration with various pole mounting configurations.
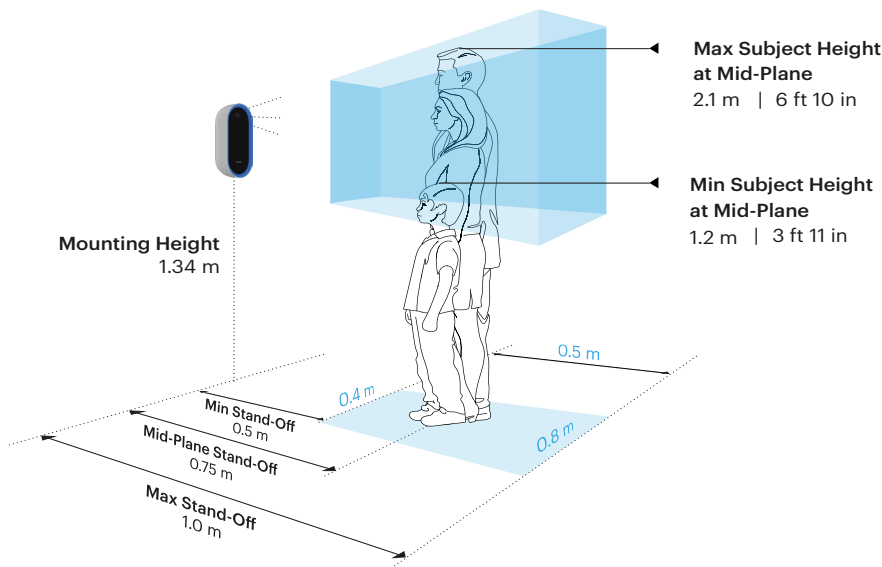
Pole adaptor

Pole mount

VESA

This VESA-compliant back ring is designed for use with standard 100 x 100mm VESA mounts. The VESA mount itself is not provided by Tascent.
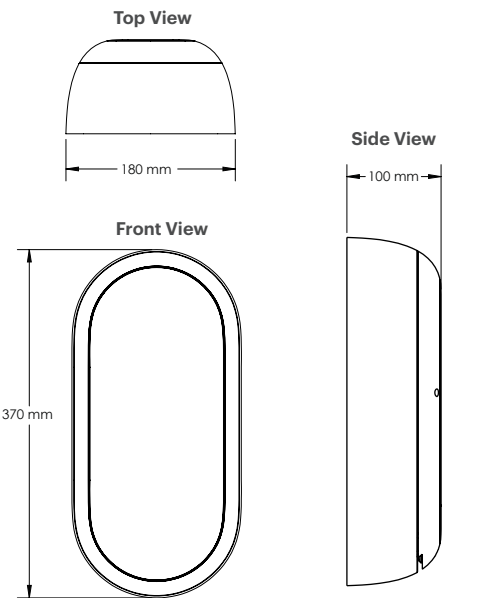
VESA-compliant back ring

InSight One
Product Specifications

Max Subject Height at Mid-Plane
2.1 m | 6 ft 10 in

Min Subject Height at Mid-Plane
1.2 m | 3 ft 11 in

Mounting Height
1.34 m

0.5 m
0.4 m
0.8 m

Min Stand-Off
0.5 m

Mid-Plane Stand-Off
0.75 m

Max Stand-Off
1.0 m

Capture Volume

Top View
180 mm

Side View
100 mm

Front View
370 mm

Mechanical Drawing
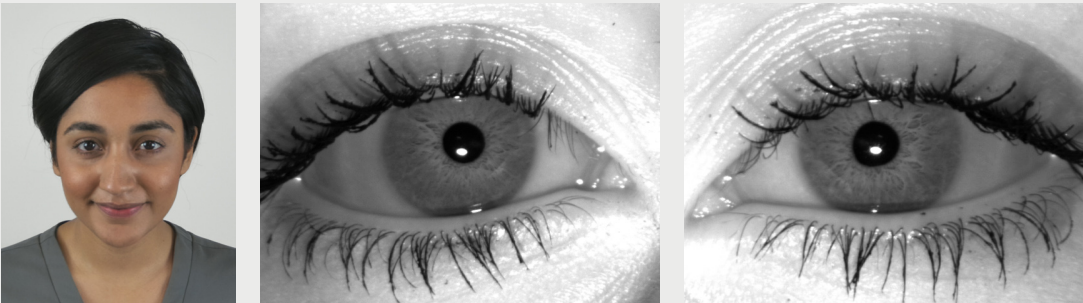
PERFORMANCE SPECIFICATIONS

Parameter	Value / Functionality
Standoff distance	0.5 to 1.0m
Location of capture volume	Mid-height of capture volume at top edge of device minus 14cm Recommended mid-height for standing applications: 1.575m (enables 1.2 – 2.1 m user height)
User height range	1.2 to 2.1m at mid-plane (0.75m) Special position can be used for ADA / children / wheelchair users if needed
Capture speed	2 seconds, simultaneous dual iris + face

FUNCTIONAL SPECIFICATIONS

Parameter	Value
User interface display	Integrated high resolution 5" LCD, fully configurable
Power	Line voltage: 100 – 240VAC Frequency: 50/60 Hz Power supply: 90W (24 VDC at 3.75A) Power consumption: 12W (standby) / 66W (active)
Weight	3.5 kg (7.6 lbs)
Encryption	Communications: PKI with standard P12 or self-signed 1024-bit certificates Storage: AES-256
Systems interface	Network connection: Gigabit Ethernet (SOAP over HTTPS); Local PC connection: USB 2.0 (device mode)
Mounting options	Pole mount (to eGate, fixed position counters) Wall mount (for access control environments) Universal mount: VESA 100mm x 100mm Desktop mount

InSight One
Product Specifications

All images are standards-compliant, promoting accuracy & interoperability

ISO 19794-6 compliant iris images captured from InSight One at 1 meter

Face Image with ICAO-compliant passport crop factor

BIOMETRIC SPECIFICATIONS

Parameter	Value
Iris image quality	Meets / exceeds ISO 29794-6
Iris image formats	Conforms to ISO 19794-6 RAW, BMP, JPEG2000, PNG format options
Iris image capture wavelength	850nm near-IR, eye safe at all distances
Face image quality	Meets / exceeds ISO 29794-5 (pending usage environment) >120px between subject eyes
Face image format	Conforms to ISO 19794-5; Custom crop factors for passport or other formats JPG, JPEG2000 format options
Face camera details	13MP with custom optics and optimized field of view Steered to directly face subject Image Signal Processor delivers optimized exposure and white balance

ENVIRONMENTAL AND REGULATORY SPECIFICATIONS

Parameter	Value
Operating Temperature	-20°C to +45°C
Humidity	0 to 95%RH, non-condensing
Regulatory Approvals	UL Product Safety, IEC 64271 Eye Safety, FCC, CE (pending)

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