

HID® U.ARE.U® Camera Identification System

The HID U.ARE.U Camera Identification System enables best in class facial recognition, identification and verification, with industry leading passive liveness security in order to verify that the person in front of the camera is real. The camera identification system is based on fusion artificial intelligence (AI) that combines multispectral imaging (MSI) with modern AI and machine learning algorithms to provide superior facial recognition and Presentation Attack Detection (PAD) in environments with widely changing light conditions, from bright sunlight to limited or no light conditions.

By combining multiple cameras in a single device, the HID U.ARE.U Camera Identification System provides the highest level of matching performance and accuracy for customers that require the best user experience. The HID camera identification system is ideal for applications in the banking and financial industry including ATM and branch offices, retail, healthcare, hospitality, time and attendance and physical access control.

ADVANCED PRESENTATION ATTACK DETECTION (PAD) TECHNOLOGIES

Facial recognition security needs to protect systems from spoofing attacks such as using mobile phone displays, tablets and monitors, photographs, paper puppets or 3D masks while accepting legitimate individuals wearing eyeglasses and face masks. While single camera systems can have strong independent anti-spoofing capabilities, they can also suffer from these specific attacks that become widely known to defeat PAD and liveness algorithms.

The HID Camera Identification System benefits from a multispectral imaging approach spanning visible to Near-Infrared (NIR) lighting. It supports a combination of camera sensing technology (RGB, active structured 3D depth sensing, high resolution periocular and 2D NIR facial flood projection) and PAD algorithms to determine whether the image is an actual spoofing attack or a legitimate user. By incorporating advanced machine learning PAD algorithms, the HID Camera System is positioned to achieve a high resilience against spoof attacks conforming to the industry standard (ISO 30107-1).

HIGH PERFORMANCE IN CHALLENGING LIGHTING

By utilizing a combination of RGB and NIR, the HID Camera Identification System can address the challenges of total darkness or bright light with High Dynamic Range (HDR) imaging for both indoor and outdoor use. Options are available for NIR-only or NIR/RGB combined.

MATCHING AT THE EDGE

The HID Camera Identification System has the ability to do facial matching and AI processing at the edge for on-board facial recognition, liveness detection, presentation attack detection, template extraction and matching.

DESIGNED TO FIT YOUR REQUIREMENTS

The HID Camera Identification System has a USB interface and can use the HID DigitalPersona® Biometric Software Development Kit (SDK) to interface with your systems and applications. Alternatively, the camera has an Ethernet interface with a integrated camera API that allows it to be directly addressable from the internet without the need for a separate SDK. As an option, the camera can be used with HID's ArcID Biometric Server and ArcID Device Manager to support a wide variety of server managed use cases.



FUNCTIONALITY:

- Integrated multispectral camera system
- 3D structured depth projection
- Does not require external light source
- Face detection
- Automatic face capture
- Automatic image quality check
- Presentation attack detection (PAD) conforming to ISO 30107-1 standard
- Face template extraction
- Face template match
- Match on device with local identification database
- Neural processing unit for fast and reliable operation
- Top ranking in NIST Face Recognition Vendor Test (FRVT)
- Unattended operation
- Multi-face detection
- Continuous authentication
- Compact module available for fast integration
- Optional HID ArcID™ Biometric Server connectivity with matching, identification and database synchronization capabilities

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Camera Sensing Technology	RGB (HDR), active structured 3D depth sensing, high resolution periocular and 2D NIR facial flood projection
Image Sensor	• 3840 x 2160 (6MP RGB and 2MP NIR) • 24-bit RGB • 60fps/30fps (HDR) • Portrait (minimum of 36° horizontally x 64° vertically)
Lighting environment	Indoor and Outdoor
Light spectrum range	• 0-100 Klux (NIR) • 2-10 Klux (RGB)
Operational distance	• 20 - 150 cm (without PAD) • 40 - 100 cm (with PAD)
Field of view (camera mounting dependent)	• 1.45 – 1.95 m @40cm • 1.10 – 2.30 m @100cm
Facial capture output	• Match score • PAD score • Image: ISO 19794-5, PNG, JPG • Template: HID proprietary template
Communication interface	• USB 3.0 • Ethernet (10/100)
Power consumption	USB powered (4.5W – USB 3.x)
Dimensions:	Maximum 88L x 42H x 41D mm
Operating temperature	0°C - 50°C
Supported Operating System	Windows® 10, Linux® 32/64-bit
Optional solution components	• HID DigitalPersona Biometric SDK (for Windows and Linux) • HID ArcID Biometric Server • HID ArcID ID Proofing Server • HID ArcID Device Manager • HID Biometric Professional Services
Certifications	• Presentation attack detection: ISO 30107-1 Level 2 • Laser eye safety: IEC 60825-1 Class I • UL, FCC, CE
Security features	• Remote attestation • Secure boot • Secure FW update • Advanced key provisioning
Encryption	• AES 128/192/256 • TDES 64/128/192 • RSA 1024/2048/4096 • SHA-1/256/384/512 • PKCS v1.5, v2.1 compatible with digital signature • HMAC (variable key size) • Random number generator • X.509 Certificates



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2022-05-02-eat-hid-uareu-facial-recognition-camera-system-ds-en PLT-06124

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