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# VIX VIZICON Leading the way in face recognition and intelligent video analytics

## **About Vix Vizion**

Vix Vizion Pty Ltd is a global leader in video analytics and facial recognition technology. Founded in January 2011 and based in Brisbane Australia, we are a dedicated team of machine learning and data specialists. We are at the forefront of providing fast, accurate and robust video analytics solutions for video based applications.

#### Imagus Facial Recognition & Video Analytics

Vix Vizion specialise in developing, deploying and supporting Facial Recognition and Intelligent Video Analytics software using advanced deep learning algorithms. Our Imagus branded software is designed to quickly and accurately capture, enrol, detect, recognise and match faces across a range of environments. Imagus provides intelligent video analytics data (including people counts, by time/ date and camera location) to improve business planning and decision making.

#### Locally Developed and Supported

Our Imagus software is designed, developed and supported in Australia. Our Imagus production algorithms are regularly tested by by the US NIST organization and consistently rate in the top 3 in the world for accuracy and speed.

#### **Multiple Deployment Options**

Imagus is easily integrated with existing video management systems, access control systems and other video based applications, or can be used stand alone. It is designed to be integrated with a wide range of software solutions to provide valuable video analytics and face recognition capabilities for new or existing infrastructure. It can be deployed locally on premises or in the cloud and can be managed as a local, cloud or distributed system across multiple locations.

#### Fast

Fast reliable face recognition and intelligent video analytics.

#### Accurate

Accurate across 1-to-1, 1-tomany and crowded environments. Optimised for uncooperative and controlled environments.

#### Flexible

Flexible, easy to implement. Local, cloud or distributed deployment options

#### Trusted

Designed with privacy as a priority. Designed developed and supported locally.

## **Our Team**



Simon Herron Chief Executive Officer

Simon Herron leads Vix Vizion's growing team of cutting-edge Video Analytics experts. With almost 30 years of international business development and IT industry expertise, Simon's focus is to deliver innovative technologies to market to improve business outcomes.

Simon is an experienced business manager and Chartered Accountant with a background in fintech, payments, biometric and ID verification technologies. Simon has successfully implemented innovative technologies in the air transport, public transit, retail, and banking and finance industries globally.



#### Steve Brain CHIEF TECHNOLOGY OFFICER

Steve Brain is Vix Vizion's technical leader and technology strategist. Steve is an experienced specialist in video surveillance and video analytics software, with a Masters in Computer Vision, Speech and Human Centred Systems from University of Birmingham, and nearly 20 year's experience engineering solutions for industry in UK and Australia.

Steve joined Imagus in Australia as a founding employee and designed and built the core Face Recognition technology used by Vix Vizion. Steve is recognized as a subject matter expert in Video Surveillance and Video Analytics.



#### Jim Christis CHIEF OPERATING OFFICER

Jim Christis is a seasoned IT professional with indepth experience across fintech, telecoms, retail and government sectors. Jim has over 25 year's experience transforming operations, leading enterprise solution implementations, and delivering product strategy initiatives across the Asia Pacific region.

Jim has been involved in Facial Recognition and Video Analytics in various roles over the last 15 years. He has led the deployment of high profile solutions across Digital Onboarding, ID verification, Security/Fraud and Retail Analytics.

## Improved Customer Experiences in selected Market Segments

Imagus addresses numerous customer issues and provides use cases in selected markets to address safety and security.

#### Retail

- Realtime alerts if repeat offenders return to a store.
- Central database to manage persons of interest across multiple store locations.
- Protect staff from violent customers and help fight organised retail crime.
- Help find missing children in shopping centres or department stores. Import your child's image from your phone, into Vix Vizion's Imagus Facial recognition system, to search all live cameras to find the child quickly.
- Help verify that returns desk refunds are authentic to reduce returns losses and theft.

#### Pubs, Clubs, and Casinos, Responsible Gambling

- Realtime alerts if problem gamblers return to a gaming venue.
- Multiple venue barring to support local liquor accords addressing anti-social and violent behaviour. Enrollment details shared amongst participating venues.

#### **Aged Care**

- Real time alerts if dementia patients or other at-risk residents attempt to leave.
- Alerts sent to existing nurse call or aging systems used at the facility. Staff do not need to learn new systems.
- As an additional safety feature, lock main doors for a period of time, until staff can escort the resident away.

#### **Ports**

Ensure more effective and efficient compliance with the Maritime Transport and Offshore Facilities Security Act 2003 (MTOFSA) by incorporating facial recognition and video analytics into your Maritime Security Plan (MSP).

#### **Mining and Critical Infrastructure**

- Hands free access control using facial recognition to assist in determining which people are in an area at any time. Monitor where people are in a mine site to help establish 'proof of presence'.
- Confirm people who are servicing critical equipment, are authorised to do so and have the correct Credentials and Licenses.

#### **Access Control**

- Use facial recognition integrated with access control systems to provide hands free or dual authentication (face and Access Card) access control.
- Save on access card costs and management time.
- High security access control for important tenants or highly secure areas.

#### **Health Care and Hospitals**

 Real time alerts if persons of interest return to an emergency department.Protect drug/medicine areas with dual authentication access control to ensure person accessing that area is that person.

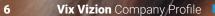
## **Our Industry and Technology Partners**

#### Some of our partners

Vix Vizion's software is designed to work alongside or integrated with a wide range of software services and hardware infrastructure. To bring these capabilities to market we employ a multi-channel approach. We work with core Industry and technology partners, systems integrators, and sector specific solution partners to provide our technology to their customers.

We also work with corporate and government customers to provide our software and services directly.

<b>F</b> inner range	calibre	Canon	Dell
ELEMENT SECURITY	GALLAGHER	The Power of Truth	milestone
ΜΟΒΟΤΙΧ		VIDEO MANAGEMENT SYSTEM	
SECURITY SYSTEMS			



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## **Imagus Core Facial Recognition System**

### Fast, Accurate and Reliable Market Leading Facial Recognition.

#### **Product Overview**

Vix Vizion's Imagus Facial Recognition System delivers fast accurate face detection, matching, recognition and tracking using advanced deep learning algorithms. Imagus is effective with high or low densities of people in frame, even with poorly lit, poor quality, angled or obstructed views. Imagus is easy to deploy and operate with intuitive User Interface for operation and management. Imagus can be deployed stand alone or integrated with your VMS as a local, distributed or cloud-based solution.

Our Imagus software is regularly benchmarked and tested by the US NIST organization. In 2023 we were rated 1st in Australia and 3rd in the world for the 'Wild Scenario' type environments for accuracy and speed.

#### **Key Features**

#### **Face detection**

- Monitor video streams either stand alone or integrated with your VMS.
- Market leading face detection accurately detects faces in video streams in real time in crowded or 1-to-1 scenarios and uncooperative environments.

#### **Face recognition**

- Easily enroll faces for recognition from existing databases, from video footage or on the fly.
- Enroll faces for recognition of person of interest or repeat offenders.
  Known and Unknown associate identification.
- Privacy controls and facial blurring.
- Algorithms trained against multiple demographics, mask/glasses/hats, Lighting variations, motion blur and large pose changes (+/- 90 deg yaw,+15/-30 deg pitch, +/-30 roll).

#### **Face verification**

- Real time alerts for staff and management via screen, email and mobile phone SMS.
- Identity verification for staff/ customer/passenger through enrolment and onboarding feature.
- Enhanced security use cases to support high security environments.

#### Access Control

- Face only access control for hands free access via integration with Access control system.
- Dual Authentication with face and card for high security areas to ensure card holder is the authorised person.
- Makes use of access control system cardholder database and image on file.

### **Imagus Intelligent Video Analytics**

#### **Product Overview**

Improved business decision making through Video Analytics Informative data to enhance safety and planning. Vix Vizion's Imagus Intelligent Video Analytics module works seamlessly with Imagus Core Facial Recognition to provide valuable insights into the people seen in video footage through data capture and reporting.

#### **Key Features**

#### **Improved Safety And Security**

- Visualise and report on occupancy and people counts by location, time and date.
- Use 'Super Tracks' feature with ensures that people are not double counted if they come into view multiple times.
- Real time alerts for people of interest or unknown/unidentified people.
- Dwell times for people in a defined area.
- Track people moving through multiple zones and camera field of views.
- Improve site design to optimise traffic flow and safety.
- Mask detection / face detection while wearing masks.
- Gender estimation.
- Age estimation.
- Emotional trends.
- Compliance, and contact tracing.

### **Vix Vizion Alerts and Forensic Reporting Toolkits**

#### **Product Overview**

Enhance business intelligence with advanced incident management and data correlation. Detect, identify and alert on people of interest and security risks in real time. Vix Vizion's Alerts and Reporting Tools include powerful incident and event investigation capabilities enhanced by intelligent video analytics.

#### **Key Features**

#### Alerts

- Configure events through an intuitive UI.
- Alert status management via Imagus UI's.

#### Notification

- Enable real time notification via SMS, Email, Light Panels, Screen Flashing or Web callouts to other systems.
- Integrate with Nurse call and paging systems to make use of existing infrastructure and internal processes.
- Alert/notification reporting

#### **Forensic Analysis**

- Powerful forensic search and historical analysis via intuitive UI's.
- Investigate historic footage captured by Imagus or import footage for analysis to assist investigations and law enforcement.
- Investigate known and unknown associates.
- Find people across many video streams extremely quickly and download data about when, where, who, plus demographic information.
- Access data for input to your BI systems.

### **Remote Monitoring Service**

#### **Product Overview**

Imagus Remote Monitoring Service is a 24/7 service which monitors Imagus Video Analytics and Facial Recognition systems to ensure both cameras and servers are online and functioning correctly so that customers do not need to actively monitor the systems themselves. Vix Vizion uses a comprehensive real time monitoring dashboard to monitor the system. If problems occur, Vix Vizion will notify the customer and coordinate with them to remotely resolve the issue. Keeping the Imagus system running is often an internal and external compliance requirement required by companies or Government Regulators.

#### **Key Features**

Vix Vizion use a comprehensive monitoring dashboard that gives us real-time data on every important aspect of your Imagus facial recognition system including:

- System health: To ensure Imagus services are running and system health is acceptable.
- CPU usage: To ensure the system is running fast and smooth.
- **GPU temperature:** To ensure the longevity of the system by avoiding any overheating.
- GPU usage: To ensure the Graphic Processing Unit is always running and not overloaded.
- Memory usage: Memory storage and usage.
- Camera errors: To ensure all cameras are always running and online.
- Camera blurriness: To ensure all cameras are focused and are scanning faces.
- **Min PFPS:** To ensure cameras are processing the required number of frames every second.

#### **Benefits to Customer**

Vix Vizion's Remote Monitoring Service provides customers with assurance that their Imagus Video Analytics and Facial Recognition System is operating correctly at all times. This saves time and money and helps ensure that the Imagus System is meeting the desired outcomes required by our customer.

### **Imagus Integrations and Plug-Ins**

### Seamless and simple integration options allow you to enhance and extend any existing environment.

Vix Vizion's Imagus software can be operated as a stand-alone solution or integrated with your existing Video Management System or Access Control System. Vix Vizion also provides deeply integrated seamless plug-in options for several VMS and Access Control Systems which are designed to make the implementation and management of Imagus capabilities for existing systems very easy. We continue to add new plug-ins as required by our customers.

#### **Plug-In Options and Other Integrations**

- Milestone VMS
- Hanwha Wave VMS
- NX Witness VMS
- Gallagher Access Control
- Inner Range Integriti Access Control
- Inner Range Inception Access Control
- Whistle Aged Care Communications Platform
- Advance Care IP Nurse Call System
- OK2Play Harm Minimisation for enrollment and alerts for Pubs and Clubs
- More on the way...

## **Imagus Edge**

#### **Product Overview**

Using Imagus Edge you can add video analytics and facial recognition functionality to a large number of edge-based AI cameras without requiring excessive server hardware or network bandwidth.

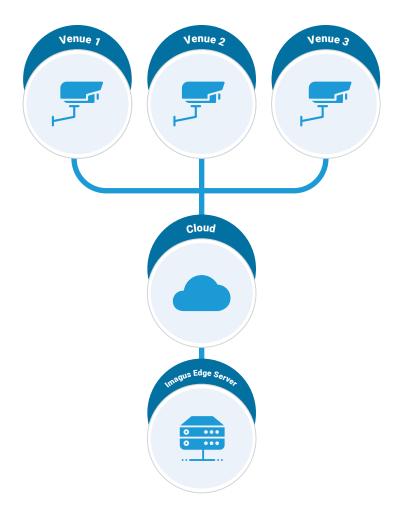
#### **Key Features**

Vix Vizion's Imagus software is designed to capture video analytics data and perform facial recognition for one or many video streams across single or multiple sites.

The core Imagus software includes three key image processing components – the Face Detector, the Video Analytics tool, and the Face Recognition engine. These components have been optimised so that one or more components, depending on the use case and the AI camera hardware, can be installed on AI edge-based cameras and perform the relevant processing on the device. Analytics and match results data is then sent in small packets to the server managing the system, for alerts, reporting and investigation.

#### **Benefits to Customer**

Imagus Edge has been designed so that data transfer from cameras to servers is very "light" meaning that a large number of cameras can be attached to a system both locally or across a distributed network architecture without the need for extensive network bandwidth or server architecture. One or more of the "heavy lifting" processes can be done on the edge-based device. This means a faster, more effective and lower cost video analytics and face recognition solution can be deployed using existing infrastructure or across large sites. This type of edge-based architecture will provide additional savings to customers as the cost of server reduces.





## **Multi-Site Central Management**

#### **Product Overview**

Vix Vizion's OSCR (online self-managed central register) system is a web-based system for managing video analytics and face recognition programs across multiple distributed sites. OSCR includes central management, reporting, enrolment and database tools.

#### **Key Features**

The OSCR system includes the following high-level functionality:

- Database management: Centralised face database configuration, secure storage, and management tools.
- Multi-site management: The central OSCR database can be linked to multiple customer sites/venues for central system management, and up and down database syncing.
- External database links: The OSCR database can be linked to multiple external databases to enable third party databases to be synced with your OSCR system (e.g.: government or industry-based source data for compliance or industry programs.)
- Face registration: Face registration options include bulk registration tools, program manager registration screens, and consumer/patron facing self-enrolment tools and user interfaces.
- Identity verification: Identity verification tools for use during face registration processes including face matching against ID documents, data capture from documents, and data checking options.

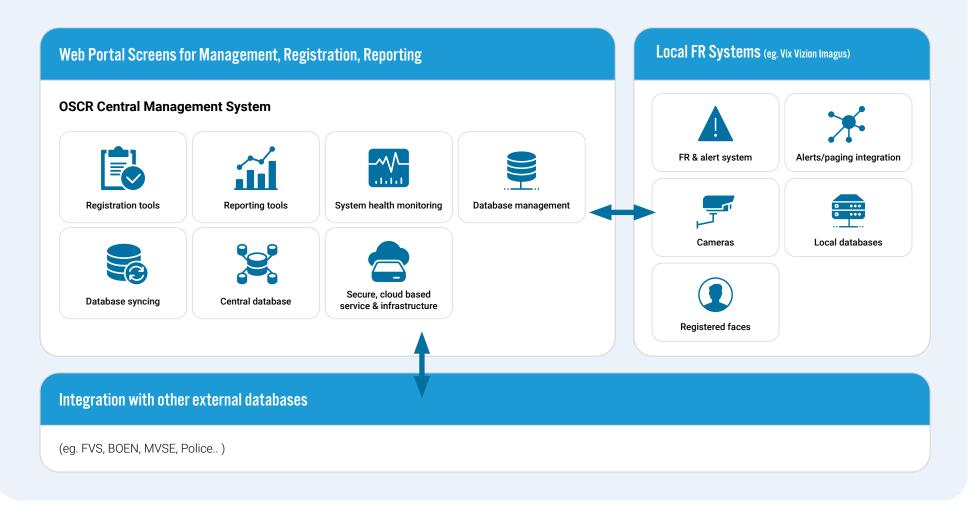
- Reports: Central multi-site reporting tools for incident alerts, incident reporting, compliance reporting, and overall program management statistics across all linked participating sites/venues.
- Monitoring: System status monitoring for all linked/participating sites/venues to ensure systems are operating in an optimal manner and create alerts when issues are detected.

#### **Benefits to customer**

OSCR is a self-contained software application which can be hosted securely by our customers in their own data centre, securely on site at one of their venues/sites, or in our secure sovereign cloud-based datacentre. The choice is yours. Vix Vizion can set up and deploy OSCR in your own data centre to be managed and operated by your own team, with the backup and support of our technical team when you need it.

Alternatively, our world leading Vix Vizion team can operate and maintain OSCR and your associated face recognition / video analytics programs for you. All our technology is designed, built and delivered from our development centre in Australia and all of our services are managed securely by our local team of trusted face recognition and video analytics experts.

### Vix Vizion OSCR Multi-Venue System



## **Our Solutions and Services**

### Vix Vizion provide a range of solutions and services based on our core Imagus Facial Recognition product.

#### Way to market

Vix Vizion provides its Software and Services either directly to certain strategic customers or indirectly via technology partners and Distributors. Further information can be found on our website at vixvizion.com.

#### **Other services**

- Solution consulting for Facial Recognition Safety, fraud reduction and analytics
- System operation for single or multi-site systems
- Remote Monitoring Services and Support

#### Licensing

Vix Vizion license its core Imagus software and a range of other services and software including:

- Facial Recognition access control module
- People counting and other video analytics
- Retail Returns Desk Fraud module
- Multi-Site Central Management module
- Imagus Edge algorithms for AI enabled cameras
- Remote Monitoring Service

Licensing is typically an annual based subscription service including software maintenance.

## **Privacy**

### Vix Vizion's Imagus software has been designed to meet the Australian Privacy Principles which form part of the Privacy Act 1988.

#### **GDPR**

Imagus also meets the principles of the General Data Protection Regulation (EU) relating to data protection and privacy. Users of Imagus software must also operate the Imagus system in accordance with these laws.

How Vix Vizion's Imagus software works with regards to privacy:

When a face is detected on a camera using our FR software, we create a metadata face file ("Metadata") for that particular face which describes the characteristics of the face. This Metadata is then used by the system to match against faces of people of interest who have been enrolled by the operator in the enrolled faces database. The Metadata is a data file, not an image file. The FR software is designed to access VMS video footage for investigation purposes, but the storage of images is generally happening in the existing VMS, not the FR system.

- Face images and Metadata storage is a configurable part of our software which is managed by the operator and set depending on their needs. Metadata and images can be stored for days or minutes or immediately deleted.
- The Imagus FR software checks the Metadata face file against a database of enrolled faces. This database of enrolled faces is manually set up by the operator of the Imagus FR software. These enrolled faces in the database are typically only "persons of interest" or "persons who opt in" which the operator wants to be alerted about in the future e.g., if a person of interest returns to their building, self-excluded problem gambler entering a gaming room or a person using facial recognition for access control.
- If the Metadata from the detected face is a close enough match to the Metadata associated with an enrolled face, then we get a facial recognition match.
- Enrolment and associating any personal data or narrative data with an image needs to be done manually by the operator through the enrolment process. Typically, personal information is not added as it is not known or needed, but rather comments about the nature of previous indiscretions and the level of caution that should be used with the person of interest.

## **Customer References**

### Vix Vizion work with many customers across Australia, New Zealand, and Asia Pacific across multiple segments.

In some cases our customers prefer not to allow Vix Vizion to use their name. Notwithstanding this some customers are happy to be used as a reference.

#### **Pubs and Clubs**

- MyBar at the Hilton Hotel, Adelaide South Australia
- Club Rivers, Sydney NSW
- HCS Management QLD (7 venues and growing)
- Over 400 pubs and clubs across South Australia, NSW, Queensland and Tasmania

#### Retail

- Hundreds of Retail stores across major Australian Retailers
- Over 50 Retail stores across NZ with Major NZ Retailers
- Shopping Centre, Western Sydney, NSW

#### **Aged Care**

Multiple aged care facilities in South Australia, Queensland and Victoria

#### **Critical Infrastructure**

- Major eastern US airport terminal at Australian Law Enforcement Agencies
- Government Facilities
- Stadiums and Venues



## **Contact us**

#### Get in touch with us

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