How smart is your surveillance system?
Face Detection & Recognition in a Crowd (iQ-Face)

iOmniscient’s iQ-Face is the world’s first many-to-many Facial Recognition system that can operate in a crowded scene. iQ-Face is a family of various Face Detection (iQ-FaceD) and Face Recognition (iQ-FaceR) systems offered by iOmniscient. The iQ-FaceD can detect and record faces in busy environments for manual review. The more comprehensive iQ-FaceR incorporates iQ-FaceD and then automatically recognizes multiple faces which can be matched against a specified database or multiple databases.

iQ-Face excels in uncontrolled environments with variable lighting, continuous movement, low resolution and variable facial angles. It increases the probability of identification of wanted individuals in a crowd.

All iQ-Face systems are fully integrated with the iOmniscient range of Detection products and can operate with iQ-Hawk, which converges Detection and Identification systems in a single camera.

What makes iQ-Face different?

- Operates with low resolution cameras at a distance (requires only 22 pixels between the eyes)
- Excels in uncontrolled environments with non-cooperative individuals
- Detects multiple faces in a crowd (iQ-FaceD), and simultaneously recognizes them by comparing them with one or more specified databases (iQ-FaceR)
- Recognizes faces from variable facial angles
- Fully integrated with iQ-Series detection products
- Can integrate with other recognition technologies, eg. iQ-Driver Match (optional extra)
- Automates Surveillance with iQ-Hawk (optional extra) & multiple Video Analytics

See Through the Crowd

www.iomniscient.com info@iomniscient.com
Face Detection (iQ-FaceD) Applications

- iQ-FaceD (which can be purchased separately) can detect the presence of faces even in a crowded scene
- Optimizes storage (by storing faces only)
- Selects quality video (e.g. only with faces & frontal view)
- Records faces based on time/date
- Expedites search & forensic analysis using face images only (e.g. speed up police investigation)
- Face Counting
- Tailgating

Face Recognition (iQ-FaceR) Applications

- iQ-FaceR enables the system to present possible matches from faces stored in a database (or multiple databases)
- Queue Management to determine average, specific or individual waiting times
- Identifying potential threats in high security areas such as airports and banks
- Driver identification to verify vehicle ownership in secure car parks
- Improve customer service by identifying VIP guests in hotels or casinos
- Identifying blacklisted individuals such as shoplifters in a mall
- Tracking suspect footpath across non-overlapping cameras
- Advanced Access Control & Attendance System

Multiple Faces
22 pixels between the eyes
Wider Face angles
Works well in low resolution
Non co-operative
Convergence with iQ-Hawk
Distant Views

Detection

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<thead>
<tr>
<th></th>
<th>Limited</th>
<th>Average</th>
<th>Smart</th>
<th>Genius</th>
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</thead>
<tbody>
<tr>
<td>Face Detection (one face, frontal view)</td>
<td>✔️</td>
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<tr>
<td>Face Detection (many faces, frontal view)</td>
<td>✔️</td>
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<tr>
<td>Face Detection (uncontrolled environment)</td>
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<td>✔️</td>
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Convergence

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<tbody>
<tr>
<td>iQ-Hawk</td>
<td>✔️</td>
<td>✔️</td>
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<td>✔️</td>
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<td>iQ-Driver Match</td>
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<td>✔️</td>
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Recognition

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<td>Face Recognition</td>
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<tr>
<td>Many to Many</td>
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<tr>
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<tr>
<td>One to Many</td>
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1 Low Resolution requires 22 pixels, Uncontrolled Environment, Integrated with iQ-Hawk
2 Higher Resolution requires minimum 45 pixels, Controlled Environment

See Through the Crowd