

# Q Sentinel FOR AIRPORTS

Enterprise Queue Management Systems (eQMS)



queue monitoring  
for airports



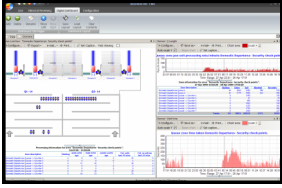
Product  
Brochure



## Software Overview

QSentinel eQMS for Airports has been designed to provide for the live monitoring of numerous high volume, high density queues, where accuracy and reliability are critical business requirements.

The QSentinel system proactively assists in managing and reviewing all aspects of queues, from queue wait times and queue lengths, to queue 'processing' timing information.



QSentinel leverages standard Microsoft technologies such as Microsoft Windows, Microsoft SQL Server for data storage and the highly acclaimed Microsoft .NET platform, for development.

QSentinel supports virtually unlimited user-defined dashboards, for the ultimate flexibility in information presentation; employs friendly wizards throughout, to quickly step the user through all configurations and sports an intuitive 'Ribbon-based' user-interface, to allow fast and easy navigation through its extensive feature set.

## Hardware Overview

QSentinel utilises high quality, solid-state components, to ensure ultimate system reliability, coupled with very low levels of system maintenance.

Depending on the queue area layout, QSentinel is capable of utilising a diverse range of sensors to:

- monitor passenger movement through all queue areas
- continuously monitor the availability and status of the queue 'processing' areas (counters, checkpoints, etc.)



To handle the problematic task of accurately counting passengers, QSentinel uses a 'downward-looking', passive infra-red camera at key queue points, which provides **bi-directional** human counting, with a proven counting accuracy **exceeding 95%**.

## Components / Architecture

QSentinel is made up of the following key components:



1. **QSentinel Field Devices.** These include a range of QSentinel sensors, designed to reliably collect various physical measurements and status information.
2. **QSentinel Aggregators.** These devices collect the measurements and status information from the various field devices and use standard Ethernet networks to reliably send the data to the QSentinel Server. In case of transient network issues, these devices can buffer the field data.
3. **QSentinel Server.** This component handles all the communications with QSentinel Clients, database logging, QSentinel Aggregators, QMS display boards and all other QMS system integrations (CCTV video, ESB, etc.).
4. **QSentinel ASP.NET Web Site.** This provides an easy-to-use, browser-based interface to access all the QSentinel information.

## Components / Architecture (cont...)

5. **QSentinel Win32 Client.** The QSentinel Client is a fast, lightweight, native 32-bit Windows application, which is easy to deploy and allows for the comprehensive configuration, management and review of the QSentinel system, from any modern Windows-based system. The QSentinel Client utilises the concept of custom user-defined 'dashboards', for ultimate flexibility in presentation of available queue data.

## Integration

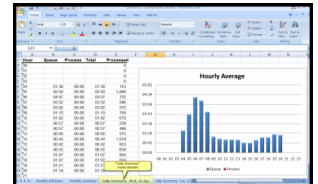
QSentinel has been designed to use a Service Oriented Architecture (SOA). All functionality has been written to be modular and to provide unmatched scalability. As a default, QSentinel has been extended to expose key performance metrics to an IBM Enterprise Service Bus (ESB), via SOAP over an SSL HTTP channel. This means key QSentinel eQMS data can easily be shared and used by other enterprise systems.

QSentinel leverages Microsoft's IIS, to provide an ASP.NET based AJAX web site, to allow any standards-compliant browser (such as a Linux/Windows desktop or a Windows/Android smart phone), to be able to access the information available from the QSentinel system. Alternatively, the highly optimised QSentinel database can be queried directly, by the more technically sophisticated user.

QSentinel has also been recently extended with a module to deliver **live video feeds** and video snapshots (for the web), of the queuing areas controlled by QSentinel. This allows for visually inspecting the live CCTV footage of any QSentinel queue, using the QSentinel Client or via a standard web-browser.

## Reporting

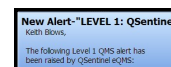
For user convenience, all QSentinel reports are made available using industry-standard Microsoft Excel files, to enable custom reporting and charting.



The built-in reporting system uses Excel's own 'drill-down' functionality, to allow you to see exactly the level of detail you require.

## Alerting / Monitoring

In case of excessive queue lengths or lengthy queue wait times, QSentinel can immediately dispatch warning alerts via e-mails, SMS messages, as well as directly to each QSentinel Client software. The alerts are highly flexible in their trigger levels and can target specific recipients, for specific queues and specific time periods.

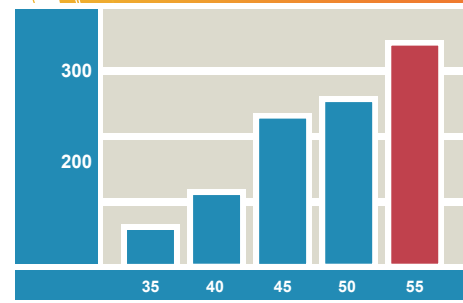


QSentinel is even capable of monitoring most of its own sensors, to ensure that all data being collected is accurate. In case of any sensor problems or failures, QSentinel can immediately dispatch SMS and e-mail alerts to service personnel.



## QSentinel Benefits

- **Improve customer satisfaction**– ensure queue wait times and lengths remain within acceptable norms, through QSentinel's 'always on' alerting system.
- **Better use of resources**– monitor queues in 'real-time', for problems and review historical information, to better understand peak periods and distinctive queue behaviours.
- **Monitor resources**– know exactly how well queue resources are performing, using the available 'queue-metrics' in QSentinel.
- **Peace of mind to run your business**– knowing that key customer processing areas are being closely monitored, to avoid any embarrassing customer complaints over substandard service levels.
- **Accuracy**– QSentinel's accuracy and stability has been proven for over 2 years at a major international airport, and has counted millions of passengers, without missing a beat.
- **Hassle-free, low-impact deployment**– the QSentinel team has the experience to quickly deploy and install a QSentinel system, with minimal impact on current queue functionality.
- **Browser-based information delivery**– by utilising an industry-standard, browser-based information delivery mechanism, virtually any kind of device can query live and historical QSentinel information and reports.



## System Requirements

### Windows Server

- Platform: Windows Server 2003/2008
- Database: Microsoft SQL Server 2005 or 2008

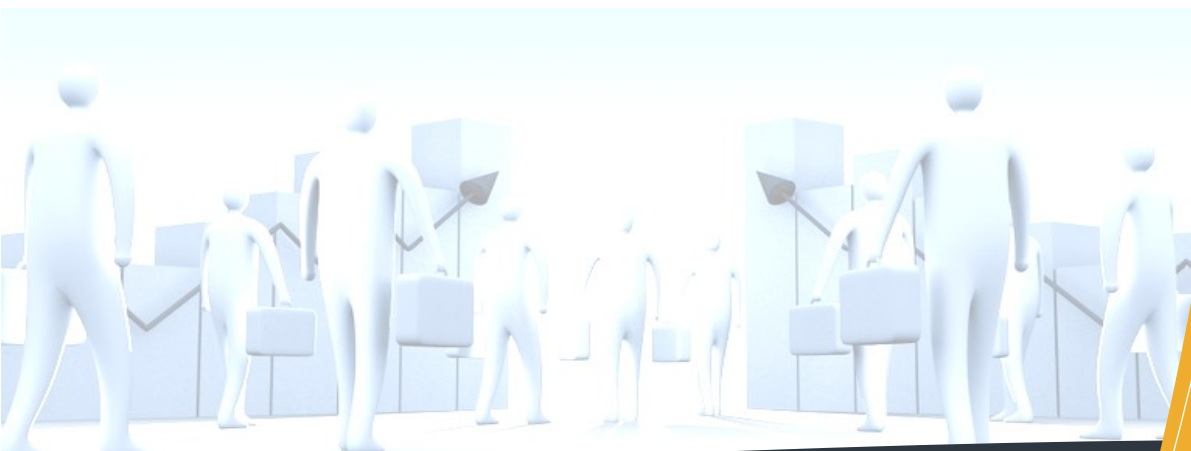
### Windows Client

- Windows 2000 SP4, Windows XP SP3, Windows Vista, Windows 7

### Browser

- Internet Explorer 7 and up, Firefox 3.5 and up, Opera 9.0 and up, Google Chrome 4.0 and up.

COUNT ON QSENTINEL



E-mail: [info@qsentinel.com](mailto:info@qsentinel.com)  
Web: <http://www.qsentinel.com>  
Phone: +27-82-651-6802  
+27-83-456-6557

Supplied by:  
Moben Integrated Systems (Pty) Ltd.  
Corner Nasmith/Graphite  
Germiston  
South Africa

