



**Syntell**

**Traffic Systems and Solutions**





## Traffic Controller

With over four decades of experience in designing and manufacturing traffic control systems, Syntell has established itself as a leader in the field. Our diverse range of controllers ensures that we stay at the forefront of technology and innovation.

True to Syntell's reputation, our Traffic Control Solutions are designed to meet the complex demands of modern traffic engineering while providing reliable and efficient operations, even in high-stress environments as we experience in Southern Africa.

We currently offer two main product lines: the MX and the XTE Traffic Controllers. Both ranges are highly modular, exceptionally robust and designed with ease of installation and maintenance in mind. This flexibility not only simplifies the work for technicians but also ensures that our systems deliver world-class performance and reliability.



## MX Traffic Controller Range

The MX range offers traffic management solutions starting with the MX Nano, a 2-signal group solution for Pedestrian crossings, to 24 signal groups provided by the big brother of the family. A range of housing solutions is offered to accommodate varied requirements, be it small pole mounted enclosures, plinth or root mounted cabinets.

**Capabilities :** 4 to 24 signal groups.

**Classes :** Basic, Multi-Stream, Adaptive.

**Complementary Tool :** MAC4 Configuration and Simulation Tool.

**Modular Design :** Easy installation, clear operation and fault information.

**Durability :** Designed for demanding environments.

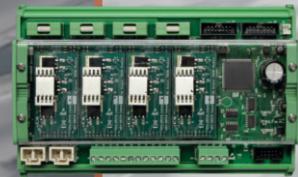
**User-Friendly :** Minimal, understandable wiring for semi-skilled staff.

**Versatility :** Tailored, cost-effective solutions for diverse traffic demands.

**Connectivity :** IP interconnectivity, RMS, UTM, UG405 communication, UTC[1]based systems.

**Compatibility :** Interfaces with ITS solutions (magnetic loop, video/thermal, radar, Sensys).

**Housing Options :** Small pole-mounted to Plinth & Root-mounted cabinets as well as Mounted Kits to fit existing housings.





## XTE Traffic Controller Range

Smarter, Safer, More Resilient Traffic Signal Control

Smarter, Safer, and More Resilient Traffic Signal Control. The Syntell XTE Traffic Controller range is a forward-thinking solution that tackles modern urban challenges like vandalism, theft, and infrastructure adaptability, while simplifying installation through reduced cabling requirements.

### Cutting-Edge Technology Meets Practical Design

- Ring-fed, distributed control architecture
- Decentralized signal processing for enhanced reliability
- Reduced installation costs through streamlined street furniture layout
- Minimal cable exposure—a powerful deterrent against cable theft

### Seamless Integration with SIMS

The XTE system integrates directly with the Syntell Integrated Management System (SIMS), enabling advanced asset management, geo-fencing, and real-time monitoring of every controller module. SIMS enhances visibility, improves maintenance efficiency, and secures valuable infrastructure. Powered by MACx Software

### The intuitive MacX software platform supports

- Backward compatibility with legacy systems
- A modern, user-friendly interface
- Full integration with SIMS for centralized control
- Simplified diagnostics and configuration

### Advanced Features for Safer Roads

- Safety-critical monitoring at each intersection pole
- Conflict detection algorithms to prevent traffic incidents
- Rapid fault identification and alerts
- Robust communication backbone ensuring real-time performance

### The Syntell XTE Controller System

**Built for the modern city. Engineered for resilience.**



## Traffic Management Systems and Software

**Visibility. Control. Confidence — Anytime, anywhere.**

The Syntell Remote Monitoring System is a, web-enabled platform that gives traffic management teams real-time visibility and control over critical roadside infrastructure. Designed to support proactive operations and rapid incident response, this system provides continuous monitoring of traffic signal controllers, UPS units, communication devices, and other key assets

Whether deployed across a single municipality or a citywide traffic network, Syntell's Remote Monitoring System enables informed decision-making, reduces downtime, and supports efficient, cost-effective maintenance.

### Key Features

- Live System Status & Alerts  
Monitor the health and operational status of each traffic signal controller, power supply, and field device in real time. Receive instant alerts on faults, power failures, communication losses, or unauthorized access.

- **Data Logging & Historical Reporting**  
Access detailed logs of events, performance data, and environmental conditions to support diagnostics, compliance, and long-term planning.
- **Remote Configuration & Diagnostics**  
Adjust controller settings, reset devices, and run diagnostics remotely — minimizing the need for on-site visits and improving response times.
- **Multi-Site Management**  
View and manage hundreds of intersections or installations from a single, intuitive interface, with support for user roles and access control.
- **Seamless Integration**  
Fully compatible with Syntell's XTE™ controllers, UPS units, and intelligent infrastructure.

**Benefits at a Glance:**

- Minimize signal downtime and service disruptions
- Reduce operational and maintenance costs
- Enhance safety and response time to faults
- Ensure compliance with audit-ready system logs
- Enable smarter, data-driven traffic operations

With the Syntell Remote Monitoring System, your traffic infrastructure is never out of sight — ensuring safer roads, smarter cities, and more efficient urban mobility.



# SIMS

## Syntell Integrated Management System

SIMS is a powerful, cloud-enabled software platform developed from the ground up for seamless integration with a wide range of traffic and infrastructure systems. It offers a single point of access for managing all integrated components — meaning one login, total control.

### Seamless Integration via API With

- RMS (Remote Management System)
- Electronic Door Lock Solutions
- Configuration Management Tools
- MAC x Interface

### Smart, Centralized Control

SIMS allows centralized management of traffic infrastructure through a cloud-hosted database, enabling real-time control and monitoring of intelligent hardware modules, including:

- System Processor
- Services Module
- Output Module
- Router

Each module is assigned a unique serial number, securely linked to a specific municipality or client.

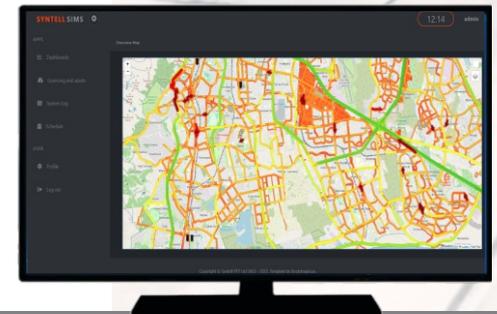
These IDs are locked into the system, making modules inoperable if removed or reused elsewhere—a robust deterrent against theft and unauthorized resale.

### Advanced Security Features

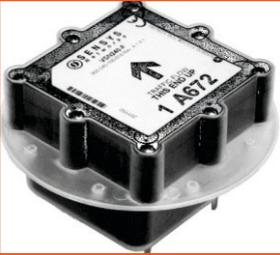
- Geo-Fencing Capabilities: Restricts each controller to operate only within its assigned geographic zone.
- If moved or activated outside its defined location, the system triggers an immediate alert to notify authorities of potential tampering or unauthorized activity.

### Why Choose SIMS?

- Built specifically for traffic systems integration
- Enhanced system security and anti-theft protection
- Real-time monitoring and control via cloud interface
- Supports smarter municipal traffic management



**SIMS by Syntell — Smarter, Safer, Seamless Integration**



Sensys

## Partners

### Sensys Networks Wireless Vehicle Detection System

The Sensys Networks solution uses wireless magnetometer sensors to detect vehicle presence and movement. These sensors, installed in the pavement, transmit real-time detection data via low-power radio to a nearby access point, which then relays the data to a traffic signal controller or remote traffic management center. For sensors out of range, the Flex Solar Repeater acts as a relay. FlexControl, a low-power Linux computer, manages radio communications, data processing, sensor data synchronization, firmware updates, and communications backhaul to central servers. Incident detection can also be deployed on motorways.



Flir

### FLIR TrafiCam Series Vehicle Sensors

The FLIR TrafiCam series includes vehicle presence sensors that combine a CMOS camera and video detector. There are two main products: TrafiCam, which detects vehicle presence, and TrafiCam x-stream, which also collects data and streams video. These sensors monitor both moving and stationary vehicles at signalized intersections, offering a cost-effective and reliable alternative to inductive loops. The FLIR TrafiOne uses thermal imaging to detect vehicles and bicyclists at intersections and pedestrians and bicyclists at crossings. Thermal cameras and TrafiCams are available for specialized applications.



Swarco

### Swarco Futurled Traffic Signal Modules

Swarco Futurled Traffic Signal Modules have sold nearly 3 million units globally, demonstrating



Smart Lock

Swarco Futurit's expertise in LED signaling technology. With over 15 years of experience, they offer highly reliable, state-of-the-art products. Their modules feature a central light source and dual lens system for a brilliant and uniform signal display. The slim, elegant design of the Futura signal head enhances urban landscapes and improves efficiency and environmental impact. Swarco also offers a range of ITS solutions

### Smart Lock Underground Chamber

The SMARTLOCK Underground Chamber is an innovative, high-security solution designed to protect critical traffic management equipment from theft, vandalism, and environmental damage. Engineered specifically for the demands of urban traffic infrastructure, this underground enclosure provides a secure and concealed housing for components such as UPS units, controllers, communication interfaces, and power distribution equipment.

By relocating vulnerable assets from traditional roadside cabinets into tamper-resistant underground chambers, SMARTLOCK significantly enhances the physical security and operational reliability of traffic control systems.

Ideal for high-risk or high-density urban areas, the SMARTLOCK Underground Chamber redefines infrastructure security while supporting the seamless operation of modern traffic management systems.

**Secure. Discreet. Built for Modern Traffic Infrastructure.**

# Quebit

## Where Traffic Meets Technology

Quebit is the next generation of intelligent traffic management, seamlessly combining edge computing and artificial intelligence to deliver real-time analytics, predictive insights, and adaptive traffic light control across urban mobility networks.

The Quebit module, a powerful, compact, edge computing unit, integrates effortlessly with existing UTMC traffic controllers such as the Syntell XTE™ and the Syntell MX™ controller. This platform equips traffic authorities with the tools needed to respond dynamically to congestion, incidents, and fluctuating demand — all while reducing operational overhead and enhancing commuter safety.

### Quebit Navigate

Quebit Navigate is a traffic insights platform that consolidates real-time and historical traffic data from the Quebit modules — providing a live and comprehensive view of the traffic network.

#### Key Capabilities

- Overview of the entire traffic network
- Actionable insights for traffic engineers
- Smart alerts based on real-time events
- Predictive analytics

### Quebit AutoPilot

Quebit modules, powered by Quebit AutoPilot, offer real-time traffic light optimisation. By processing live traffic data directly at each intersection, Quebit AutoPilot delivers adaptive traffic light control — optimising traffic flow and maximising current infrastructure. It empowers traffic teams to manage congestion proactively and deliver measurable improvements in travel times and network efficiency.

#### Key Capabilities

- Intelligent, data-driven traffic light control
- Greenwave synchronisation
- Real-time adaptive signal adjustments based on live data
- Managed via the Quebit Navigate interface
- Seamless compatibility with Syntell MX, XTE, and UTMC controllers

### Quebit enables cities to

- Understand their traffic networks better
- Improve intersection efficiency and reduce delays
- Respond proactively to traffic conditions in real time
- Enhance safety through intelligent traffic light control and smart alerts
- Transition toward fully adaptive, smart city solutions

From individual intersections to entire metropolitan areas, Quebit delivers scalable, intelligent traffic management for the demands of today and the challenges of tomorrow.







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With over 4 decades of experience in the development of road traffic management systems, it is our mission to help SA's cities flow better.

Syntell is the leading developer of state-of-the-art road traffic management systems and has partnered with Metros and local authorities across South Africa to unlock innovative, yet practical solutions that achieve tangible results.

We offer complete turnkey solutions for intersection installations, as well as the supply and service of street furniture. Our Area Traffic Control systems (UTC/ SCOOT) and Remote Management Systems (RMS) effectively alleviate traffic blockages and keep traffic moving and make maintenance a breeze.

Through our wholly owned subsidiary Mikros Traffic Management, we supply a high quality range of traffic data collection and weigh-in-motion services. Mikros Traffic Monitoring has established its credentials in this field and currently enjoys the position of being Southern Africa's leading traffic data service provider. In addition to electronic traffic data collection services, Mikros also specialises in the integration of traffic monitoring and control systems for Traffic Control Centres. We also offer an equipment range of in-house developed traffic counting and classification, which we supply world-wide.

[www.syntell.co.za](http://www.syntell.co.za)