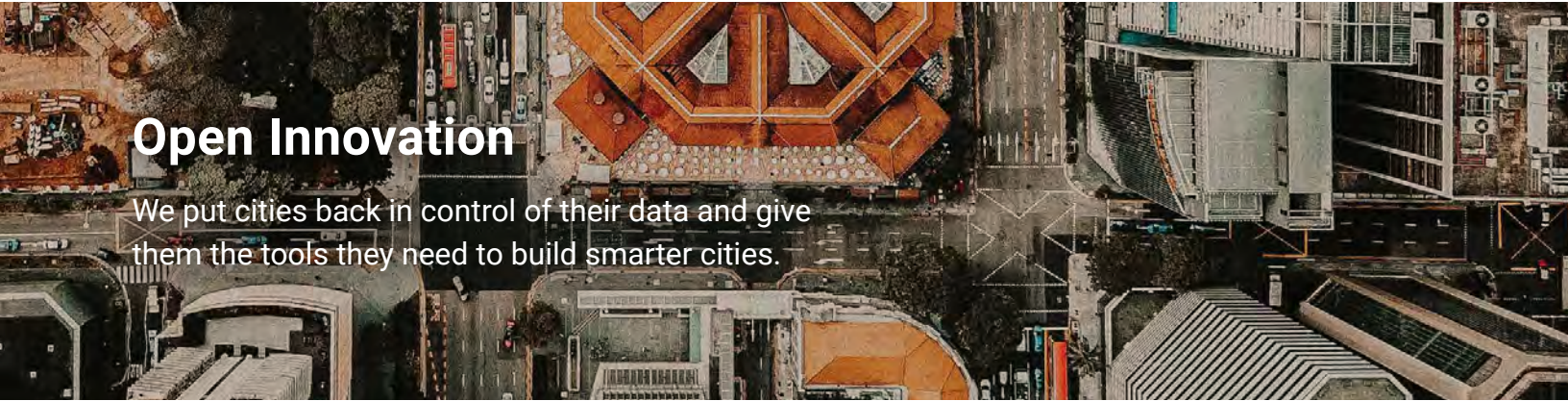# Miovision TrafficLink

Smart cities start with smart traffic signals

miovision

Miovision helps cities **solve today's problems** while laying the foundation for **tomorrow's smart city**

Our continued approach to innovation and dedication to solving real-world problems has led us to where we stand today: helping cities achieve their smart city visions.

Cities have been trapped in vendor-locked agreements for too long. Miovision puts cities back in control of their data and gives them the tools they need to improve their cities and the lives of their citizens. Because we believe that when cities come first, everyone wins.

Open Innovation

We put cities back in control of their data and give them the tools they need to build smarter cities.

Safer Streets

Use data, analytics, detection, and active safety to help cities achieve Vision Zero.

Complete Streets

Build streets for all modes of transportation, including cyclists, pedestrians, vehicles, transit, freight, and autonomous vehicles.

Reduced Congestion

Solve today's congestion problems by optimizing existing road capacity; not building more.

Reduced Emissions and Air Quality

Reduce greenhouse gas emissions by decreasing congestion on city roadways.

Innovative Traffic Teams

Help cities do more today, using existing resources and data.

Miovision TrafficLink

The practical approach to a smarter city

TrafficLink hardware

By installing this equipment to enable signal communications, you unlock the infrastructure to implement the rest of the TrafficLink platform at your own pace, as you need it. The Miovision hardware can be installed to connect your infrastructure where connectivity does not exist, and is modular to allow for future implementation of TrafficLink hardware elements at your own pace, as you need it.
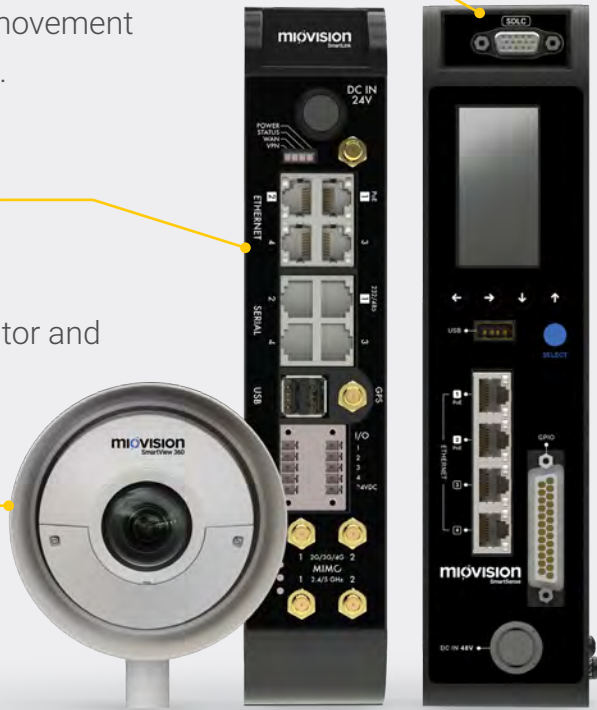
SmartSense

Miovision SmartSense gives you the power to unlock capabilities including vehicle detection, 24/7 turning movement counts, engineering studies, and vehicle classification.

SmartLink

Miovision SmartLink improves the traffic experience by enabling cities to detect events, and remotely monitor and understand, their traffic infastructure.

SmartView 360

The Miovision SmartView 360 camera provides an all-weather, 4K resolution, 9 megapixel, 360° view of the intersection.

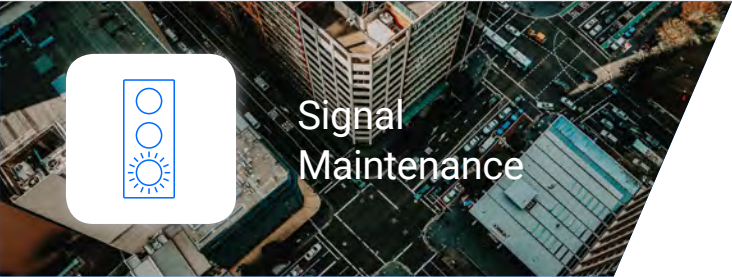## Unlock smart city potential by implementing the solutions you need today

The TrafficLink platform can be adopted in phases to deliver the functionality that suits your city's needs. TrafficLink integrates seamlessly with existing traffic infrastructure to acquire data, manage signals, and deliver actionable insights.

Signal Communications
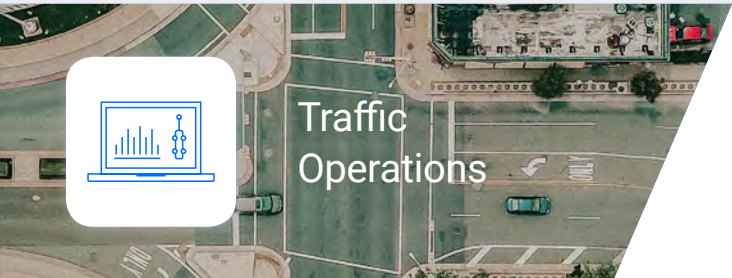
Monitor and manage your signals remotely

Transform data from your existing controllers and cabinet devices into meaningful insights.

Signal Maintenance

Your hassle-free traffic assistant

Quickly identify and prioritize issues, solve them, validate the fix, and share results.

Traffic Operations

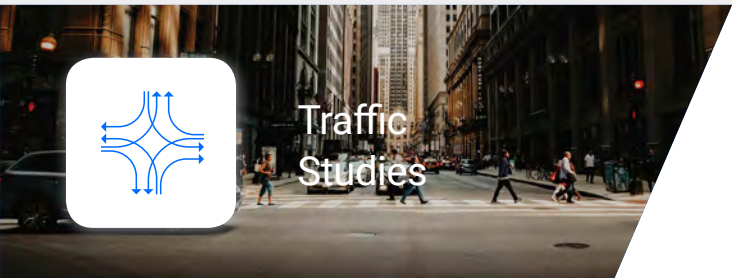**Enhance the performance of your traffic network**

Solve traffic performance issues 10x quicker than traditional approaches.

Multimodal Detection

Detection doesn't need to be difficult

Experience the next generation of video detection with easy-to-use tools and the world's most advanced traffic AI.

Traffic Studies

Non-intrusive, high-resolution traffic studies

Safer, more accurate and efficient data collection with Miovision.

Signal Communications

Monitor and manage your signals remotely

The practical way to a smarter traffic cabinet

Miovision SmartLink transforms data from your existing controllers and cabinet devices into meaningful insights
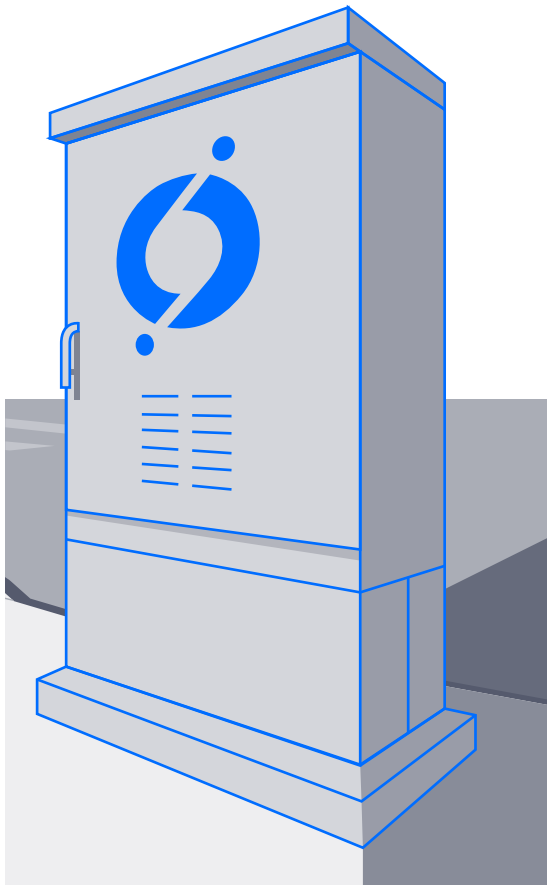
Accessible data
Data collected from the intersection is hosted securely in the cloud for fast, reliable access.

Backward compatible, future-proof platform
Works with existing controllers, so you can protect your investment and easily address future needs with the same platform.

Reliable
No need to maintain your own IT infrastructure, Miovision takes care of it for you.
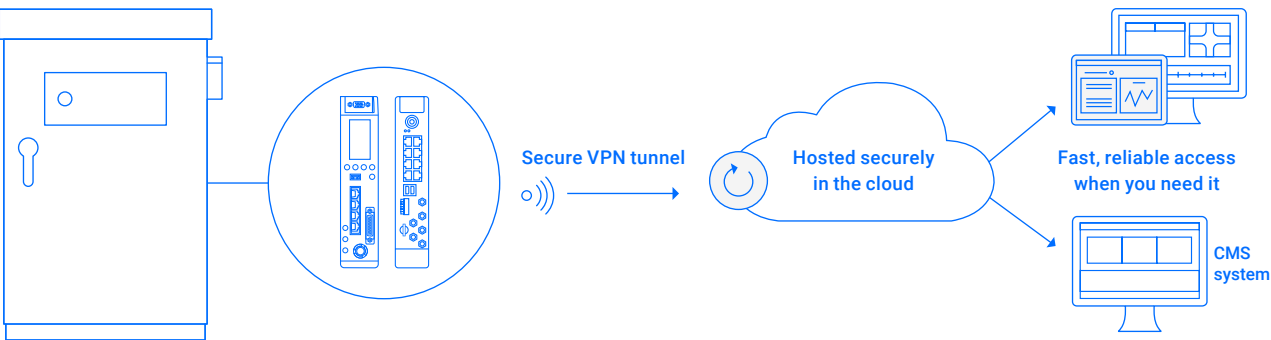
Secure
We work with the world's most advanced security partners to ensure your systems are protected.

TURN ANY INTERSECTION INTO A
SMART INTERSECTION – WITHOUT
REPLACING YOUR CONTROLLERS

Secure VPN tunnel

Hosted securely in the cloud

Fast, reliable access when you need it

CMS system

Built-in security

With Miovision SmartLink, communication with your traffic cabinet is established using a secure VPN tunnel. Data collected from the intersection is hosted securely in the cloud for fast and reliable access to your data when you need it.

Backward compatible, future-proof platform

Miovision SmartLink is compatible with today's traffic controllers (Naztec, Econolite, Siemens, McCain, Peek, Intelight, etc.), providing backward compatibility and making any cabinet a smart cabinet.

- **WiFi, GPS, 2G, 3G, LTE**
- **Connectivity to the most remote traffic cabinets**
- **Key metrics from the roadside**
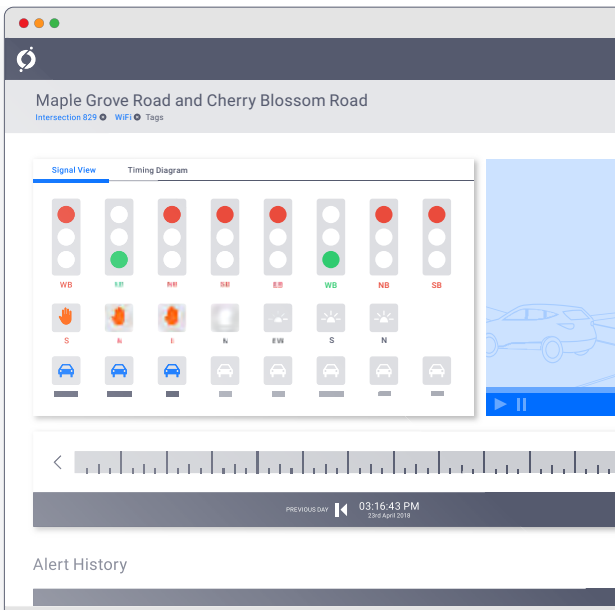
TrafficLink Solutions

Signal Maintenance

A new way to manage your signals

Your hassle-free traffic assistant

Miovision TrafficLink allows you to quickly identify and rank issues, solve them, validate the fix, and share results

Real-time problem detection
No need to wait for citizen complaints to know when there's a problem.

Automatic alerts
Receive automatic alerts when issues arise, and assign them to the right people.

Urgency-based system
Miovision helps ensure you focus on the most urgent and impactful problems first.

Measurable
Measure the effectiveness of your solutions with detailed ATSPMs.

MANAGE YOUR SIGNALS REMOTELY, UNDERSTAND WHAT'S HAPPENING ON YOUR ROADWAYS, AND SPEED UP TROUBLESHOOTING WITH LIVE DATA AND VIDEO
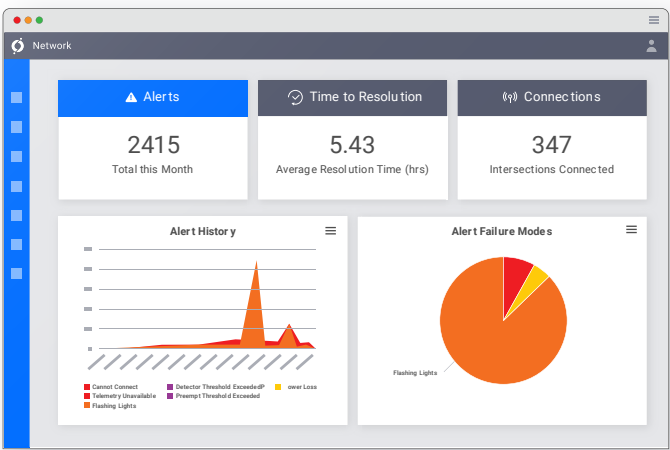
Automated smart alerts

Configurable SMS and email alerts for:

• Signal in flash
• Power loss
• UPS activity
• Faulty detector
• Loss of connection

No hidden maintenance costs

No IT required
A cloud-based platform that removes the need for IT infrastructure to store and analyze data.

Software that continuously updates
While others offer static software with paid upgrades, Miovision delivers continuous improvements and new features, automatically.

Traffic Operations

Enhance the performance of your traffic network

"IMMEDIATELY AFTER IMPLEMENTING THE SOLUTION, NOT ONLY DID TRAFFIC IMPROVE, BUT MASSDOT HAD THE DATA-DRIVEN PROOF THAT THEIR SOLUTION HAD WORKED."
– Massachusetts Department of Transportation

massDOT
Massachusetts Department of Transportation

Re-think traffic operations

Solve traffic performance issues 10x quicker than traditional approaches, with Miovision TrafficLink

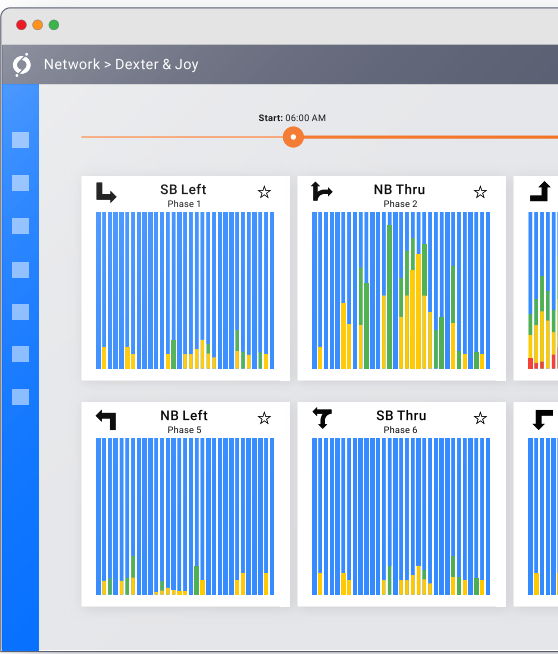**FIND** — **Find issues you didn't know you had**
Tools that highlight the hidden issues affecting your city.

PRIORITIZE — **Optimize resources**
Rank and prioritize identified issues based on their overall impact.

DIAGNOSE — **See the full picture**
Automated analysis of performance measures to determine the true cause of performance issues.

FIX — **Solve issues and measure impact**
Tools that make it easy to determine solutions and measure the results, before and after.

Network > Dexter & Joy
Start: 06:00 AM
SB Left Phase 1 | NB Thru Phase 2
NB Left Phase 5 | SB Thru Phase 6

TRAFFICLINK AUTOMATICALLY GENERATES EASY-TO-UNDERSTAND ATSPMs

Signal Performance Measures and expert analysis at your fingertips with TrafficLink
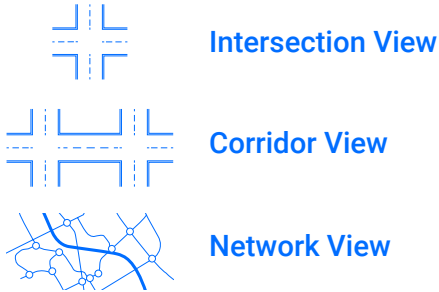
Access embedded analysis tools
Understand where problems exist and how bad they are, without requiring a PhD in Traffic Engineering.

Quantify impact and ROI
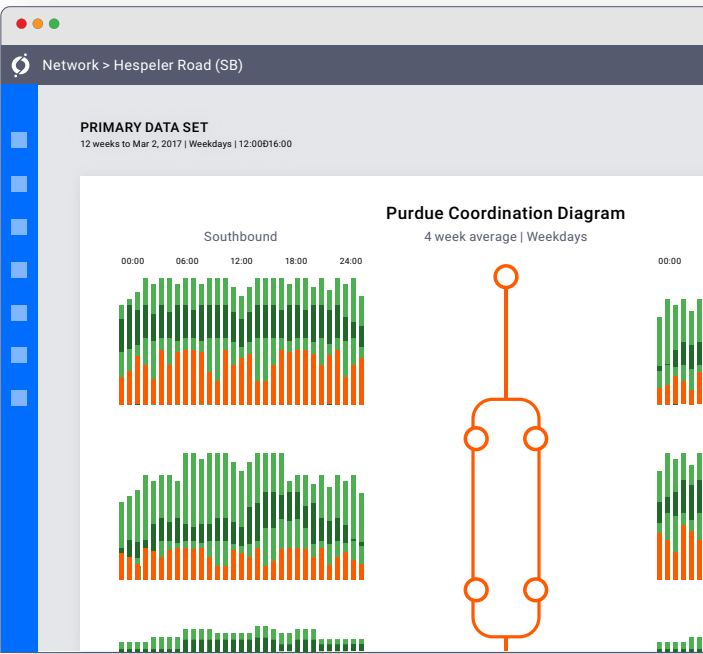Quickly compare and measure the impact of changes to timing plans or traffic policy.

Integrate with existing controllers
Acquire high-resolution data from your entire traffic network, including older, non-NTCIP controllers.

Get started right away
Shift your city's performance metrics from zero to world-class in an afternoon, without help from IT.

Measure congestion everywhere
WiFi travel time sensors built into the antenna provide reliable congestion metrics across your city.

Network > Hespeler Road (SB)
PRIMARY DATA SET
12 weeks to Mar 2, 2017 | Weekdays | 12:00016:00
Purdue Coordination Diagram
Southbound | 4 week average | Weekdays

Intersection View
Corridor View
Network View

Multimodal Detection

A fresh perspective on detection

"WITHIN FOUR WEEKS OF INSTALLING THE [MIOVISION] SYSTEM, TOWN STAFF WERE ABLE TO IDENTIFY THE CAUSE OF POOR TRAFFIC PROGRESSION, IMPLEMENT A SOLUTION AND MEASURE THE IMPACT OF THEIR CORRECTIVE ACTIONS, ALL FROM A COMPREHENSIVE, WEB-BASED PORTAL."

– Heide Schlegl, Manager, Traffic at the Town of Milton

MILTON

Detection doesn't need to be difficult

With easy-to-use tools and the world's most advanced traffic AI, Miovision provides the next generation of video detection

Reliable in all conditions
Our detection actually "sees" the intersection, meaning if you can see a car in fog and rain, it can too.

Single 4K camera
One SmartView 360 camera is all you need to get a complete view of your intersections.

Easy to install and operate
The only thing easier than setting up TrafficLink Detection is keeping it running.

Multi-use platform
TrafficLink provides far more than just detection – it generates analytics to help you quantify the impact of adding detection.

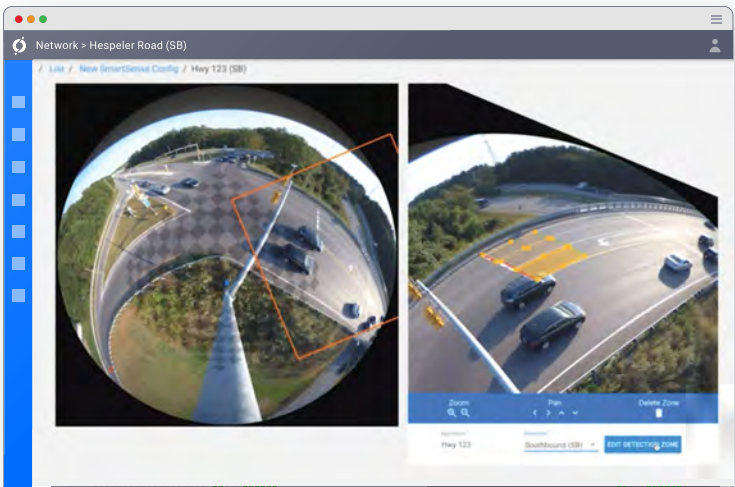RECOGNIZE PEDESTRIANS, CYCLISTS, AND VEHICLES IN REAL TIME
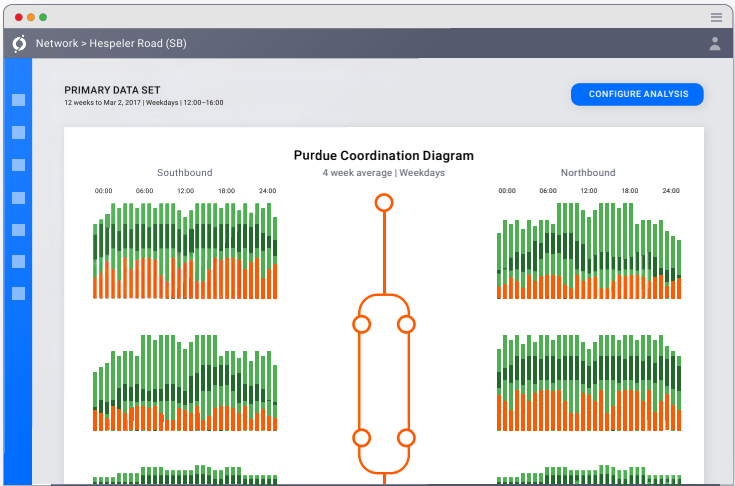
True multimodal detection

Continuous Counts
TrafficLink collects 24/7 traffic data from intersections, including pedestrians and bikes.

Future proof
Multimodal detection paves the way for future groundbreaking solutions such as:

- Predictive and near real-time safety applications
- Actuation based on the presence of different modes
- Alerting connected vehicles about the presence of vulnerable road users in real time

Prove the impact of your solution

ATSPM analysis
Built-in tools to explain the performance improvements unlocked by detection, all without requiring a PhD to understand.

Before-and-after report cards
Automatically compare and measure the impact of changes to timing plans or traffic policy.

Traffic Studies

A fresh perspective on detection

"AFTER INSTALLING THE MIOVISION SYSTEM, WE WERE ABLE TO IDENTIFY THE PROBLEM AND IMPLEMENT A CHANGE THAT REDUCED SIMPLE DELAY BY MORE THAN 65%, AND IMPROVED TRAVEL TIME FOR ALL VEHICLES."

– Robert Dolson, Special Projects Manager, City of Maricopa

Non-intrusive, high-resolution traffic studies

Safer, more accurate and efficient data collection with Miovision

Traffic data you can trust
Miovision has been producing data that traffic teams trust, since 2005.

Keep your field techs out of harm's way
Miovision solutions offer non-intrusive traffic data collection that never sacrifices the safety of your field teams.

Eliminate setup time and increase efficiency
Both our portable and permanent data collection solutions can be installed in just minutes and stand up against wear and tear, and construction.

Travel time
We provide a fast and easy way to request, deliver, and analyze travel time data.

MIOVISION SOLUTIONS ARE POWERED BY THE WORLD'S MOST ADVANCED TRAFFIC AI

Permanent traffic data collection

With Miovision, you get access to high-resolution traffic data that never sacrifices the safety of your field crews and technicians.

Turning Movement Counts
Measure right-turn, left-turn, straight through, and other movements at the intersection.

Travel Time
Measure of time for traveling between two or more locations.

Multimodal counts
Count and classification of multimodal traffic such as light vehicles, heavy vehicles, pedestrians, and bikes.

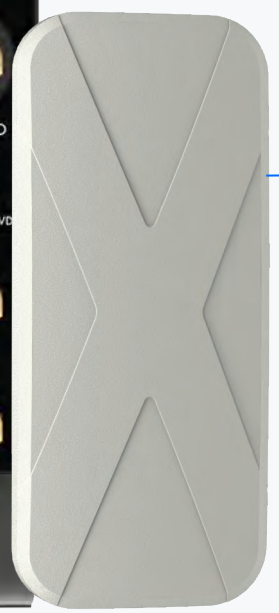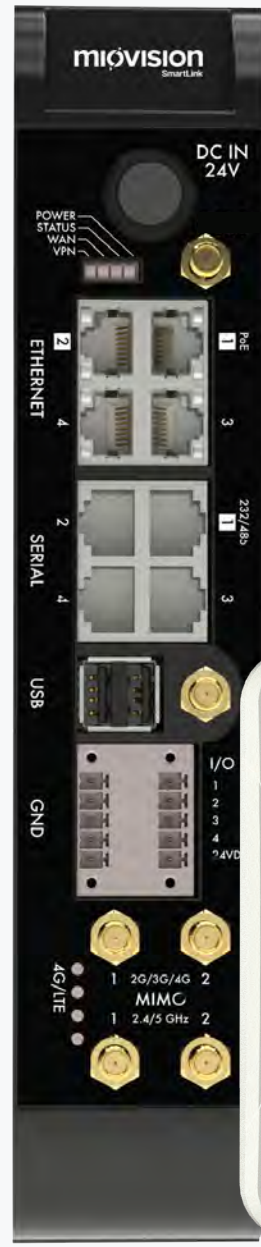# TrafficLink utilizes the world's most advanced traffic hardware to create the world's smartest intersections

Miovision SmartLink

Gather meaningful insights from your existing controllers and cabinet devices

Security: Enable VPN connectivity from all your hardware to your operations center and use HTTPS for encrypted access to the TrafficLink portal.

Connectivity: Connect any intersection quickly and easily over LTE without the need for expensive cables. In addition, take advantage of GPS & GLONASS capabilities.

Video: With the SmartView 360 camera, stream video natively secured in a 64GB SATA III Solid State Drive (SSD).

Wireless antenna

Discreet, wireless connectivity for all your hardware

This sleek antenna can be mounted wherever is convenient for your setup, to enable wireless connectivity and travel time metrics.

Miovision SmartSense

Enable the world's most advanced traffic AI

Capabilities: Vehicle detection, complete street strategies, engineering studies, traffic classification, and event detection.

Easy to use: SmartSense is easy to navigate with its 5 button control panel, and OLED display giving you all the information you need, when you need it.

Speed: SmartSense is equipped with a Dual GPU and 12 core processor to never keep you waiting.

Miovision SmartView 360

See a bird's eye view of your intersections in real time

The SmartView 360 camera is equipped with a 4K, 9 megapixel 360º lens with a 180º field of view to capture the intersection clearer than ever before possible.

Open innovation is the first step to a smarter city

We believe cities should control their own data. With Miovision, that's exactly what they get. Cities can choose to share their data with other city departments, partners, academia – whomever. The point is, it's their choice.

From there, cities and their partners can use that data to create innovative solutions on top of the existing Miovision platform, ultimately making their city smarter, one piece at a time.

And, that's the beauty of choosing Miovision: You can protect your existing investment while putting the pieces in place to address future needs – all with the same platform.

For more information, or to get in touch, please visit **miovision.com**

miovision

At Miovision, we believe that
any city can be a smart city, and it
all starts at the intersection.

miovision.com