



Miovision Technologies Incorporated
137 Glasgow Street, Suite 110 Kitchener, ON N2G 4X8
Tax ID #831042346

Date: 6/12/2024
Valid Until: 9/10/2024
Currency: U.S. Dollar
Payment Term: Prepayment Required
Billing Term: Standard Billing Terms
Shipping Term: FOB Shipping Point

Account Executive: Jamie Gallard
jamie.gallard@miovision.com
Shipping Contact: Stevie Luther
stephen.luther@hcaog.net

Customer Name: Humboldt County Association of Governments (HCAOG)

Bill To

Humboldt County Association of Governments (HCAOG)
611 I Street, Suite B
Eureka, California 95501
United States

Ship To

Humboldt County Association of Governments (HCAOG)
611 I Street, Suite B
Eureka, California 95501
United States

Product Name	Start Date (yyyy-mm-dd)	End Date (yyyy-mm-dd)	Term (Months)	Price	Qty	Total
=>Scout Plus Device				\$6,795.00	2	\$13,590.00
====>Scout Plus Rechargeable Battery				\$750.00	4	\$3,000.00
====>Scout Plus and Explore - Annual Connectivity	2024-12-31	2025-12-30	12	\$200.00	2	\$400.00
=>Safety Study - Intersection	2024-12-31			\$8,000.00	2	\$16,000.00

UPS - UPS Standard \$386.00
Subtotal : USD 33,376.00
Discount : (USD 8,000.00)
Subtotal (Net) : USD 25,376.00
Tax : USD 1,230.35
Total : USD 26,606.35

DataLink Usage Rates	Rate
Onboard Road Volume Count (1 study-hour)	\$4.00

The Customer hereby agrees to order the products outlined above at the prices indicated, and acknowledges it has read, understands and agrees to be bound by the terms and conditions outlined at:

<https://miovision.com/legal/msa>

For all Miovision Safety Studies:

1. Miovision recommends video recordings of between 48-60 hours in length to ensure suitable sample size of conflicts in the analysis. Any requests to process videos above 60 hours in length will incur additional study costs.
2. Customer is responsible for collection and delivery of video to Miovision.
3. Video will have to meet the deployment requirements determined by Miovision prior to being accepted for processing.
4. Turnaround time is quoted at 4 weeks from date of video acceptance

For customers paying by credit card, a Miovision accounts receivable representative will contact you by phone to obtain credit card details. Please note that in order to complete payment the Miovision representative will require you to provide the applicable Quotation reference number.

Date:

Name:

Signature:

Canada remit to: Miovision Technologies Incorporated
137 Glasgow St., Suite 110, Kitchener, Ontario, N2G 4X8, Canada
GST# 831042346 QST# 122032762 TIN# 98-0588774

United States remit to: Miovision Technologies Incorporated
PO Box 675431, Detroit, Michigan, 48267-5431, United States

Bank Details CDN

Royal Bank of Canada, 180 Wellington Street West, Toronto, Ontario, M5J 1J1
BankID, Transit # 003,06019 Swift: ROYCCAT2 Account: 1025444 Routing #:000306019

Bank Details USD

Comerica Bank, 226 Airport Parkway, Suite 100, San Jose, California, 95110
ABA/Routing Number: 121-137-522, Account Number: 1895-73030-5, Account Type: Commercial Checking, Swift Code: MNBDUS33

Miovision Safety Studies Requirements

Miovision® requires all movements that require conflict measurement are fully in view including vehicle lanes and pedestrian crossings. A deployment recommendation will be sent for each location to ensure all movements are fully captured for optimal results.

Note: Camera view must be shared with your Miovision contact while the installation crew is on site to ensure positioning is suitable for conflict analysis. Failure to do so may result in the need for redeployment.

Recording Period

Miovision recommends approximately 60 hours of video for most application types to ensure a suitable sample size is analyzed. Your Miovision specialist will work with you on determining the best recording schedule for your project.

Miovision Scout Requirements

When using Miovision Scout please ensure the following steps are taken for best results

1. Video must be recorded using the High Quality settings (900 MB/h)
2. The telescoping pole should be fully extended using all telescoping sections.
3. Ensure camera head and all polemount sections are properly tightened to prevent camera drift

Video Recording Requirements

Ensure that all recordings meet the following requirements to ensure video can be properly processed.

1. Ensure camera lens is free of debris or smudges that may reduce visibility
2. Vulnerable Road User (VRU) conflict areas should be within 65 ft (20 m) of camera
3. VRU conflict area should prioritize the area of the crossing that spans the vehicle receiving lanes vs the vehicle entrance lanes
4. Vehicle conflict areas should be within 115 ft (35 m) of camera
5. Conflict areas should be at least 16 ft (5m) from the edge of the camera field of view to ensure 1 car length is left visible so evasive actions are captured
6. Ensure video recorded does not contain any variations in properties such as focus, zoom or warping effects.
7. Recordings must be done in one deployment to ensure the camera view is consistent
8. Adequate lighting must be provided for analysis during night periods and will only be processed if road user visibility is adequate
9. Footage must be obtained without extreme fog, rain or wind to ensure proper visibility

Camera Technical Requirements

Ensure that all cameras meet the following specifications to ensure video can be properly processed.

1. Video must be 720p resolution or higher
2. Minimum bitrate is 2000 kb/s
3. Video must be recorded at 30 fps or higher with a consistent framerate
4. Video must be high enough quality to differentiate between vehicle classes and group sizes
5. Camera horizontal field of view must be at least 90 degrees
6. A minimum camera height of 20 ft (6 m) is required
7. Video files must be saved in a generic (non-proprietary) format (ex: .mp4 or .avi)

Miovision Scout Plus Hardware Specifications

Miovision Scout[®] Plus revolutionizes data collection with its innovative video-based solution and provides instant onboard video processing at the roadside.

AI algorithms and cellular connectivity enable:

- Onboard video processing
- Automatic upload of multimodal volume counts (ATRs) and Speed data
- Immediate, remote access to data for review and validation

Projects can be scaled to collect more data since Scout Plus:

- Operates on one to three high capacity Li-ion batteries
- Batteries can be swapped in the field without interrupting the study or shutting down the device
- Studies can run up to 15 days (3 batteries)



Components

Scout Plus Device

- Video Control Unit (VCU)
- Polemount with integrated camera pole
- High-resolution wide field of view camera
- Mounting straps
- 64 GB industrial-grade SD card
- Universal power supply
- Installation tools and accessories

Accessories (Sold separately)

- Rechargeable Li-ion battery
- Portable tripod mount

Camera

Field of view	Horizontal: 124° Vertical: ~64.5°
Resolution	1920 x 1080
Stabilization	Digital image stabilizer
Camera dehumidifier	Electronic Automatic on/off
Low light performance	On-board ISP delivers excellent image quality even in low light environments

Backlit LCD Display

Dimensions	6 x 3.4 in (154 x 86 mm)
Resolution	1024 x 600

Battery and Power

Type	832 Wh sealed rechargeable Li-ion battery with carrying handle and charge indicator Batteries can be replaced in the field for longer studies
Battery life: Video capture	Up to 120 hours (5 days) runtime with 1 battery Up to 360 hours (15 days) runtime with 3 batteries
Battery life: Onboard processing	Up to 72 hours (3 days) runtime with 1 battery Up to 216 hours (9 days) runtime with 3 batteries
Recharge time	~10 hours
Temperature impact on battery capacity	90% capacity at 5°F (-15°C)
Battery Dimensions	9.0 x 8.4 x 3.2 in (228 x 212 x 81 mm)
Battery Weight	10.5 lb (4.8 kg)
Charger power requirements	50/60 Hz, 100VAC-240VAC, ~ 1.5A (MAX)

Video Recording

Video format	H.264 codec; .mp4 file format
Video file size	840 kbps (~380MB / hour of video)
Resolution	960 x 540
Frame rate	15 fps

Processing

Platform	NVIDIA® Jetson™ TX2 NX
CPU	Quad-Core Arm® Cortex®-A57 MPCore processor
GPU	256-core NVIDIA® Pascal™ GPU
AI performance	1.33 TFLOPs

Operating requirements

Operating ambient temperature	-4 to 113°F (-20 to 45°C)
Wind resistance	Up to 50 mph (80.5 km/h)
Environmental resistance	Weather proof, water resistant
Relative humidity	5% to 95% non condensing

Memory storage

SD card	Includes one 64 GB industrial-grade pSLC SD card
SD card reader format	SDXC

Wireless connectivity

Cellular	LTE Cat 4
GNSS location services	GPS, GLONASS, Galileo
WiFi	802.11 a/b/g/n/ac; 2.4 GHz and 5 GHz

Specifications are subject to change without notice

Warranty

1. One (1) Year Limited Warranty from date of delivery, the Hardware shall be free from defects in materials and workmanship, and function substantially in accordance with applicable documentation. At the date of purchase of the Hardware, the Customer may purchase an extended warranty for an additional one (1) year.
2. The Scout® Plus battery is not included in or covered by any warranty of Miovision.
3. If Miovision replaces any piece of Hardware during the term of a warranty period, the warranty on such replacement piece of Hardware shall expire at the end of the applicable warranty period for the original piece of Hardware. Miovision may use refurbished portions of Hardware in replacement, provided such parts are of equal value.

Security and durability

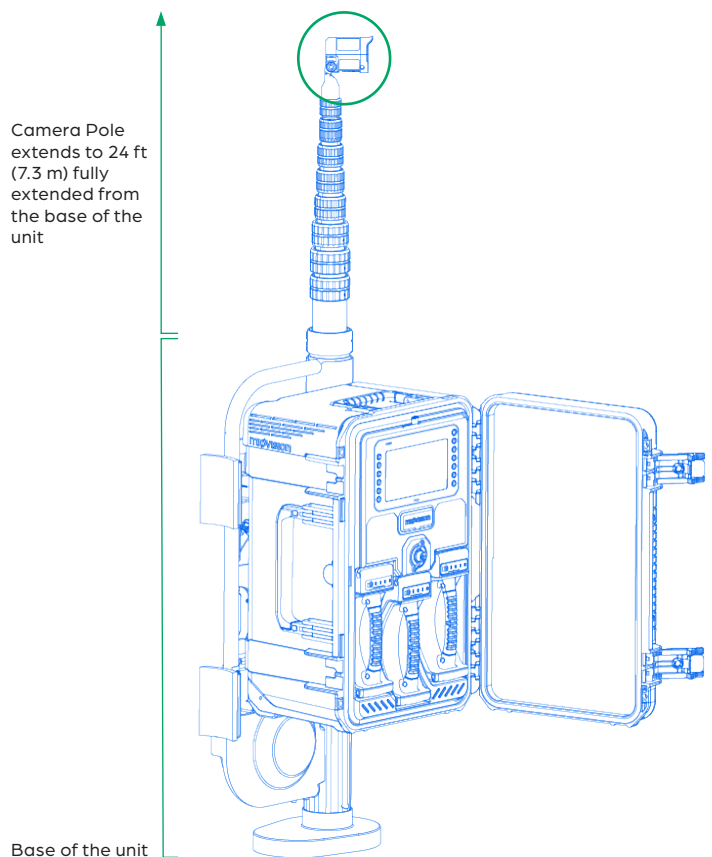
Materials	<ul style="list-style-type: none">• VCU is made of Polyethylene and Polycarbonate• Polemount made of aerospace grade aluminum• Camera pole made of carbon fiber
Damage resistance	Camera patch cable inaccessible when deployed
Theft prevention	<ul style="list-style-type: none">• Straps and enclosures are lockable• Camera pole sections secured using security screws

Dimensions

VCU	22.0 x 12.4 x 14.1 in (558 x 358 x 315 mm)
Polemount (collapsed)	35.6 x 14.7 x 7.1 in (903 x 373 x 180 mm)
Camera height	Up to 24 ft (7.3 m) fully extended

Device Weight

VCU	25.4 lb (11.5 kg)
Polemount	20.0 lb (9.1 kg)



For more information, visit help.miovision.com
email us at support@miovision.com
or call us NA Toll-free at 1-855-360-7752

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Miovision® Safety Studies

Empowering Vision Zero Decisions and Progress

Miovision Safety Studies identifies where a future injury crash is likely to happen, empowering DOT decision-makers with near-miss safety analytics. We extract this data from scout and traffic camera video feeds using AI and advanced road safety models. Miovision Safety Studies provides a much deeper understanding of risk than historical crash data, including a proactive understanding of serious risk factors for crash types that have not yet appeared in the crash record. DOTs use Miovision Safety Studies to:

- Leverage every capital project for safety
- Rapidly respond to every fatality to ensure it does not happen again
- Systematically diagnose, treat, and monitor every high crash location
- Determine mid-block crossing risk and need for treatments such as HAWKS
- Measure the impact of road safety investments



1: AI Detection 2: AI Tracking 3: Monocular Spatial Translation 4: Trajectories 5: Near-Misses 6: Precision Diagnostics



Why Miovision?

Miovision Safety Studies has programmed over \$225 million of safety improvements in leading agencies such as Cities of Los Angeles, Austin, and Montreal, all provincial DOT's in Western Canada, and several European cities.

There will always be low-speed and low-risk interactions. Miovision Safety Studies aims to identify and address high-risk red zone conflicts, intending to shift all interactions to the low-risk green zone. This zone is characterized by low speeds and high temporal separation of road users, resulting in reduced risk.

Video Requirements and Services

Miovision Safety Studies can work seamlessly with Miovision Video Detection Hardware, and other selected third party video sources. The video requirements for processing are a minimum resolution of 720p (or Scout HQ setting), 7m mounting height, 30 fps constant frame rate, and a mounting location within 40m of the analysis target area. Video length should be 60h, which may be spread over 3, 4, or 5 days.

Professional Services

Our international experts in road safety can coach you on turning diagnostic reports into action plans, or prepare recommendation reports if professional services are engaged.

Safety Data Outputs

Miovision Safety Studies uses road user trajectories to detect and classify risk events by measuring temporal proximity with indicators like PET and TTC. We also consider interaction kinematics such as speeds, angles, and accelerations to assess the likelihood and potential severity of a collision.

Trust Miovision Safety Studies for advanced safety analytics that will empower your decision-making and help you achieve Vision Zero.

For more information, visit

miovision.com/safetystudies