



ADVANCING TRANSPORTATION INTELLIGENCE

www.IRDINC.com

www.VI2M.com

Smart Cities, Roads and Infrastructure

International Road Dynamics Inc. (IRD) is a multi-disciplinary Intelligent Transportation Systems (ITS) company with the expertise to develop integrated technical solutions to solve unique and challenging transportation problems.

For over 38 years, IRD has been recognized as a world leader in the design, development, and deployment of customized technology solutions for the ITS industry. Today, IRD offers a growing portfolio of related services and solutions, bringing new technology to transportation planning, operations and management by harnessing the power and value of the Internet of Things to deliver transportation intelligence.

INTERNATIONAL ROAD DYNAMICS INC.

COMMERCIAL VEHICLE ENFORCEMENT

Over 2,000 Enforcement Systems Worldwide

DETECT

Commercial Vehicle Inspection and Virtual Weigh Stations

- High, medium and slow speed Weigh-In-Motion (WIM)
- Automatic Vehicle Identification (AVI) and machine vision for image capture and vehicle identification
- Tire Anomaly and Classification (TACS) system for single, dual, super single and wide based tire measurement powered by VectorSense™ Tire Sensor Suite
- Automated hazardous material placard capture and identification
- Thermal brake screening
- Static scale integration with automated hold and release operation

MEASURE

Screening

- Vehicle weight and dimensions
- Bridge Formula compliance
- Vehicle magnetic tire footprint and signature tracking
- Oversize/overweight permit screening
- Credential screening (Safer, PRISM, IFTA, CVOR, IRF, Oversize/Overweight permit, etc.)
- Automated thermal imaging for brake and wheel failure screening
- Tracking and compliance

ANALYZE

Reports and Analysis

- Identify vehicle and traffic trends
- Weigh station operation performance metrics
- Vehicle selection for inspection
- Single and integrated multi-site networks
- Infrastructure protection
- Highway planning and design data
- Hazardous material route compliance
- Travel time analysis



TRAFFIC DATA SOLUTIONS

Over 20,000 Data Collection Systems Worldwide

DETECT

Sensors and Systems

- Single, dual, super single and wide based tire identification powered by VectorSense™ Tire Sensor Suite
- Portable, permanent, and non-intrusive sensors
- Weather and ice detection
- Low-power, industrial-grade electronics
- Machine vision

MEASURE

Vehicle Data

- Volume, Occupancy, and Speed (VOS)
- Weight and classification
- Real-time monitoring
- Anomalous tires

ANALYZE

Enterprise Software & Data Solutions

- Cloud-based data collection, reporting and analysis using VI²M™ (Vehicle Information in Motion)
- Multiple user remote access
- Real-time vehicle reports
- Custom and user-defined reports
- Local or cloud hosting
- High quality traffic data and WIM analysis
- Traffic Monitoring Guide (TMG) reporting
- Data quality checks
- Cloud-hosted data query and reporting



BRIDGE MONITORING & SAFETY

WIM and Bridge Instrumentation for Bridge Protection and Planning

DETECT

Sensors and Systems

- Weigh-In-Motion (WIM), vehicle dimensions, speed and classification
- Real-time screening and tracking
- Machine vision and image capture
- Identify vehicles from hot lists
- Statistical traffic data
- Single, dual, super single and wide based tire identification powered by VectorSense™ Tire Sensor Suite

MEASURE

Vehicle Weight/Bridge Protection

- Identify over weight, over height, and over dimension vehicles approaching bridges
- Automated monitoring, screening and diversion
- Image capture of non-compliant vehicles

ANALYZE

Loading Assessment/Asset Management

- Output data for further analysis
- Monitor changes in traffic, including class and weight
- Temporary studies (portable/temporary systems)
- Live load monitoring
- Multiple presence statistics
- Data for bridge design and maintenance



TOLL SYSTEMS

Over 10,000 Lanes of Toll Worldwide

DETECT

Manual, Automatic and Shadow Toll Systems

- VectorSense™ tire sensor suite
- DYNAX® treadles
- Non-intrusive sensors
- Active (transponders) and passive (RFID) Automatic Vehicle Identification (AVI)
- Machine vision and image capture
- Bidirectional/reversible lanes
- Electronic Toll Collection (ETC)
- Single, dual, super single and wide based tire identification
- All vehicle classes including motorcycles, three-wheelers and bicycles

MEASURE

Classification and WIM@Toll®

- Toll by weight
- Pre- and post-vehicle classification
- Overweight and unclassified vehicle screening
- Anomalous tires
- Independent audit

ANALYZE

iToll®

- Centralized auditing and monitoring
- Video incident detection
- Automatic Traffic Count and Classification Systems (ATCC)
- Infrastructure protection
- Data for highway planning and design



SECURITY & ACCESS CONTROL

Advanced Technologies for Physical Access Control & Security

DETECT

Sensors and Systems

- Machine vision
- Automatic Vehicle Identification (AVI)
- License Plate Reader (LPR)
- Under Vehicle Surveillance System (UVSS) in permanent and portable configurations
- Statistical traffic data
- Road Blockers and Barricades
- Under Vehicle Area Scanner (UVAS)
- Weigh-In-Motion (WIM)
- Permanent and portable options in dynamic and static configurations
- Vehicle dimensioning and over height detection
- Perimeter Intrusion Detection Systems
- High Energy Detection Systems

MEASURE

Scanning and Dimensioning

- Automated screening and sorting
- Automated detection of anomalies and threats using Intelligent Optical Threat Detection
- Improve efficiency and customer service
- Vehicle footprint and classification
- Selection

ANALYZE

Optimizing Security Operations

- Increase efficiency
- Expedite processing of compliant and authorized users
- Integrate complementary operations
- Biometrics
- Video and Credential Management Systems
- Reduce idle time



MAINTENANCE & SERVICE SOLUTIONS

TRAFFIC PRODUCTS NON-INTRUSIVE & INTRUSIVE

DETECT

Operations Management

- On-site and remote diagnostics
- Site assessment and design recommendations
- Self-diagnostics and notification
- Cloud-based performance and status monitoring

MEASURE

Monitoring and Auto-calibration

- Remote monitoring
- 24/7 continuous operations
- Sensor, electronics and system health
- Timely dispatch of maintenance, and service

ANALYZE

Data Services

- Verifications and validation
- Application Service Provider (ASP)
- Reliability, performance analysis and reporting
- Customer support and training

DETECT

Operations Management

- Portable and permanent
- Non-intrusive radar based and intrusive in-road sensors
- Weather and ice detection
- Low-power, industrial-grade electronics
- AC powered and solar powered

MEASURE

- Volume, occupancy, and speed (VOS)
- Vehicle classification
- Weigh-In-Motion (WIM)
- Real-time monitoring

ANALYZE

- Web accessible
- Multiple user remote access
- Real-time and historical reporting
- Custom and user-defined reports
- Data quality checks
- Cloud-hosted data query and reporting



THE FUTURE IS NOW - THE FUTURE IS NOW - THE FUTURE IS NOW



Smart City Solutions with Environmental Benefits

Smart Cities have the ability to sense and the intelligence to react appropriately. This includes all modes of transportation, in a connected approach. IRD provides Smart City solutions to fit within a multi-service architecture.

IRD technologies reduce fuel consumption and emissions, and increase mobility and safety by keeping vehicles moving smoothly and efficiently.

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Contact Us: info@irdinc.com

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