ADVANCING TRANSPORTATION INTELLIGENCE

ird®

www.IRDINC.com

www.VI2M.com

Smart Cities, Roads and Infrastracture

International Road Dynamics Inc. (IRD) is a multi-disciplinary technology company with the expertise to integrate complementary technologies into systems designed to solve unique and challenging transportation problems.

For over 37 years, IRD has been recognized as a world leader in the design, development, and deployment of customized 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

Integrated Solutions Using VectorSense™ Tire Sensor Suite—Tomorrow's Sensor Technology Today

DETECT

Commercial Vehicle Inspection and Virtual Weigh Stations
- High, medium and slow speed Weigh-In-Motion (WIM)
- Machine vision for image capture and vehicle identification
- Tire Anomaly and Classification (TACS) system for single, dual, super single and wide based tire measurement
- Automatic Vehicle Identification (AVI)

- Automated hazardous material placard capture and identification
- Thermal brake screening
- Automated traffic data collection
- Single and integrated multi-site networks
- Static scale integration with automated hold and release operation

MEASURE

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

ANALYZE

Reports and Analysis
- Identify vehicle and traffic trends
- Weigh station operation performance metrics
- Vehicle selection for inspection
- Infrastructure protection
- Highway planning and design data
- Hazardous material route compliance

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TRAFFIC DATA SOLUTIONS

VI²M™ Cloud-based Data Collection, Reporting and Analysis

DETECT

Sensors and Systems
- VectorSense™ tire sensor suite
- Portable, permanent, and non-intrusive sensors
- Weather and ice detection
- Low-power, industrial-grade electronics
- Machine vision
- Single, dual, super single and wide based tire identification

MEASURE

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

ANALYZE

Enterprise Software & Data Solutions
- Enhanced decision making
- 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

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

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 Assesment/Asset Management

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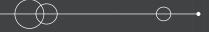- Multiple presence statistics
- Data for bridge design and maintenance

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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 cameras
- 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 Perimeter and Physical Security

DETECT

Sensors and Systems
- Machine vision
- Automatic Vehicle Identification (AVI)
- License Plate Reader (LPR)
- Under Vehicle Surveillance System (UVSS)
- Statistical traffic data
- Under Vehicle Area Scanner (UVAS)
- Weigh-In-Motion (WIM)
- Static and portable weighing
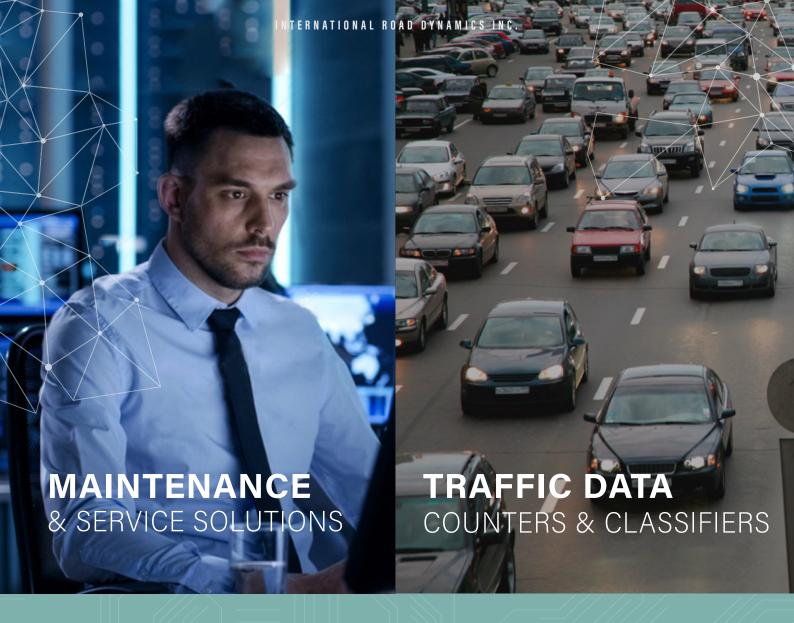- Vehicle dimensioning and over height detection

MEASURE

Scanning and Dimensioning
- Reduce idle time
- Automated screening and sorting
- Automated anomaly detection
- Improve efficiency and customer service
- Vehicle footprint

ANALYZE

Optimizing Security Operations
- Increase efficiency
- Expedite compliant and authorized users
- Integrate complementary operations

ird®

MAINTENANCE
& SERVICE SOLUTIONS

TRAFFIC DATA
COUNTERS & CLASSIFIERS

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 Autocalibration
- 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
- Weather and ice detection
- Low-power, industrial-grade electronics

MEASURE

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

ANALYZE

- Enhanced decision making
- Multiple user remote access
- Real-time and historical reporting
- Custom and user-defined reports
- Web accessible

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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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ROAD DYNAMICS INC.

Contact Us: info@irdinc.com

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Corporate Office

Quality System Registered to
ISO 9001
2015

IRD Inc.
702 - 43rd Street East
Saskatoon, SK
Canada S7K 3T9
Phone: +1 (306) 653.6600
Toll Free: 1-877-444-4IRD (4473)

Subsidiaries

United States
IRD Corp.
Phone: +1 (815) 675-1430

Brazil
PAT Traffic
Sistemas de Transportes
Intelligentes Ltda.
Phone: +55 11 3807 2297

South Asia
IRD South Asia Pvt. Ltd.
Phone: +91 129 257 7900

Mexico
PAT Traffic Mexico,
S.A. de C.V.
Phone: +52 55 27895442

Latin America
PAT Traffic Ltda.
Phone: +56 2 223 9713

China
Xuzhou PAT Control
Technologies Co., Ltd.
Phone: +86 516 8773 7997/7986

Belgium
icoms Detections S.A.
Technologies Co., Ltd.
Phone: +32 10 454102

icoms   **PAT Traffic**

IRD Team Members

Q QUARTERHILL
TEAM MEMBER

INTERNATIONAL ROAD DYNAMICS INC.