HI-TRAC® UTC-WIM
WEIGH-IN-MOTION UNIT

TDC
A [Q FREE] COMPANY

- LOW POWER / LOW COST SOLUTION WITHOUT COMPROMISING CAPABILITY
- IDEAL SOLUTION FOR BRIDGE PROTECTION SCHEMES
- UP TO 2 LANES OF MONITORING WITH 8GB DATA STORAGE
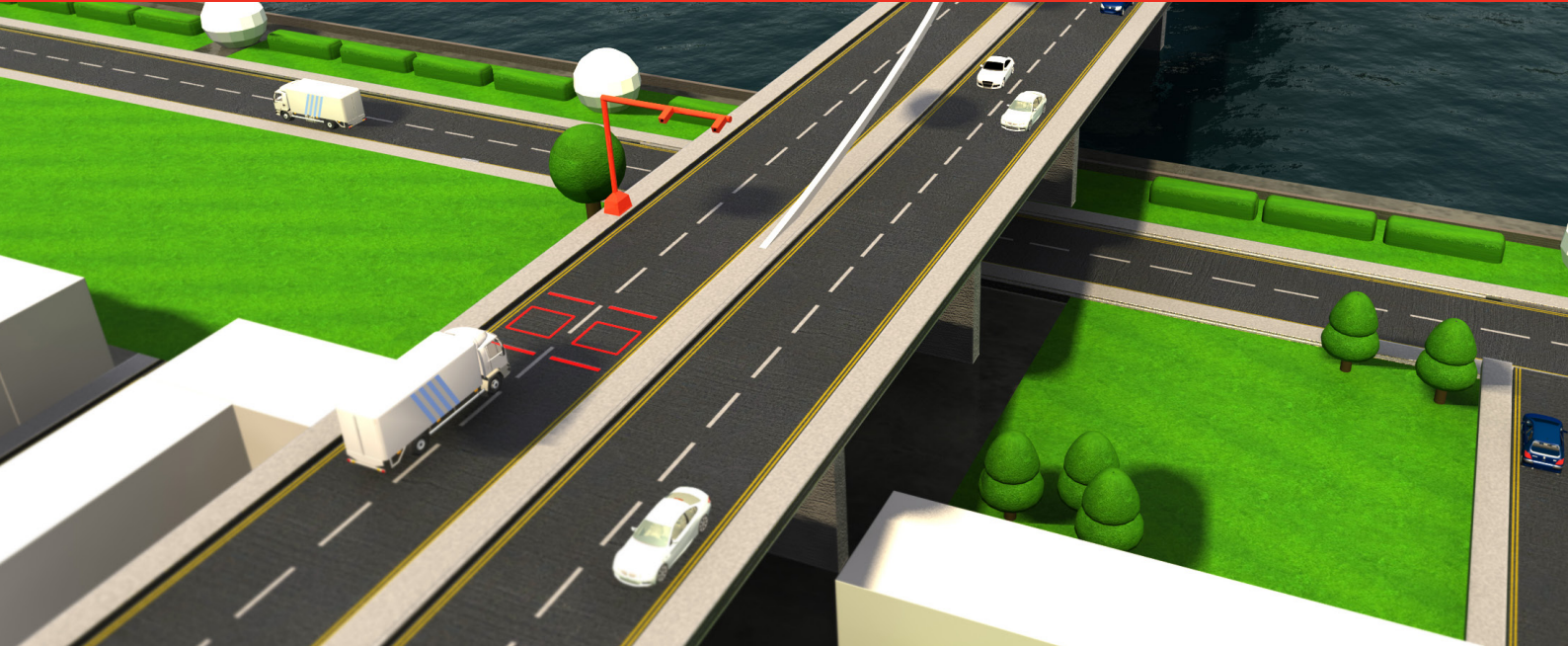
OVERVIEW

The HI-TRAC® UTC-WIM is a small, low powered, low cost electronic system capable of monitoring up to 2 traffic lanes providing vehicle weight and class data.

The HI-TRAC® UTC-WIM uses established piezo-electric sensor technology to detect mixed traffic, recording axle weight, gross weight, vehicle classification, speed, axle count, wheelbase, gap and headway.

In the standard configuration, two piezo-electric sensors, a temperature probe and one inductive loop are installed in the highway per lane of detection (maximum 2 lanes). Accuracy levels of COST 323 Class B(10) are achievable with this configuration.

For a multi-sensor array 4 piezo electric sensors, 2 temperature probes and 2 inductive loops are installed in a single traffic lane (maximum 1 lane) to provide higher accuracy levels to COST 323 Class B(7).

The HI-TRAC® UTC-WIM unit is sealed to IP68 and can be installed into either a small pillar or post. The HI-TRAC® UTC-WIM can be powered by a small 3W solar panel mounted on top of a small pillar, supported by two rechargeable 6v 8AH batteries to form a fully standalone permanent solution.

KEY FEATURES

Weigh-in-Motion	Counter & Classifiers	Data Hosting	Multiple Lane Operation	Solar Power	8GB Storage

BENEFITS

- Weigh-in-Motion (WIM) operation
- Classification of over 100 unique vehicle types as well as supporting UK DFT, FHWA, AUSTROADS class schemes
- Advanced temperature compensation algorithm ensuring accuracy of weight data
- 4x MEAS BL Piezoelectric Sensor Input
- 2x Inductive Loop Input
- 2x Temperature Probes Input
- Sealed to IP68
- Ultra Low Power (< 0.1W)
- USB Communication Option
- Bluetooth Communication Option
- TCP/IP Ethernet Communication Option

INSTALLATION

- Two piezo electric sensors per traffic lane.
- HI-TRAC WIM electronics housed in above ground pillar or post
- Typical installation time – 2 hours.

SOFTWARE

- HI-COMM 100 Compatible
- Data Download, Analysis,Real Time VBV View, Report Generation & Diagnostics
- Data hosting and reporting services

TECHNICAL SPECIFICATIONS

ACCURACY DATA (P-L-P Lane Configuration)

Gross Vehicle Weight	±10%
Individual Axle Weight	±15%
Group Axle Weight	±13%
Traffic Volume	>99.5%
Length	±8%
Headway	±7%
Speed	±1.5%
WIM Speed Range	20 - 180 mph

Note: Gross vehicle and axle weight accuracy with 90 % confidence. Axle weight accuracy assumes road sensors installed in a surface compliant with COST 323 Class B(10) or ASTM E1318-09 specifications.

VBV DATA RECORDED

- Individual Axle Weights
- Inter-axle Spacing
- Vehicle Length
- Lane Number
- Validity Code
- Vehicle Gap
- Headway
- Gross Vehicle Weight
- Site Identity Code
- Vehicle Speed
- Vehicle Class
- Time & Date
- Wheelbase
- Direction of Travel

LANE CONFIGURATIONS

- Piezo-Loop-Piezo
- Piezo-Piezo

POWER SUPPLY

- 6V to 24V DC
- 0.1 Watts
- Ethernet Versions 2.5 Watts

STORAGE CAPACITY

- 8GB microSD Non-Volatile 365 Day VBV Capacity

CLASSIFICATION ACCURACY

- FHWA, UK DFT, AUSTROADS, user definable

Motorbike	>95%
Cars & Vans	>97%
Cars & Vans + Trailer	>97%
Rigid HGV	>98%
Articulated HGV	>99%
Draw-Bar Trailers	>99%
Buses & Coaches	>97%

INPUT/OUTPUT PORTS

4 Nos.	Piezo Electric Sensors
2 Nos.	Inductive Loops
2 Nos.	Temperature Probe
1 No.	Bluetooth™ Option
1 No.	RS232 Option
1 No.	USB Option
1 No.	Ethernet Option

DIMENSIONS & WEIGHT

- W - 120mm
- D - 60mm
- H - 110mm
- Weight: 1.5 kg