VIP BIKE

BICYCLE DETECTION ON THERMAL CAMERAS

Thermal cameras can consistently differentiate bicycles from other traffic.

Why choose VIP Bike?

- Dedicated **bike presence** information for intersections
- **Proven** detection algorithms
- High detection rate
- **Easy** to configure
- Non-disruptive, **above-ground** installation
- **Visual verification** via streaming video

Bike detection systems are an ideal way to enhance **safety** and **efficiency** for cyclists at intersections. The Traficon VIP Bike platform offers high-performance **bike detection for thermal cameras** that overcomes the limitations of traditional inductive detection loops. VIP Bike is suitable for any US traffic controller type.

Adapted green time for cyclists

Cyclists should be able to cross signalized intersections in an efficient and safe way. This means they should not have to wait too long and they should get **sufficient green time** while crossing the intersection. Traficon's VIP Bike board analyzes images from thermal cameras in order to detect bicycles approaching or waiting at the intersection on **multiple lanes**. VIP Bike provides four contact closures or serial information to the traffic light controller to indicate presence of bikes: one for thru lanes, one for left turn lanes, one for right turn lanes and one for dedicated bike lanes.

Bike counting

VIP Bike allows to accurately assess bicycle volumes. Per phase, the traffic light controller knows whether VIP Bike registered a dedicated trigger for bicycles. This means that it is possible to compare the total number of phases with the number of phases where bike detection took place.

Proven and tested technology

Traficon's VIP Bike solution is based on the company's proven and tested VIP range of v**ideo image processors** for vehicle presence detection and data collection. Traficon's VIP boards have been installed at hundreds of intersections across the US as a successful and cost-effective alternative for inductive loops, as they do not require any disruptive roadworks for installation or maintenance.

Visual monitoring

The IP-addressable VIP Bike board provides H.264, MPEG-4 and/or MJPEG streaming video on thermal cameras for traffic monitoring from a remote location. Both frame rate and bandwidth are configurable.

TRAFICON USA
TRAFFIC VIDEO DETECTION

EASY TO SET UP AND CONFIGURE

The Traficon Configuration Tool (TCT) enables you to easily configure your image on a PC. **Four bike detection areas** can be drawn on the thermal camera image. If needed, an extend time or delay time can be selected. Just send your configuration to the board and Traficon's powerful bicycle detection algorithm will start working. VIP BIKE provides presence information to traffic controllers via optically isolated open-collector outputs (NEMA TS-1, 170), via serial line (NEMA TS-2, 2070) or via TCP/IP.

BIKE PRESENCE DETECTION

- **4** detection areas for dedicated bike presence detection:
  - □ Mixed thru lane(s)
  - □ Mixed left turn lane(s)
  - □ Mixed right turn lane(s)
  - □ Dedicated bike lane
- Bike presence information to traffic controller via 4 optically isolated open-collector outputs, via SDLC (PIM module) or via TCP/IP (Traficon SDK available)
- Zones and parameters can be edited without interrupting operation
- Remote access via TCP/IP to upload/download configurations, upload firmware (pre-installed TCT software on PC)

H.264/MPEG-4/MJPEG COMPRESSED VIDEO

- High quality H.264/MPEG-4/MJPEG streaming video (from thermal images)
- Dual stream (low and high quality stream) function possible
- Both frame rate and bandwidth configurable

The Traficon VIP BIKE detector board

TYPICAL INSTALLATION

- VIP BIKE board(s) integrated into a standard US rack
- No separate communication board required
- Outputs (bike presence detection) are used as inputs to the traffic light controller to optimize the traffic flow for bikes
- Communication options are:
  - □ SDLC to TS-2 controllers (via PIM module)
  - □ Open collector outputs to TS-1 controllers
  - □ Ethernet (TCP/IP via front)
- Streaming video and detection can be checked with monitor
- Remote monitoring & set-up possible

TECHNICAL SPECIFICATIONS

Dimensions
- **H** 4.5 in x **L** 1.1 in x **W** 7.0 in (**H** 114 mm x **L** 28 mm x **W** 178 mm)

Communication
- Set-up, streaming video and output states via TCP/IP (front, RJ45 port)
- Output states via SDLC (back, via PIM module for TS2 controllers)
- Double row 22 pins EDGE (NEMA TS2-1992) connector (back)

Inputs
- Analog thermal camera input (back)
- Power supply (back)
- Reset button (front)

Outputs
- Auto-diagnostic LED indicators (front)
- 4 optically isolated open-collector outputs (back, for TS1 controllers)
- Video OUT via BNC connector (front)

Power
- 12V DC (400mA) to +24V DC (200mA)

Environmental
- -29°F to 165 °F (-34°C to +74°C)
- 0-95% relative humidity, non-condensing

Regulatory
- Electromagnetic Compatibility - 2004/108/EG
- EMC/EMI: FCC Part 15 class A
- Shock & vibration: NEMA II

CALIFORNIA: CT-West Inc. - 43391 Business Park Dr. Suite C-8 – Temecula, CA 92090 – Phone: 951-691-1385
NORTHWESTERN USA: Kar-Gor Inc – 2769 19th Street, S.E. – Salem, OR 970302 – Phone: 503 315-9899 – E-mail: kargor@aol.com
TRAFICON USA: 10161 Park Run Drive, Suite 150 – Las Vegas, NV 89145 – Phone: 702 851-5880 – E-mail: traficon@traficonusa.com
EASTERN USA: Control Technologies Inc – 2776 South Financial Court – Sanford, FL 32773 – Phone: 407 330-2800 – E-mail: cttraffic@aol.com

www.traficonusa.com

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