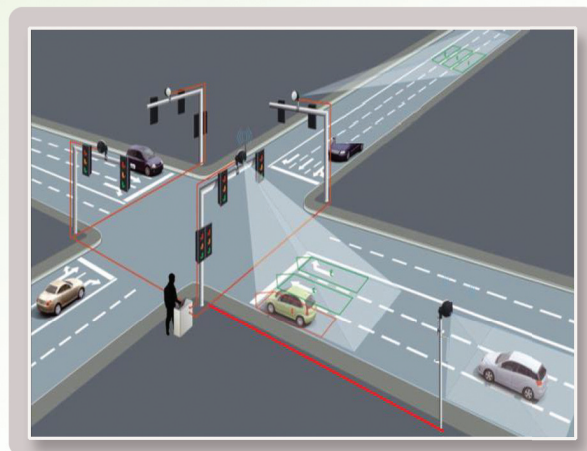# DIMTS

We help people move

WiTraC is a Vehicle Actuated (VA) Road Traffic Signal Controller that controls LED signal lamps switching over wired medium and compatible with CDAC's CoSiCost-W based Area Traffic Control System (ATCS) software having features to perform at isolated intersections or as part of a synchronized chain of controllers.

WiTraC supports remote monitoring and management of signal plans over various communication network. WiTraC Controller is designed to work with 230VAC or Solar power. PWM based intensity control of LED Lamps, GPS or Control Room Server based time synchronization, ergonomically designed foundation mountable compact enclosure etc. are some of the other features.

Designed by DIMTS, WiTraC is based on Master-Slave hardware architecture of CDAC, developed under the "Intelligent Transportation System Endeavour (InTranSe) for Indian Cities" funded by the **Department of Electronics and Information Technology (DeitY), Ministry of Communications and Information Technology, Government of India.**

MODES OF OPERATION

- ➲ Pre-timed
- ➲ Vehicle Actuated
- ➲ Semi-Actuated
- ➲ ATCS
- ➲ Combination of the above modes in any order
- ➲ Hurry Call
- ➲ Manual
- ➲ Forced Flash
- ➲ Pedestrian push button (optional)

SALIENT FEATURES

- ➲ 32 bit ARM microcontroller based
- ➲ Integrated Master-Slave architecture on CAN bus
    - 1 Master controller and 2 Slave controllers
- ➲ Signal switching and feedback on wired medium
    - 48 lamp outputs with 12VDC or 24VC @1.5Amps
    - 230VAC output (Optional)
- ➲ GPS interface for corridor synchronization
- ➲ Optimized Power
    - 230VAC or 12V DC operation
- ➲ In-built Hardware conflict monitor
- ➲ Foundation mountable ergonomically designed enclosure

SIGNAL PLANS

- ➲ 32 - Phases
- ➲ 32 - Stages
- ➲ 24 - Cycle Plan
- ➲ 20 - Day Plan
- ➲ 4 - Week Plan
- ➲ 20 - Special Day Plan
- ➲ 4 – Hurry Calls

EXTENDED MODES OF OPERATION

- ➲ Cable-less Synchronization
    - Pre-timed
    - Vehicle Actuated
    - Semi Actuated
- ➲ Remote Administration
    - Hurry Call
    - Forced Flash
    - Junction Off
    - Real-time clock (RTC) update
    - Signal Time update
    - Plan Download
- ➲ Wireless Police Panel (Optional)

EXTENDED FEATURES

➲ Programmable
  - All Red
  - Start Amber
  - Red Extension
  - Stage skipping

➲ Early start in VA mode

SIGNAL SWITCHING

➲ Wired
➲ CAN bus

WiTraC CONTROLLER

➲ 48 optically isolated solid state lamp driving outputs
➲ Ethernet
  - Remote Administration
  - ATCS
➲ 16 optically isolated Vehicle detector interface supports inductive loop, camera and microwave based vehicle detection
➲ Inbuilt GPS module for time synchronization
➲ User friendly man-machine interface
  - Menu driven
  - 20X4 LED backlit LCD and 5X4 keypad
➲ USB
  - Firmware update
➲ CAN
  - Signal Switching
➲ RS232 debug port
  - Status monitoring and data logging
➲ 8 Auxiliary I/O interface

POWER SAVING

PWM Based Intensity Control
  - Greater than 50% Power saving during night

Selective Switching of Flashing lamps
  - Primary
  - Secondary
  - Tertiary
  - Combination of the above

SAFETY FEATURES

➲ Self-diagnosis on Power up and runtime
➲ Green-Green Conflict Monitoring
➲ Lamp failure/Short circuit Monitoring
➲ Battery Voltage Monitoring (for Solar Power)
➲ Fallback on AMBER flash in case of conflict or error condition
➲ Automatic selection of Flashing program on error conditions and communication failure
➲ Error logs sent to traffic monitoring center when networked

ELECTRICAL

➲ 230VAC ± 10% OR 12V DC ± 10% for Solar Power C
➲ Power consumption
  - 20 Watts (max)

CERTIFICATION

➲ IEC – 60068 (ERTL)

ENVIRONMENTAL & DIMENSIONS

➲ 0 to 55° C
➲ 95% RH Non-condensing at 40° C
    550mm (W) x 850mm (H) x 275mm (D)