IRNSS INTEGRATED CAMERA

TEDI
ZEDEYE

THE SCHOOL, COLLEGE & COMMERCIAL VEHICLE CAMERA SOLUTION

Educational & Commercial Vehicle CCTV Camera and IRNSS based Location Tracking System

Our Vehicle Camera Solution are specially designed to provide videos using VR Technology that minimizes blur caused by camera shake.

TEDI® INDIA
ICAT Innovation • Service • Excellence

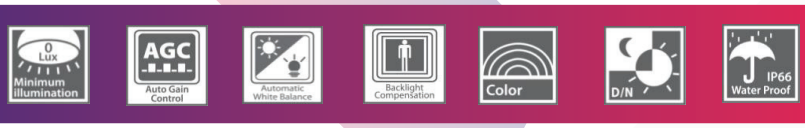
An IATF 16949 & 9001 - 2015 certified company

Mobile HDAVI Vandal Proof Camera

Key Features

- 1/3 SONY CMOS Sensor
- (1920 * 1080P) Resolution
- 4G and WiFi supported (any sim card)
- Inbuilt mic & speaker
- IR LED Range upto 10M
- 2 way audio communication
- 180degree wide angle view
- 25days camera recording
- Vibration & Shock Proof

Vibration & Shock Proof
Stabilized Video Recording



PRODUCT SPECIFICATIONS

SIGNAL SYSTEM	PAL @25FPS	NTSC @30FPST
IMAGE SENSOR	1/3 SONY CMOS Sensor	
EFFECTIVE PIXEL	1920 * 1080P	
SHUTTER CONTROL	1/50 sec to 1/10,000 sec	1/60 sec to 1/10,000 sec
HORIZONTAL RESOLUTION	1080P @25FPS	
IR	12 * ¢ 5 (14mil) LED lights	
LENS FURNISHED	2 MP HD lens, 2.8mm,3.6mm,6mm optional	
VIEW ANGLE	115 degrees	
LENS INTERFACE	M12	
SIGNAL/NOISE RATIO	More than 60dB	
MIN ILLUMINATION	0.001Lux @ (F1.2,AGC ON), 0 Lux (IR LED On)	
SYNCHRONISATION	Internal	
WHITE BALANCE	Auto	
BACK LIGHT COMPENSATION	Auto	
GAIN CONTROL	Auto	
VIDEO OUTPUT SIGNAL	HD Analog Output	
TRANSMISSION DISTANCE	Up to 500m over coaxial cable	
CONNECTOR	4 PIN aviation connector (female)	
OPERATING CONDITIONS	-10°C ~ +60°C, Humidity 90% or less (non-condensing)	
POWER SUPPLY	DC 12V ± 10%	
CURRENT, POWER CONSUMPTION	250mA , Max 3.5W	
DIMENSION (LxWxH), WEIGHT	Φ90 (base) *75*60 (mm), 0.35KG	

Benefitors


Public Buses

Cabs


School Buses


Goods Carriers


Ambulance

*Due to continuous technology upgradation, designs and specification are subject to change without prior notice.
**The photos and images used here are only for reference purpose. The actual product may var. All Brand names and trademark are the property of their respective owners.

AIS - 140 vs Normal GPS

FEATURES	AIS - 140 (IRNSS)	NORMAL GPS
AS PER GOVT. SPECIFICATIONS	✓	✗
INDIAN SATELLITE (IRNSS)	✓	✗
REAL TIME TRACKING	✓	✓
EMBEDDED SIM (E-SIM)	✓	✗
DUAL PROFILE-NETWORK	✓	✗
GPS TRACKING WITH ROUTE PLAYBACK	✓	✓
SECURED CLOUD STORAGE	✓	✗
REPORTS	✓	✓
ALERTS ON MOBILE	✓	✓
IMMOBILIZER ENGINE ON/OFF	✓	✗
GEO-FENCING	✓	✗
1 YEAR WARRANTY	✓	✗
WATER PROOF	✓	✗
INTERNAL BATTERY	✓	✗
INTERNAL STORAGE	✓	✗

Vehicle CCTV vs Normal CCTV

PARAMETERS	Vehicle CCTV	Normal CCTV
CAMERA		
CAMERA TYPE	VANDAL PROOF NON-ROTATABLE	CONVENTIONAL ROTATABLE
TECHNOLOGY	IP CAMERA	ANALOG CAMERA
VIBRATION & SHOCK PROOF	YES	NO
IN BUILT MEMORY SLOT & MIC	YES	NO
FRAME RATE	HIGH	LOW
IMAGE DISPLAY	SHARP & CLEAR	GRAINY & BLURRY
COVERAGE ANGLE	BIG & WIDE ANGLE	SMALL & NARROW ANGLE
ENCRYPTION	YES	NO
2 WAY COMMUNICATION	YES	NO
4G SIM & SD CARD SUPPORT	YES	NO
SPECIALLY DESIGNED FOR VEHICLES	YES	NO
WARRANTY	1YEAR + 1YEAR	NIL or 6 MONTHS

Vehicle Location Tracking Device as per AIS-140 (Automotive Industry Standard)

Certified by – International Centre for Automotive Technology
Standardization by – Automotive Industry Standard
Mandated by – Ministry Of Road Transport & Highways (Govt.of India)
Rule – Centre Motor Vehicle Vehicle Rule - 1989

AIS -140 (Automotive industry standard)
AIS -140 defines the Safety and Security feature requirement for all public service vehicles, as defined under the clause (35) of section 2 of the act, shall be equipped with or fitted with vehicle location tracking device and one or more emergency buttons or SOS button. As per the Ministry of Road Transport and Highways (MoRTH), all passenger transport vehicles including taxis and buses are to be mandatory equipped with ITS vehicle tracking devices starting 1st April, 2018.

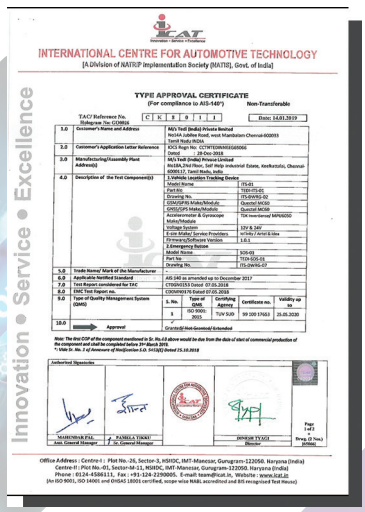
Implementation

When it comes into implementation, and given that AIS 140 is enforced properly, it can completely change Indian transport, especially in terms of overall safety. The technology can help in ensuring that everyone on the road feels absolutely secure.

Specifications

There are many specifications for the ITS tracking device, under the AIS -140 of which we have listed a few ones here:

- *Location tracking through Indian Regional Navigation Satellite System (IRNSS/NAVIC)*
- *Communicate to designated backend government servers with PVT data*
- *Dual IP addresses for PVT data and Emergency response*
- *Alert ID on pressing emergency button*
- *4-hour internal battery back-up*
- *Unique ID or IMEI number*
- *Register vehicle to device*
- *Operate between 8VDC to 32VDC*
- *Assisted GPS*
- *3 axis accelerometer and gyroscope*
- *Multi Network Embed SIM (GPRS)*


INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY
(A DIVision of NATRIP Implementation Society (NATIS), Govt. of India)
TYPE APPROVAL CERTIFICATE
(For compliance to AIS-140*)
Non-Transferable
Innovation • Service • Excellence

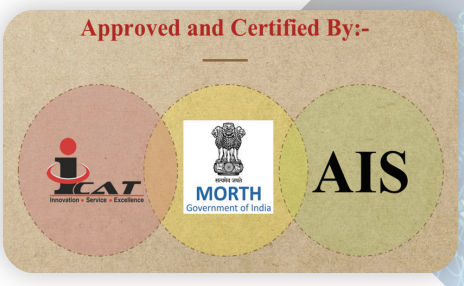
Government Orders

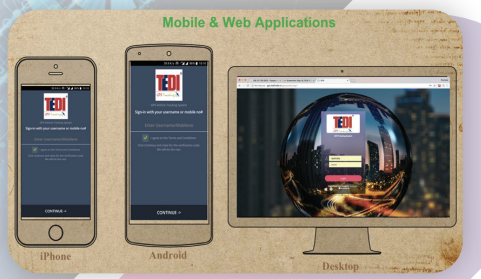
Government of India Notification No G S R 1095(E) New Delhi Dt :28.11.2016
Government of India Notification S.O 5453 (E) New Delhi Dt :26.10.2018
Government of India Notification S.O 5454 (E) New Delhi Dt :26.10.2018
Ministry Of Road Transport and Highways –No.RT.11028/12/2015-MVL- Dated 31st October,2018
Government of India Notification S.O 1081 (E) New Delhi Dt :02.11.2018

Skills

Emergency Response Alert
Vehicle Location Tracking
Device Tampering Alert
Driver Behavior Alert
8 Hours Battery Backup
Every 5 second Location Update

Products Available
VTS Device | Panic Switch (SOS) | Internet & Software Application





TECHNICAL SPECIFICATIONS - IRNSS

GPS MODULE

L1 Band Receiver (1575.42 MHz)
C/A code Channel 33 Channels
Horizontal Position
Accuracy WAAS, EGNOS
Autonomous <2.5 m CEP
SBAS
Velocity Accuracy
Acceleration Accuracy
Reacquisition Time <2.5 CEP
Without aid <1 s
Without aid <0.01 m/s 0.1m/s2
TTFF(Time To First Fix) Cold Start <33s
Warm Start 35 s
Warm Start With CGEE <30s
Hot Start <1s
Sensitivity Acquisition-149dBm
Hot Start -149dBm
Tracking -167 dBm
Navigation -161 dBm
Patch Antenna Receiving Frequency 1575.42+1.023MHz
Environment Operating Temperature -40°C to 85°C

GSM MODULE

- Quad Band 850/900/1800/1900 MHz
- GPRS Multi-slot Class
- GPRS Mobile Station Class 12
- Supply Voltage Range 3.3 ~4.6 V 4.0V nominal
- Low Power Consumption 1.2 mA @DRX=5, 0.9 mA @RDX=9

- Operation Temperature -40°C ~ + 85°C
- Dimensions 18.7mm*16.0 *2.1m
- WeightApprox. 3g
- Control Via AT commands (GSM 07.07, 07.05 and other enhanced AT Commands)
- GSM Module Quectel M66
- GPS Module L89 (Navic Satellite enabled)
- Microcontroller ST Micro Electronics
- Input Voltage 9V ~ 36V

Working Principle

-GPS (global Positioning system) Device can work in the following manners.

-Real Time Tracking

In real time tracking mode the current location can be viewed on the map, or last position when GPS connection was active.

Hardware

1. Quad band GSM/GPRS module.
2. GPS module with Sirf-Iv technology
3. Strong 1300 mah. With internal protective circuit.
4. High Speed micro processor
5. 16MB internal memory for storing the data in case of server failure.
6. Two Analog input/ digital inputs + Four digital inputs.
7. Two digital OP.
8. switching mode Power supply.
9. Standard battery management.
10. Box tempered indicator.
11. Protection against surges.
12. Battery remove indicator.
13. Small Size.

Features of AIS-140

- Real-time Tracking
- 32-bit cortex M3 microcontroller
- 40000 plus records storage wide operating voltage (12v-24v DC)
- Over voltage and reverse connection Protection
- Over the air (OTA)device configuration
- Over the air firmware update(FOTA)
- Dual IP Supported
- Data sending to multiple IPS simultaneously
- Support TCP, HTTP&MQTT Protocol
- Accelerometer & Gyroscope
- Four digital inputs
- Two analog inputs
- Two digital output
- SOS switch interface with multiple serial connection

- IP -66 Interface
- Sleep mode for extended battery backup
- Box tampered alert
- Supports AGPS
- Details of network operator name, servicing cell id and neighboring cell ID Info
- GPRS to SMS fall back
- Internal GSM and GPS Antennas
- Operational L and or S band including support for NAVIC/IRNSS
- Internet uploading details in Vahan and National - Backend server (BSNL & CDAC)
- Activation Message & Health Message

Transportation Focus

Intelligent Transport Technology
Hybrid Technology
Traffic Management & Driver Assist
Connected Vehicles

Public Buses
Cabs
School Buses
Goods Carriers
Ambulance

Benefitors