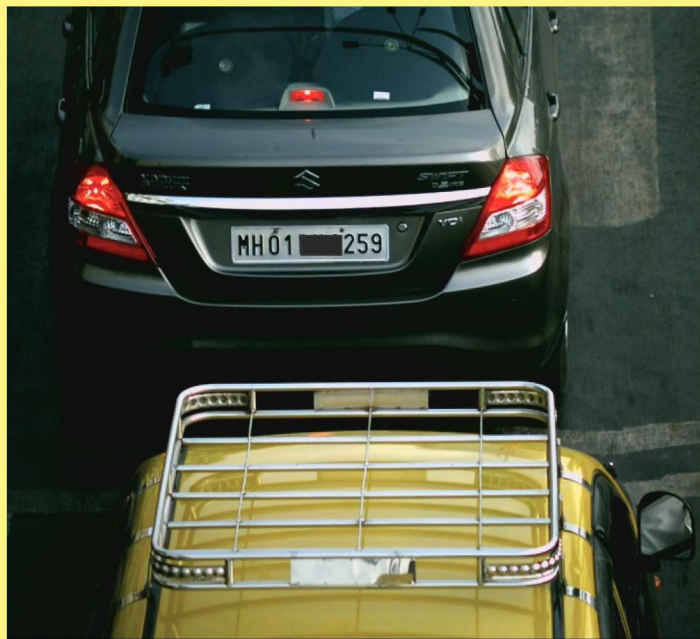
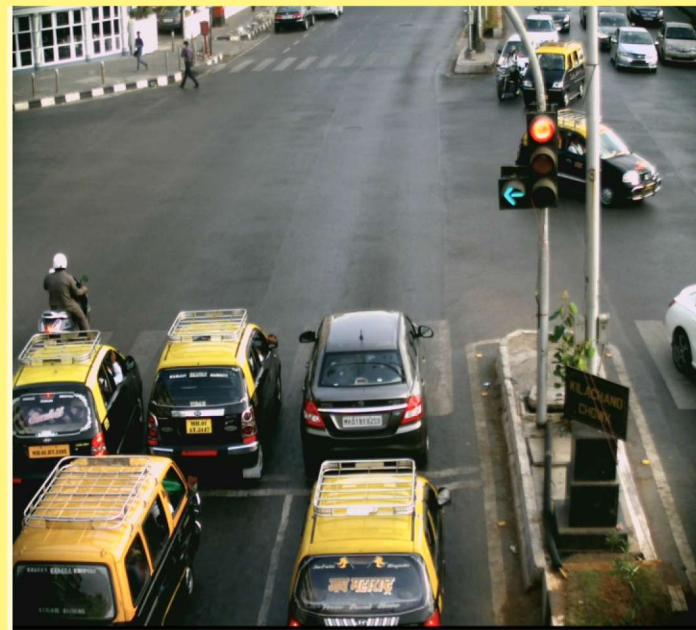


LANE CAMERA IMAGE



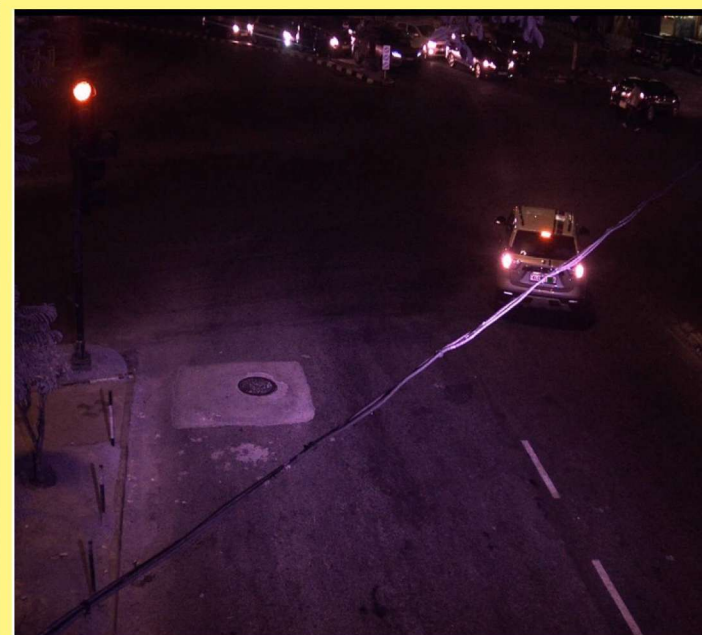
EVIDENCE CAMERA IMAGE



LANE CAMERA IMAGE



EVIDENCE CAMERA IMAGE



REDLIGHT VIOLATION DETECTION SYSTEM

Model–KEL - RLV

K-RLV system uses advanced deep learning technology to detect and capture images / license number of all types of Vehicles violating Red Light signal. System works fully automatically during day and night conditions.

- ☞ Day & Night with IR Flash
- ☞ Court evidence camera
- ☞ Capable of capturing images of vehicles (including 2 Wheelers) at Day & Night
- ☞ Capable of capturing both Retro & Non-retro reflective type of license plates.
- ☞ No inductive loops / road cutting
- ☞ Light sensor for all round image quality
- ☞ Lightning protection, on-line health monitoring
- ☞ System designed for 0 - 55 deg C operation
- ☞ Uses global shutter camera with synchronized high power IR flash
- ☞ End to end solution – Hardware, control room software
- ☞ Software feature – Challan processing and payment software
- ☞ Software supports clustering of servers for 24 x 7 fail safe operation



SPECIFICATION:

Technology	K-RLV system uses advanced deep learning technology to detect and capture images / license number of all types of Vehicles violating Red Light signal. System works fully automatically during day and night conditions.
Road side hardware	
Image Capture subsystem	
Primary detection method	Video Analytics (AI - Deep Learning)
ANPR Camera (ANPR camera one per lane) (Model: K-ANPR-GS-2M-L)	Sensor: 2 Mega pixel resolution CMOS Global shutter sensor, Sony Pregius sensor,3.5 μm, >50dB SNR, True day & night operation Exposure time 1ms - 10μs, (1:1000 – 1:100,000) On board Video processor, 10/100 base T Ethernet JPEG compression, Trigger in, Flash strobe out Lens : Motorized lens, F1.4, Day & Night operation, IEC 60950-1 certification, IP 66 Outdoor enclosure
Evidence camera (camera one per road) (Model: K-ANPR-GS-4M-E)	4 Mega pixel resolution CMOS Global shutter sensor, True day & night Exposure time 1ms - 10μs, (1:1000 – 1:100,000) On board Video processor, 10/100 base T Ethernet JPEG compression, Trigger in, Flash strobe out Lens: Wide angle, IP 66 Outdoor enclosure
Infrared Flash Illumination (Model: K-IRILM-250W)	Infrared flash for image capture at night Synchronized flash with global shutter of camera Peak pulse power 250 watts, Average power < 10 Watts Wavelength: 850 nm, Flash power sufficient to capture vehicle images also at night. Capability to capture retro reflective and non reflective number plates.
Light sensor for Exposure control	Light sensor (5 decade measuring range) used for adjusting camera parameters (Exposure time, Gain) to get optimum image quality under all conditions.
Vehicle image Capture Mode	All vehicle Capture Mode: Along with number plate, high quality image of vehicles (all types of vehicles, including two wheelers), also captured at Day and Night for real time alerts and post analysis (irrespective of license plate condition) Evidence camera: Capture images of vehicle on the road along with the traffic signal light (day and night) Video clip of the violation also captured and recorded, Vehicle marking of violated vehicles
Vehicle Classification	Classify different type of vehicles like car / bus / truck / auto / two wheelers etc.
Traffic light interface	Wired / light sensor based interface
RLVDS Configuration	2/3 lane, 2-3-4 road junctions
Power supply	Power input: 170-240VAC, On line UPS for road side hardware with min 3 Hr back up, and also soft shutdown of Hardware in case of power failure with auto restart.
Local / Remote health monitoring	Temperature, battery , UPS, Mains voltage status, Anti tamper with siren option

Field Enclosure	Pole mounted outdoor type with Rain canopy etc. rugged construction, IP 65 rating
Camera mounting	Suitable Gantry / cantilever poles to be provided as required
ANPR Accuracy and Vehicle detection rate	ANPR accuracy better than 90% for standard / near standard number plates, vehicle detection rate better than 90%
Data Encryption	Advance Encryption Standard (AES)
Road side field unit	Road side processor, 256 GB storage, industrial switch, DC UPS, protection circuit, VPU, conformal coated PCB for hig humid environment (95% RH), >55 deg C operation

