

TECHNICAL DATASHEET

NUMBER PLATE DETECTOR

MODEL NUMBER: **DetectorHD_XRL_NP8MM, DetectorHD_XRL_NP12MM**

GENERAL

The Number Plate Detector is a variation of our standard battery powered detector. It is triggered by motion detection or tamper sensor. The camera element has been optimized to provide readable number plates in a wide range of lighting and environmental conditions

We have two variants, both of which provide a monochrome only image

Distance Detector to vehicle

- 8mm lens - optimised for vehicles 6 - 12M/20-40 feet
- 12mm lens - optimised for vehicles 9 - 18M/30-60 feet

Vehicle speed below 15 MPH/25 KPH

Operating temperature range -40°C to +60°C
 -40°F to +140°F

IP rating X7 (waterproof)

Weight (including battery) 700g
 1,54 lb

Dimensions 85x120x100mm
 3.34x4.72x3.93 in

Colour NATO Green (RAL6014)



MOTION DETECTION

Smartdec detector uses passive infrared (PIR) sensor and signal analysis to track thermal signature across the monitored area. If motion is detected an alarm is generated and the camera is activated.

Maximum detection range **35M/114.8 ft**

Detection angles standard **13° @ 30.5M/100 ft**
(areas shown on
Figure below left)

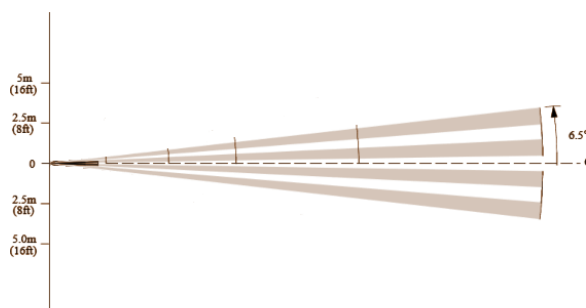
Minimum alarm interval Configurable (default 0s -
 limited by camera to ~1.5s)

Sensitivity Configurable

PIR DETECTION

PIR detection zones for Number Plate detector

TOP VIEW:



SIDE VIEW:



SHORT RANGE RADIO

Short-range 2.4GHz radio is used for two-way communication between the Detector and other Smartdec devices.

Standard	IEEE 802.11.4
Bandwidth	2 MHz
Data rate	250 kbps
Modulation	QPSK
Antenna	omnidirectional
EIRP	12 dBm
Security	ECC (secp160r1)

Authentication & encryption	AES 128
Max LOS distance	500M 1640.42 ft
Network topology	mesh

CAMERA

Camera module comprises a day camera for colour imaging, a night camera for monochrome imaging and an infrared illuminator for dark conditions. Camera stores full size raw images in internal memory and smaller size jpg images are uploaded to the command center server.

Internal memory	7.6 GB
Storage capacity	1800+ images
Downloaded image size	Thumbnail ~20 kB

Number plate camera

Picture resolution	1280 x 960
Raw image size	2.5 MB
Horizontal angle	63°

BATTERY

Detector is powered by 1 rechargeable Li-Ion battery.

Voltage	3.7V
Capacity	10.2 Ah
Lifetime	up to 400 days standby/ up to 50,000 events
Time to recharge	7-12 hours (depending on charge type)
Auxiliary solar panel	optional

Number plate detector - 8mm performance at different ranges

Below images are static vehicle at night time at different distances

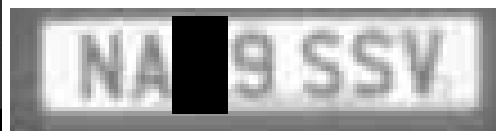
8mm lens 17M detector to vehicle



8mm lens 12.5M detector to vehicle

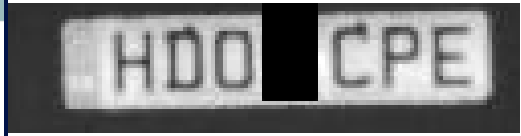
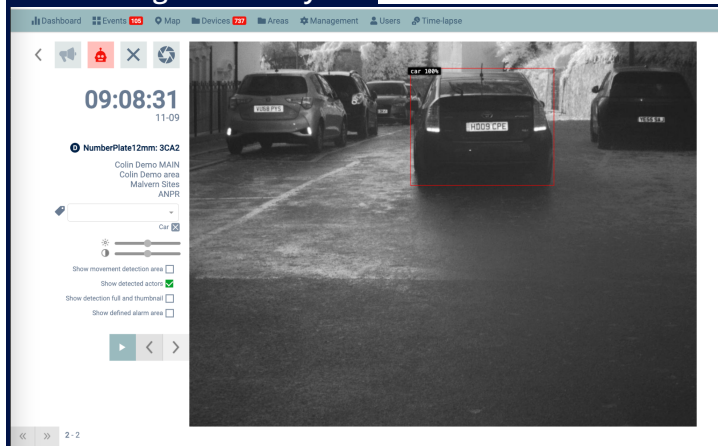


8mm lens 8M detector to vehicle

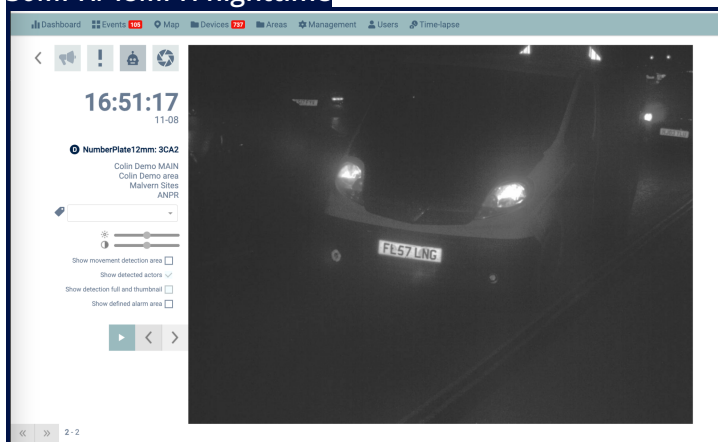


Number plate detector - 12mm performance at different ranges, vehicle speeds and conditions

Slow moving vehicle daytime



30MPH/48MPH nighttime



Slow moving vehicle night time

