

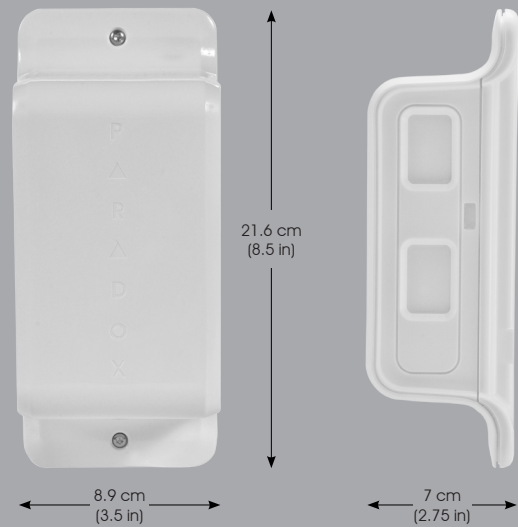
P ▲ R ▲ D O X™

ENVY  
SERIES

PARADOX  
DIGITAL  
DETECTION

PET  
IMMUNITY

The Detection Series to ENVY



## NV780/NVR780: Digital Outdoor Dual Side-View Detector with 4x Quad Sensors

### Description

The Paradox NV780 (wired) and NVR780 (wireless) were designed to provide a pre-entry protection solution while keeping the perimeter free for movement without generating false alarms. The NV780/NVR780 provides early warning detection, before intruder entry, with excellent exterior/interior wall and window protection.

Available in both wired (relay and/or Paradox EVO BUS) and wireless versions (433 MHz or 868 MHz), these rugged indoor/outdoor detectors incorporate two passive infrared side-by-side detectors, each containing two independent dual element sensors, optics, and electronic channels. The optics are specially designed to provide multiple narrow beams (two pairs per side, eight total) for excellent detection and false alarm rejection, covering up to 12m (39ft) for each side. The NV780/NVR780 are configurable to report as a single unit (2 sides of the unit report to a single zone output) or dual units (each side reports to a separate zone). The NVR780 provides extended battery life operation with Paradox Effi+ circuit.

Developed for outdoor conditions with bright LED indication on each side, and buzzer for detection verification. The optics offer simple and easy independent low beam adjustment for coverage flexibility.

### Features

#### Advanced Digital Technology:

- Two double passive infrared motion detector with eight narrow detection beams, managed by Full Authority Digital Electronics Control (FADEC)
- High-resolution and full dynamic range digital signal conversion
- High-speed, advanced algorithm digital signal processing
- Digital EMI / RFI interference rejection
- True Pet Immunity, up to 40kg (90lb)

#### Advanced Optical Technology:

- 4x dual element sensors arrangement
- High efficiency long focal point (1.77") lens, providing long-range narrow beams
- 2 pairs of narrow beams per side provide 2x signals per protected area crossing for increased "catch" and false alarm rejection
- Combination optics of mirror reflector and 2<sup>nd</sup> generation Fresnel "LoDiff" Lens
- Increased white light rejection

#### Advanced Wireless Operation (NVR780 only)

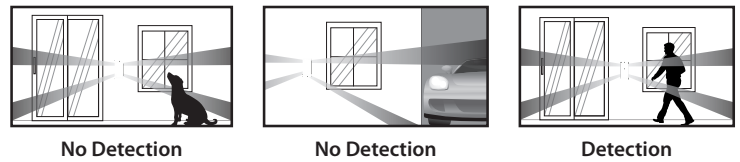
- Ultra low power management operation with Paradox Effi+ circuit
- Dual tamper detection (removal of cover or unit)

#### Easy Installation and Setup

- Single or Dual Zone operation modes: two sides can report to a single zone or to two separate zones
- Optical and digital range adjustments
- Bright LED and buzzer indicator for clear adjustment feedback
- No need for PCB removal
- Wall mount, with built-in level tool
- In-field firmware upgradable via serial port

## Immediate Perimeter Protection

The NV780/NVR780's distinct beam pattern creates a narrow, 24m (78.8 ft.) long detection zone (12m / 39.4 ft. each side), to protect wide horizontal areas such as a house's perimeter. To avoid detection of unwanted objects, it will only trigger an alarm if both beams are crossed.



## Adjustable Detection Range

The NV780/NVR780 will only trigger an alarm if both beams are crossed. The detection range can be adjusted (both vertically and horizontally), to avoid detection of unwanted objects. Each side's lower beam can be independently adjusted within two positions (see fig.1). In addition, both beams' distance from the wall can be adjusted (horizontally) from 0° to 3° degrees (see fig.2).

Figure 1: Vertical Beam Adjustment (Lower Only)

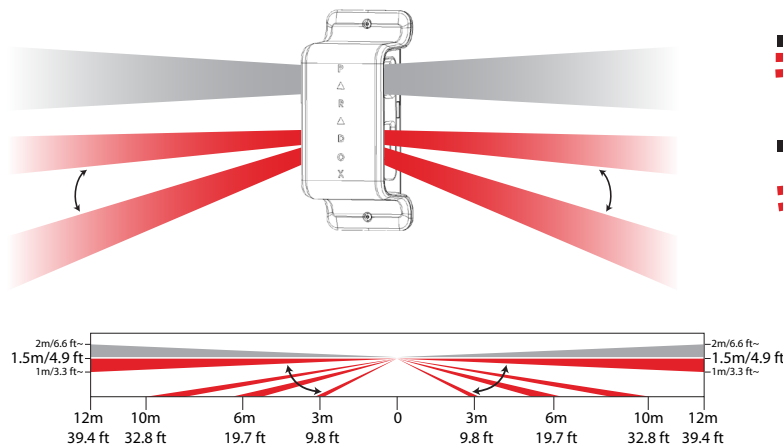
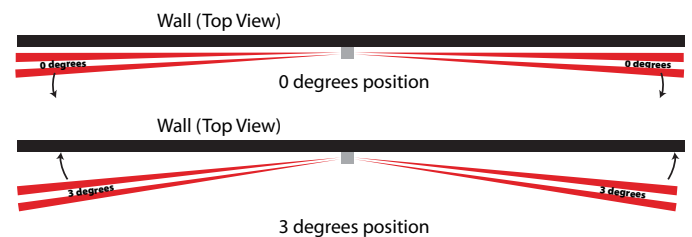


Figure 2: Horizontal Beam Adjustment



## Technical Specifications

	NV780	NVR780
<b>Sensor</b>	4x quad rectangular element, low noise, high sensitivity, EMI immunity	4x quad rectangular element, low noise, high sensitivity, EMI immunity
<b>Lens</b>	2nd gen., flat, 2x dual beam, 1.7" focal point, narrow beam long-range Fresnel lens	2nd gen., flat, 2x dual beam, 1.7" focal point, narrow beam long-range Fresnel lens
<b>Processing</b>	High resolution digital signal processing / digital APSP / true digital temperature compensation / ultra low current-saving algorithm (NVR780 only)	High resolution digital signal processing / digital APSP / true digital temperature compensation/ultra low current-saving algorithm (NVR780 only)
<b>Startup time</b>	25 sec.	35 sec.
<b>Detection speed</b>	0.2m/sec – 4m/sec (0.6' – 13.1'ft/sec)	0.2m/sec – 4m/sec (0.6' – 13.1'ft/sec)
<b>Power input</b>	10Vdc to 15Vdc	3x AA alkaline battery
<b>Current consumption</b>	9.9mA @ Standby (Dual), 14.4mA @ Standby (Single) 39.8 mA @ Alarm (Dual, One LED + Buzzer), 58.0mA @ Alarm (Dual, Two LEDs + Buzzer), 41.5mA @ Alarm (Single, One LED + Buzzer)	3 year battery life
<b>Coverage</b>	Bi-directional, independent, 2 x 3m to 12m (9.8ft to 39ft)	Bi-directional, independent, 2 x 3m to 12m (9.8ft to 39ft)
<b>PET Immunity</b>	Up to 40kg (90lb) - requires min.1.5m (4.9ft) installation height	Up to 40kg (90lb) - requires min.1.5m (4.9ft) installation height
<b>Installation height</b>	1.5m and above	1.5m and above
<b>Alarm indicator</b>	2x red LED for 3 sec., 1 for each detection side + buzzer (can be disabled)	2x red LED for 2 sec., 1 for each detection side + buzzer (can be disabled)
<b>Alarm output</b>	2x Solid State, N.C, 150mA. In Dual mode the relays are 2 independent Form B type and in Single mode the relays are a single Form C type operation	Configured as two independent zones or a single zone
<b>Anti-tamper switch</b>	N.C. 28Vdc, 0.15A	Box and wall tamper detection and messages
<b>Operating temperature</b>	-35°C to +50°C (-31°F to +122°F)	-35°C to +50°C (-31°F to +122°F)
<b>Humidity</b>	95% max.	95% max.
<b>Dimensions</b>	9 x 5.5 x 4 cm (3.5 x 2.2 x 1.6 in.)	9 x 5.5 x 4 cm (3.5 x 2.2 x 1.6 in.)
<b>RF Frequency</b>	N/A	433MHz or 868MHz
<b>RFI Immunity</b>	Complies with EN 50130-4: 10V/m 80MHz to 2GHz	Complies with EN 50130-4: 10V/m 80MHz to 2GHz