

SMART POLES

EMPOWERING STREETS. PROTECTING LIVES.

SMART POLES FOR SAFER CITIES

A smart pole is an AI-enabled streetlight that boosts public safety through automated lighting, CCTV, SOS buttons, Wi-Fi, two-way communication, sensors, and seamless command-centre connectivity,creating safer, smarter, and more responsive cities for women, children, seniors, and vulnerable groups.

Key Features

Real-time CCTV Surveillance

- 360° HD cameras with night vision for continuous monitoring.
- AI-based video analytics to detect unusual activity.
- Automatic alerts for crowding, trespassing, or suspicious movement.

Emergency SOS / Panic Button

- Instant GPS-enabled alerts to police and ICCC.
- Loud siren + strobe light activation to deter offenders.
- Auto-triggered nearby camera focus for evidence capture.

Smart LED Lighting

- Motion-activated brightness increases in low-activity zones.
- Energy-efficient LEDs reduce electricity consumption.
- Adaptive lighting adjusts based on time and footfall patterns.

Two-Way Communication

- Citizens can speak directly to operators in emergencies.
- Command centre can broadcast safety announcements.
- Supports multilingual audio for inclusive accessibility.

Public Connectivity & Sensors

- Free Wi-Fi hotspot for public access and emergency use.
- Environmental sensors monitor air quality, temperature, and noise.
- Motion sensors optimize lighting and trigger surveillance modes.

Easy to Fund, Easy to Deploy with Government-Supported Safety Infrastructure Schemes

Nirbhaya Fund, MHA's Umbrella Scheme, and State/ULB Smart City budgets can finance women-safety infrastructure, including Smart Poles. A fully equipped Smart Pole costs ₹2–3 lakhs based on connectivity, camera specs & site conditions.

WHY CITIES NEED SMART POLES

- Unsafe, poorly lit public spaces that increase risk for women, children & vulnerable groups.
- Delayed emergency response because the authorities lack real-time location, visuals & alerts.
- No instant SOS support in public spaces, leaving citizens helpless during the state of emergencies.
- Gaps in continuous surveillance where traditional CCTV is limited or has not been centrally integrated.
- Lack of data-driven governance, making it difficult for cities to identify hotspots and plan safety interventions.

SMART POLE FUNCTIONAL DIAGRAM



This illustration shows a fully connected Smart City Safety Grid where Smart Poles with Wi-Fi, CCTV, GPS, and emergency sensors link residential areas, public spaces, transit routes, and the city command centre. Each pole continuously sends real-time data, enabling 24×7 monitoring, instant alerts, safer mobility, and rapid emergency response across the entire urban zone.

HOW THE SMART POLE OPERATES

- **Continuous Monitoring:** Cameras, sensors & LEDs scan the area in real time.
- **Event Detection:** Motion, anomalies, or SOS triggers activate the system.
- **Instant Alerts:** Live video, GPS, siren & strobe reach the ICCC immediately.
- **Two-Way Communication:** Operators speak directly to the person at the pole.
- **ICCC Coordination:** Control room verifies & dispatches the nearest response team.
- **On-Ground Action:** Police reach swiftly using real-time location & visuals.
- **Incident Closure:** All data is logged for tracking, analytics & future prevention.

BENEFITS FOR CITIZENS

- Safer public spaces with CCTV monitoring, motion-based lighting & SOS alerts.
- Immediate emergency support with real-time communication & faster police response.
- Increased confidence for women, children, seniors, commuters & tourists.
- Better accessibility via public Wi-Fi, announcements & environment monitoring.
- Improved night-time mobility & deterrence of crime or harassment.

BENEFITS FOR ADMINISTRATION

- Centralised, real-time surveillance & data integration with ICCC.
- Faster incident detection, improved response time & reduced manual monitoring.
- Lower operational costs through energy-efficient smart lighting.
- Stronger compliance with Smart City Mission & women-safety mandates.
- Data-driven governance through analytics, heatmaps & environmental insights.

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