



Infokit of common software and hardware for residential sites

The purpose of this document is to provide security agencies in Singapore with a comprehensive set of technology recommendations aimed at optimising manpower deployment and improving security efficacy. This guide is designed to assist agencies in making informed decisions about the adoption of technology hardware and software solutions, geared towards outcome-based solutions.

1) Visitor Management System (VMS)

Access Control Software

Benefits:

- Able to generate visitor and vehicle black/white list
- Visitor can use SMS Message Dynamic QR Code to access door
- Paperless registration via QR code available online
- Remote Access function of barricade through 4G
- Vehicle overstay alert

2) License Plate Recognition System (LPR)

Typically, VMS is integrated with LPR. Commonly used hardware for LPR:

- License Plate Recognition Camera with built-in AI algorithm
- Camera Pole with LED light
- License plate camera to gantry controller
- QR Code access reader
- 4G Router
- Outdoor high brightness LED display
- 10.1 Inch touch screen kiosk
- Kiosk Printer with wireless button

Estimated cost: \$14,000 to \$20,000 based on one IP Camera, one Two-way Intercom, VMS software and one barrier/gate Sensor. Cost may vary depending on site, complexities of installation and type of camera.

3) CCTV System

Hardware for a normal CCTV system involves the following:

- 1) 16-Channel NVR, 1 VGA,
- 2) Surveillance Hard Disk.
- 3) Bullet IP Camera

- 4) PoE switch.
- 5) Junction box for PoE switch.

Estimated cost: \$350 to \$650 per camera and cabling works. Cost may vary depending on site, complexities of installation and type of camera.

6) CCTV with Video Analytics

Capable of remote surveillance, alerting on-site security when needed for checks (e.g., loitering, line crossing, abandoned objects)

Estimated cost: \$700 to \$1300 per camera and cabling works. Cost may vary depending on site, complexities of installation and type of camera.

7) Body Worn Cameras

Security officers can use body-worn cameras with real-time streaming to instantly share live incident feeds with remote supervisors, enabling quick assessment and support, ensuring no critical moments are missed.

Estimated cost: \$60 to \$450 per camera. Cost may vary depending on type of camera.