Intelligent Surveillance & Security Systems

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Samsung Techwin
Intelligent Security Guard Robot

Product Concept

Convergence

Surveillance

Target Detecting
Target Tracking
Warning
Suppression
Intelligent Security Guard Robot

◆ Major Features

<table>
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<tr>
<th>Components</th>
<th>Performance</th>
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<tbody>
<tr>
<td><strong>Surveillance Module</strong></td>
<td>CCD Camera</td>
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<tr>
<td></td>
<td>Infrared Camera</td>
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<tr>
<td></td>
<td>Day 4km Night 2km</td>
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<tr>
<td><strong>Tracking Module</strong></td>
<td>CCD Camera Laser illuminator Laser Range Finder</td>
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<tr>
<td></td>
<td>Day 2km Night 1km</td>
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<tr>
<td><strong>Weapon</strong></td>
<td>5.56mm / 7.62mm Machine gun Non lethal weapon</td>
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<tr>
<td><strong>Pan/Tilt</strong></td>
<td>±180° / -60~+45°</td>
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<tr>
<td><strong>Operation SW</strong></td>
<td>Autonomous Detecting/Tracking Pattern Recognition Characteristic Analysis</td>
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Intelligent Security Guard Robot

Surveillance Module

- Panorama / Preset mode
- Detecting multiple moving objects
- Prioritize the targets for closer watch

Detection Capabilities

CCD Camera
Thermal Camera
Pan / Tilt
Tracking Capabilities
- Automatically / manually track a prioritized moving object
- Path tracing of a moving object
- Day / Night capability
Effective Firing Range (K3) : 800m

**Weapon Station**

- Machine gun
  - 5.56mm / 7.62mm
  - Fire mode:
    - Semi automatic
    - Fully automatic
    - 3-round burst
    - Cartridge belt

**Universal Gun Mount**
- Can mount various machine guns
  - K3 (M249)
  - M4, M16
  - K2, AK47

**Machine gun**
- 5.56mm / 7.62mm
Non-Lethal Weapons

Acoustic Device
- System for hailing, notification and warning
- Delivering effective sound more than 500m
- Painful within 200m+

Searchlight
- High intensity discharge lamp (HID beam)
- Search / impediment for intruders
- Effective range: 500m
Detecting / Tracking software

- Automatic detection of moving objects
  (Day / night capability)
- Tracking a prioritized moving object
  (Day / night capability)
- Centering the object
  (Efficient for suppression)

Pattern recognition / Characteristic analysis

- Recognition for vehicles and humans
- Data base of various shapes
Integration of surveillance modules

- High level Intrusion detection capability
- Detecting the object by ground radar and camera
- Enable robot to zoom-in for target confirmation

System Integration
(Robot, Camera, Radar, etc.)

- Ground Radar (16GHz, Ku band / 36GHz, Ka band)
  - Human : 3~6 km, Vehicle : 8~14 km
Thank you

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