SNOV PROFILE
HD Surveillance Products
TABLE OF CONTENTS

- COMPANY PROFILE
- PRODUCTION
- QUALITY CONTROL
- PRODUCT OVERVIEW
- GREEN Q&A CHANNEL
- THANKS
Overview

- Basic Profile
- Company Organization
- Business Idea
- Management
- International Exhibition
- Future
Basic Profile

Company Name
SNOV INTERNATIONAL CO., LIMITED

Company Address
Bantian Industrial Zone,
Bantian Changfa Road,
Longgang District,
Shenzhen City, China

Business Philosophy
Different Products
Different Company

General Manager
Mr. Deng
## Basic Profile

<table>
<thead>
<tr>
<th>Established Date</th>
<th>2009 (Shenzhen)</th>
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<tbody>
<tr>
<td>Number of Employees</td>
<td>200s (Shenzhen)</td>
</tr>
<tr>
<td>Total Areas</td>
<td>3300 Square Meters (3 Floors)</td>
</tr>
<tr>
<td>Sales Revenue</td>
<td>Nearly 10 Million USD (2012)</td>
</tr>
<tr>
<td>Production Capability</td>
<td>Analog CAMs 50,000 PCS, IP CAMs 10,000(PCS/Month) NVRs/DVRs 2000PCS PTZ 2000 PCS</td>
</tr>
<tr>
<td>OEM Partners</td>
<td>HYUNDAI TCL COSHIP AMPON CEIC</td>
</tr>
<tr>
<td>Overseas Subsidiary Company</td>
<td>SNOV INTERNATIONAL CO., LIMITED</td>
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</table>
Future

Profile  Production  Quality  Product  Q&A

Different products, Different Company
02

Overview

• Assembly Line
• Experienced Staff Team
• Brief Information
• Anti-static Equipments
• Flow Diagram
• Productive Process
• Advanced Production Management
Assembly Line
[Workshop]
[CLEAR AND NEAT WORKSHOP]

[Profile]  [Production]  [Quality]  [Product]  [Q&A]

Warehouse
[Organized raw material warehouse]

[A Line]
[More than 100 PCS]

[B Line]
[Within 10-100 PCS]

[C Line]
[Within 10 PCS]
Average working experience in CCTV field as **3.5 years** for production staff.

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
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<tbody>
<tr>
<td>Production Management Staff</td>
<td>10</td>
</tr>
<tr>
<td>Worker</td>
<td>105</td>
</tr>
<tr>
<td>QC</td>
<td>15</td>
</tr>
<tr>
<td>Maintenance Man</td>
<td>10</td>
</tr>
<tr>
<td>PE Engineer</td>
<td>5</td>
</tr>
<tr>
<td>Technical Support Team</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total Staff</strong></td>
<td><strong>155</strong></td>
</tr>
</tbody>
</table>
Anti-static Equipments
Anti-static equipments used on production.

- Anti-static lift
- Anti-static finger gloves
- Anti-static gloves
- Anti-static slippers
- Anti-static gracelet
- Anti-static curtain
Flow Diagram

Finished Dome Production Workflow Map

1. Install lens
2. Adjust Lens
3. Fix LED board
4. Assemble cover
5. Unfinished product testing
6. Aging test Cover
7. Glass
8. Finished product testing
9. Post Label and Warming sticker
10. Inspection
11. Packing
12. QA
13. Shipping

Profile  Production  Quality  Product  Q&A
Productive Process

1. Issue material
2. Assembly line
3. Semi finished product testing
4. Aging test
5. Weighing delivery
6. Packing
7. Screen printing LOGO
8. Finished product testing
Advanced Management

“5S” management principles prompted production management and improved staff working efficiency.

The charms of “6s” are train and insist “consider every detail” as daily habit.
03 Overview

- Quality Idea
- Quality Assurance Process
- Test Procedure
- Quality Analysis
- Our Excellent Suppliers
- Quality Advantages
Quality Idea

1. General outline of the quality management:

7 All, 3 No

7 All
1. All staff’s participation
2. All control of the whole process
3. All company QC’s activities
4. All customer-centric
5. All to prevention-oriented
6. All data used to speak
7. All go according to the PDCA cycle

3 NO
1. No receipt of disqualified products
2. No production of disqualified products
3. No disqualified products out
Quality Idea

2. Quality management system

Quality Policy & Aim

Quality: standard management, to meet the standards; Continuous improvement and exceed customer needs.

Quality aim: pass rate: $\geq 98\%$
Customer Satisfaction: $\geq 99$
Product aging test: Each platform is 100% burn-in test
**Process**

**QA quality assurance process**

- Sending for Inspection
  - Order Check
    - Appearance Inspection
      - Deploy Inspection
        - Capability Inspection
          - Capability Inspection
            - Stocking
              - Shipment

- Rectification and corrective operation procedure

  - Problems Found
    - Cause Analysis
      - Reason
        - Draw up Measure
          - Approve
            - Implement Action
              - Effect Confirmation
                - Management Review
                  - Filing
        - NG
          - Presented OCC Resolution

  - NG
Test Conditions

Direct-current power

Multimeter

CRT monitor

Kymographion

LED photoelectric instrument

Frequency spectrum analyzer

Constant temperature electric iron

Simulation transport vibration instrument

LCD monitor
Test Conditions

Normal Camera
- Color vector
- Luminance level waveform
- Resolution waveforms

Network High definition Camera
- Color vector
- Luminance level waveform
- Resolution waveforms
Test Procedure

1. Design and development
2. Engineering experiment
3. IQC incoming inspection
4. Board aging test
5. Board & lens adjustment
6. IR laging test
7. IR leds board functional test
8. Semi finished product test
9. Product aging test
10. Simulation of night vision test
11. Finished product full inspection test
12. Waterproof experiment
13. Vibration test
14. Drop test
15. QA shipments sampling
## Quality Analysis

### Experiment Of National Standards

- low temperature method
- High temperature method
- Temperature variation test method
- Salt spray test method
- Variation test method
- Free fall method

### Items | Specification | Results | Tools & equipment
--- | --- | --- | ---
aging test | 72hours under room temperature | Pass | aging rack
High temperature test | Temp:70 ℃, Humidi: 85%, Test Time: 8 hours. | Pass | Temperature and humidity chambers
Low temperature test | Temp: -40℃, Test Time: 8 hours. | Pass | Temperature and humidity chambers
Water proof test | IP66/IP67 | Pass | Waterproof tester
vibration test | Frequency at 35HZ/Test time 30mil | Pass | vibration measurement instrument
drop test | Height: 80-120cm | pass | Ruler /Pad wood
The map of defective fraction rate from Jan to June

<table>
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<tr>
<th>In the first half of year (1-6 months)</th>
<th>Defective Fraction Rate</th>
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<tbody>
<tr>
<td></td>
<td>0.50%</td>
</tr>
<tr>
<td>Jan.</td>
<td></td>
</tr>
<tr>
<td>Feb.</td>
<td></td>
</tr>
<tr>
<td>March.</td>
<td></td>
</tr>
<tr>
<td>Apr.</td>
<td></td>
</tr>
<tr>
<td>May.</td>
<td></td>
</tr>
<tr>
<td>June.</td>
<td></td>
</tr>
<tr>
<td>The average annual</td>
<td></td>
</tr>
<tr>
<td>The quality objectives</td>
<td></td>
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</table>
Quality Analysis

Analysis of defective reasons - Fishbone Diagram

**Man Power**
- The lens is not set clear
- No corresponding standard
- The new staff operation
  - Inadequate training
  - & lack of experience
- The lens inside is dirty
- Out of focus after screws being fixed

**Machine**
- Electric screwdriver bad
- Torque Tester big error
  - No regular check
- The excessive high temperature aging racks
- The too high power supply voltage
- The aging display
- The display beyond working period
- The image blur after aging test
- The lens surface is dirty
- The exposed material without protection
  - Process arrangement is not reasonable
  - The front cover of glass should not be installed before aging test
- The lens mount is skewed
- The sponge ring is not dry
- Lens fogging
- Raw Material

**Operation Method**
- No corresponding standard
- No regular check
- Inadequate training & lack of experience
- The new staff operation
- The lens inside is dirty
- Out of focus after screws being fixed
- The lens surface is dirty
- The exposed material without protection
  - Process arrangement is not reasonable
  - The front cover of glass should not be installed before aging test
- The lens mount is skewed
- The sponge ring is not dry
- Lens fogging
Quality Analysis

TQM(QCC)

Product quality planning

1. Analyze the current status and find out the problems.
2. Analyze the reasons.
3. Analyze the key points.
4. Formulate methods, make plans.
5. Carry out the research.
6. Review the achievements and check the results.
7. Standard formation & achievement consolidate.
8. Keep the legacy, step into next cycle.
Each component comes from only the world's top brands

Guests come from the world’s top security companies
Quality Advantages

Product Advantages

1. Anti-thunderbolt
2. Anti static and high-voltage surge
3. Anti-clutter
4. Constant voltage and current control of IR light
5. Precise control of IR light
6. Wide voltage designed CCD board
7. IC applied video amplifier
8. Day and night dual program conversion
9. Day and night light filter switch
10. Select the world famous supplier
Overview

• Higher Quality Materials & Parts
• Professional HD IP Products
• IP Camera Image Effect
• Professional HD SDI Products
• Professional Analog Camera Products
• Home Surveillance Cameras & Kits
1. **State-of-the-art workmanship for cameras**

   - **Waterproof plug**
   - **2MP+ICR LENS**
   - **Laser LEDs**
   - **Modular design**

2. **Metal gray & light white selectable for free**
Material & Parts

3. OSD menu & external vari-focal lens

4. Extremely easy adjustment (Real 3-Axis Design)
5. IP67 water-proof rating IP67

6. High definition of Lens (ICR, AUTO IRIS)
7. **12 MIL good quality of black IR LEDs**

8. **The best performance from Laser LEDs at night**
9. Wider voltage range of 8-18V 12VDC/24VAC

10. Good quality of cable

- Water-proof protection.
- Shield-proof protection.
- Protection plastic pipe from soldering point of video and power.
- IC control.
- 5 pin bronze cable.
11. **Temperature control board**

- The temperature control board
- Application of cold environment

12. **Good quality of the inflatable bag**
**Camera Features**

- 3-Axis bracket for waterproof cameras
- Stylish & delicate design
- Waterproof IR Camera consist of aluminum material case
- Standard 4-9mm (F1.2/M12 Mount) mega pixels HD lens
- Good quality of new laser LEDs
- Strong waterproof rating for IP67

**Network Characteristics**

- Aptina, OV Sensor Optional
- TI, Hisilicon DSP Optional
- 1.3MP 2MP 3MP 5MP IP Cameras
- WDR, Super Low Light
- TF Card, WIFI, P2P Mobile
- Standard ONVIF
- Professional CMS
## Products Line-ups

### IP Camera

- 5MP
- 3MP
- 2MP
- 1.3MP

### Camera Features
- 3-Axis bracket inside dome cameras
- Stylish & delicate design
- High strength aluminium casting alloy case
- Standard 4-9mm (F1.2/M12 Mount) mega pixels HD lens
- Good quality of black IR LEDs
- Strong waterproof rating for IP66

### Network Characteristics
- Aptina, OV Sensor Optional
- TI, Hisilicon DSP Optional
- 1.3MP 2MP 3MP 5MP IP Cameras
- WDR, Super Low Light
- TF Card, WIFI, P2P Mobile
- Standard ONVIF
- Professional CMS
### Products Line-ups

#### IP PTZ Camera
- **2MP 1.3MP**

#### Camera Features
- Streamlined metal appearance
- Window wiper
- High power led IR Array Led
- Vandal-proof, “0° bend light rate” high strength PMMA cover
- IP67 waterproof rate

#### Network Characteristics
- 1.3MP 720P and 2MP 1080P HD real time image output
- H.264 compression format
- Onvif 2.0, RTSP, and VLC streaming media protocols, video FTP uploads
- Smartphone remote access, network services
- Dual-stream encoding transmission
**NVR Series**

<table>
<thead>
<tr>
<th>Model</th>
<th>Channels</th>
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<tbody>
<tr>
<td>SV-N8104/SV-N8109/SV-N8116</td>
<td>4CH/9CH/16CH</td>
</tr>
<tr>
<td>SV-N8209/SV-N8216/SV-N8236</td>
<td>9CH/16CH/36CH</td>
</tr>
</tbody>
</table>

**Features**

- Workable for 552 days continuously
- IPC controlled by professional CMS
- 11 languages, whole icon, mouse operation
- Flying Shuttle knob, cool appearance
- GUI OSD interface, USB Mouse controller

**Network Characteristics**

- 1 ch VGA, 1 ch HDMI video output
- Local hard disk record, support different big size HDD, 2TB, 3TB, 4TB etc.
- Support 4 ch 720P/1080P playback synchronous
- Support Onvif2.0 protocol
- Support 3G and WIFI via USB port
### Management Software

**Software Features**

- Based on Windows XP/WIN7 system
- User friendly GUI, simple operation
- Centralized management of video monitoring system
- Compatible with devices that support ONVIF protocol
- Centralized management of NVR, NVS, IPC etc.
- Support local storage, platform and front-end historical video/picture search, playback, download etc.
- Support SDK for personalized secondary development
Products Line-ups

HD-SDI Cameras
- SV-8601HD
- SV-8602HD
- SV-8603HD
- SV-8704HD
- SV-870HD

Camera Features
- 2 mega-pixel HD CCTV video coaxial cable to achieve
- Real-time 1080P HD image output
- 2 mega-pixel progressive scan CMOS sensor
- Full HD video output: 1920 × 1080 25/30fps
- Standard HD-SDI high definition digital interface

Technical Specification
- Panasonic 1080P sensor
- Max. 100m transmission distance
- 25/30/50/60 frame optional
- Excellent WDR performance
- Better night vision
- 2P analog output
- 2D/3D, IR-CUT, HLC, DNR
- Pass through fog
- Lower power consumption
Products Line-ups

**HD-SDI-DVR**

- **4CH SDI-DVR**
  - 2/8 hard disk

- **8CH SDI-DVR**
  - 8 hard disk

---

**Features**

- Graphic user interface (OSD)
- Embedded Linux
- Multi-level user management
- 4/8 CH video/audio input
- Supports HDMI/VGA output

---

**Technical Specification**

- 720P/1080P video input
- H.264 video compression
- Supports IE/PPPOE/DDNS network protocol
- Supports android phone/iPhone/iPad Monitor
- 2/8pcs hard disk HD-SDI video recorder
- Lower power consumption
Camera features

- 3-Axis bracket for waterproof cameras
- Stylish & delicate design
- Waterproof IR camera consist of aluminum material
- Standard 3.6/4-9mm(F1.2/M12 Mount) mega HD lens
- Good quality of new laser LEDs
- Strong waterproof rating for IP67

Technical Specification

- SONY 138 CMOS 1.3MP 720P HD optional
- EFFIO 800TVL CCD New version optional
- 600TVL\650TVL\700TVL optional
- Pass through fog
- D-WDR, DNR, Car-plate surveillance
- D-Zoom, RS-485, Alarm, Audio
## Products Line-ups

### Analog Products

#### Camera features

- 3-Axis bracket for waterproof cameras
- Stylish & delicate design
- High strength aluminium casting alloy
- Standard 3.6/4-9mm(F1.2/M12 Mount)mega HD lens
- Good quality of black LEDs
- Strong waterproof rating for IP66

#### Technical Specification

- SONY 138 CMOS 1.3MP 720P HD optional
- EFFIO 800TVL CCD New version optional
- 600TVL\650TVL\700TVL optional
- Pass through Fog
- D-WDR, DNR, Car-plate surveillance
- D-Zoom, RS-485, Alarm, Audio
## Camera Features

- Stylish mini case design
- Fixed Lens, widely installed in lift/ATM
- Easy adjustment for lens angle
- Standard 3.6mm/6mm/8mm lens
- Easy installation

## Technical Specification

- SONY 138 CMOS 1.3MP 720P HD optional
- EFFIO 800TVL CCD new version optional
- 600TVL\650TVL\700TVL optional
- Pass through fog
- D-WDR, DNR, Car-plate surveillance
- D-Zoom, RS-485, Audio
Home Surveillance Cameras

Features
- Consumer home cameras
- Pan/tilt home camera
- Support for remote control and video
- Image is clear, delicate
- Support for automatic color to black function

Technical specification
- Aptina, OV Sensor optional
- Hisilicon DSP
- 1.0MP 1.3MP home IP cameras
- TF Card, WIFI wireless
- Extremely convenient mobile view
- Standard ONVIF
- Support cloud storage
- Professional CMS
# Products Line-ups

## Home Surveillance Cameras

### Network Phone Camera

<table>
<thead>
<tr>
<th>Features</th>
<th>Technical Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Network Video Phone</td>
<td>- 0.3MP , 1.0MP home IP cameras</td>
</tr>
<tr>
<td>- Telephone-Alarm-Surveillance All-in cameras</td>
<td>- 3C smart Card, TF Card, WIFI</td>
</tr>
<tr>
<td>- Realize remote control and video call</td>
<td>- Extremely convenient mobile view</td>
</tr>
<tr>
<td>- E-Robot is a multifunctional product including video call function</td>
<td>- Construct a wireless alarm system</td>
</tr>
<tr>
<td>- Construct a wireless alarm system</td>
<td>- Advanced cloudlink P2P network transmission technology</td>
</tr>
<tr>
<td>- Support free APP software</td>
<td>- Support free APP software</td>
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</table>
NVR Kits

**Features**
- Workable for 552 days continuously
- IPC control by profession CMS
- 11 languages, whole icon, mouse operation
- Flying shuttle knob, cool appearance
- GUI OSD interface, USB Mouse controller

**Network Characteristics**
- 4CH/8CH 960P HD network small CCTV system
- 4CH/8CH images can browse in real time
- Support 1pc HDD max 4TB
- Support 4 channel 960P playback synchronous
- Support Onvif2.0 protocol
- Support 3G and WIFI via USB port
We promptly feedback the views of customers, to create maximum value for customers.

Our unique business philosophy, to create maximum value for customers.

Our all-weather services, to create maximum value for customers.

<table>
<thead>
<tr>
<th>SERVICE REPRESENTATIVE</th>
<th>David</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN Q&amp;A CHANNEL (24 HOURS)</td>
<td>+86-139-7946-9517</td>
</tr>
<tr>
<td>GREEN Q&amp;A E-MAIL</td>
<td><a href="mailto:David@snov-cctv.com">David@snov-cctv.com</a></td>
</tr>
</tbody>
</table>
Be innovative in the security world

Thanks