

Features:

- ✔ **Ultra HD 4K Resolution:** Captures sharp 3840×2160 video with an 5MP SONY CMOS sensor.
- ✔ **Advanced Video Compression:** Supports H.265+/H.265/H.264 for efficient storage and bandwidth usage.
- ✔ **Low-Light & Night Vision:** IR-CUT filter ensures clear images in various lighting conditions.
- ✔ **Enhanced Image Processing:** Features 2D/3D noise reduction, HDR, and WDR for better clarity.
- ✔ **Seamless Connectivity:** Supports multiple protocols for easy integration with existing systems.
- ✔ **AI & Security Features:** Includes human detection, motion detection, and intelligent analysis.
- ✔ **PoE Support:** Simplifies installation by reducing the need for extra power cables.
- ✔ **Mobile Monitoring:** Compatible with iOS and Android for remote real-time viewing.



Product Datasheet: 5MP 4K IP Camera with Advanced Video Compression & AI Capabilities

Our 5MP 4K IP Camera is engineered for modern surveillance and industrial applications, offering a seamless combination of high-resolution imaging and advanced video analytics. Designed with both performance and ease-of-use in mind, this camera not only delivers superior image quality but also supports efficient data transmission and intelligent features that simplify monitoring and analysis.

Overview

At its core, the camera leverages a state-of-the-art 1/2.8" SONY CMOS IMX415 sensor, capturing crystal-clear images at a resolution of 3840×2160. This is further enhanced by robust video compression technology, including H.265+, H.265, and H.264, which minimizes bandwidth usage while preserving video quality. The device is equipped with features such as dual-stream output, enabling users to select between high-quality main streams and bandwidth-optimized sub-streams based on their specific application needs.

Whether you are deploying it in a smart city environment, a commercial setting, or an industrial facility, the camera's intelligent analytics—such as human and motion detection—ensure that critical events are accurately captured and processed in real time. Its compatibility with PoE and various network protocols makes installation and integration with existing systems straightforward.

Key Features & Benefits

High-Resolution Imaging:

- Sensor: 1/2.8" SONY 5MP CMOS IMX415
- Resolution: 3840x2160 (4K Ultra HD)

This high-resolution sensor provides exceptional detail, making it ideal for applications that demand precise image capture, such as facial recognition and detailed scene analysis.

Advanced Video Compression:

- Compression Formats: H.265+, H.265, H.264
- Dual-Stream Capability: Main stream (4K) and sub-stream options

The camera's advanced video compression capabilities reduce storage and bandwidth requirements without compromising video quality. Dual-stream functionality allows simultaneous transmission of a high-quality primary feed and a secondary stream optimized for remote viewing.

Enhanced Low-Light Performance:

- IR-CUT Filter with Automatic Switching
- Night Vision Support

With its integrated IR-CUT filter and low-light optimization features, the camera automatically adjusts to varying lighting conditions, ensuring reliable performance day and night.

Robust Connectivity:

- Network Interface: RJ45 10/100M adaptive Ethernet port
- Protocol Support: HTTP, RTSP, FTP, DHCP, Onvif, P2P

The versatile network interface allows for easy integration into existing systems. Whether you are connecting the camera to a NVR or directly accessing it via web browsers, the camera supports multiple protocols to suit different network configurations.

Detailed Explanations

The camera's processing power is boosted by its dedicated ARM-based control chip (SSC338 ARM), which ensures rapid and reliable handling of high-resolution data. This allows for real-time video analytics such as human detection and motion detection, crucial for advanced security and monitoring applications. With features like 2D/3D noise reduction and digital wide dynamic range (WDR), the camera delivers consistent image clarity even in challenging environments with variable lighting.

Furthermore, the built-in audio interface supports bidirectional communication, enabling voice broadcast and interactive monitoring. This dual audio feature is especially beneficial in scenarios where communication between security personnel and on-site individuals is critical. In addition, the camera's design supports external devices like PTZ control modules, which can be integrated to extend its functionality in dynamic surveillance setups.

Technical Specifications

Imaging & Video:

- Shutter Speed: 1/50 (1/60)s to 1/10,000s
- Noise Reduction: 2D/3D noise reduction for clearer image quality
- Dynamic Range: Digital wide dynamic range (WDR)

Streaming Capabilities:

- Main Stream Output:
 - 20FPS @ 3840x2160
 - 30FPS at lower resolutions (3072x2048, 2592x1944, 2560x1440, 2304x1296, 1920x1080, 1280x720)

Sub-Stream Output:

- Supports resolutions including 720x480, D1, VGA, 640x360

Connectivity & Interface:

- Ethernet Port: 1x RJ45 10/100M

Audio:

- Input: 1 channel (2Vp-p, 1KΩ impedance)
- Output: 1 channel (16Ω impedance, 30mW)
- Control Protocols: Onvif compliant, with support for RTSP and P2P connections

Power & Environmental:

- Power Supply Options: DC 12V/2A or PoE (IEEE802.3af/at compliant)
- Operating Temperature: -20°C to 70°C
- Dimensions: 38mm × 38mm (both board sizes)

Software & Configuration:

- Default IP Address: 192.168.1.200 (modifiable via DHCP or static IP configuration)
- Access Credentials: Default username 'admin' and password '123456'
- Supported Platforms: Compatible with modern browsers (Edge, Chrome, Safari) using HTML5 technology

Applications

This camera is versatile enough to be deployed in a variety of environments, including:

- Security & Surveillance: Ideal for monitoring offices, retail spaces, and public areas.
- Smart Cities & Urban Management: Provides high-resolution monitoring essential for public safety and traffic management.
- Industrial Automation: Enhances quality control processes with precise imaging and robust data analytics.
- Remote Monitoring: Facilitates real-time access and control via mobile devices and web platforms, ensuring constant oversight.

Specifications Table for CCDCAM IMA50L12 Camera

Feature	Specification
Brand Name	CCDCAM
Model Number	IMA50L12
Origin	Mainland China
High Definition	5.0 Megapixels
Sensor Type	CMOS
Sensor Brand	Sony
Dimensions (L × W × D)	38 × 38 mm
Connectivity	IP/Network Wired
Min. Illumination	0.01 Lux (F1.2, AGC ON)
Video Compression	H.264 / H.265
Digital Zoom	Available (unspecified)
Optical Zoom	None
Lens (mm)	3.6mm
Main Stream 1	2592×1944/15fps, 2688×1520/2560×1440/25fps
Main Stream 2	2480×1520/2304×1296/1080P/720P/25fps, 1080P/720P/30fps
Sub-Stream	D1/VGA/640×360/480×360/CIF/25fps
Audio I/O	1 Input, 1 Output
Audio Output	1CH RCA
IP Rating	Other
Min. Illumination (Lux)	0.05 Lux (F1.2, AGC ON)
High-Concerned	None

Chemical	
Power Supply	12VDC/0.2A
Power Consumption	2.4W
Storage	None
TF Card	None
Supported Mobile Systems	Android, iOS, Windows Mobile
Supported Operating Systems	Windows 10, Windows 8, Windows 7, Windows XP, Windows Vista, Windows 98, Mac OS
AI Functions	Human Detection
Smart Home Platform	Other
App Name	Other
Installation	Normal
Is Customized	Yes
Alarm Action	FTP Photo, Local Alarm, Email Photo