

IN-Surround-View-Camera

Product Specification

Product Overview

The **IN-813-A200H** is a high-performance 360° surround view camera designed for automotive bird's-eye view systems. This ultra-wide-angle camera module captures a massive 210° field of view, making it an essential component for 360-degree vehicle surround view monitoring systems. When four of these cameras are mounted around the vehicle (front, rear, left, and right), they provide a complete bird's-eye view of the vehicle's surroundings, enhancing parking safety and situational awareness.

Key Features

- Ultra-wide 210° field of view for maximum coverage
- Full HD 1080P resolution with AHD technology
- Excellent low-light sensitivity (0.01 Lux)

Specifications

Model Information

Parameter	Specification
Model Number	IN-813-A200H
Module Type	1MP AHD Module (FH8536H + GC2053)
Application	360° Surround View System

Image Sensor & Performance

Parameter	Specification	Description
Resolution	AHD 1080P	Full High Definition video output
Video System	PAL	Phase Alternating Line standard (25fps)
Total Pixels	1080(H) × 720(V)	High-resolution image sensor
Minimum Illumination	0.01 Lux	Ultra-low light sensitivity for night vision capability
Electronic Shutter	PAL: 1/50 ~ 1/100,000s (Auto)	Automatic adjustment for varying lighting conditions
Signal-to-Noise Ratio (S/N)	> 52dB	Clear images with minimal noise
White Balance	Auto White Balance (AWB)	Automatic color temperature adjustment
Day/Night Mode	Color Mode	Optimized for various lighting conditions
Digital WDR	Enabled	Wide Dynamic Range for high-contrast scenes
Mirror Function	Disabled (Default)	Standard orientation output
UTC Function	Enabled	Up-the-coax control for remote configuration
OSD Language	English (Default)	

Video Output

Parameter	Specification	Description
Video Output	1.0Vp-p Composite Video, 75Ω	Standard analog composite video output

Lens Specifications

Parameter	Specification	Description
Lens Model	C6001-A68	Custom ultra-wide-angle lens
Focal Length	1.6mm	Ultra-short focal length for maximum FOV
IR Filter	650nm Bandpass Filter	Optimized for visible light spectrum
Field of View (FOV)	210°	Ultra-wide diagonal field of view

Connector & Cable

Parameter	Specification	Description
Connector Type	GX12 4-Pin Female	Industry-standard M12 locking connector for vibration resistance
Cable Length	600 mm	Flexible cable length for easy installation
Cable Protection	Waterproof sleeve and cable clip included	IP-rated protection for outdoor use

Electrical Specifications

Parameter	Specification	Description
Power Supply	DC 12V \pm 50%	Wide voltage input range for vehicle compatibility
Power Consumption	Refer to module datasheet	Low power design

Environmental Specifications

Parameter	Specification	Description
Operating Temperature	-30°C ~ +70°C (-22°F ~ +158°F)	Automotive-grade temperature range
Operating Humidity	< 90% RH (Non-condensing)	Protected against humidity
Storage Temperature	-40°C ~ +80°C	Safe storage temperature range
Water Resistance	IP67 (with proper installation)	Waterproof design for exterior mounting

Mechanical Specifications

Parameter	Specification	Description
Dimensions	See dimension drawing	Compact form factor
Housing Material	Automotive-grade materials	Durable construction
Mounting	Surface/flush mount compatible	Flexible mounting options

Package Contents

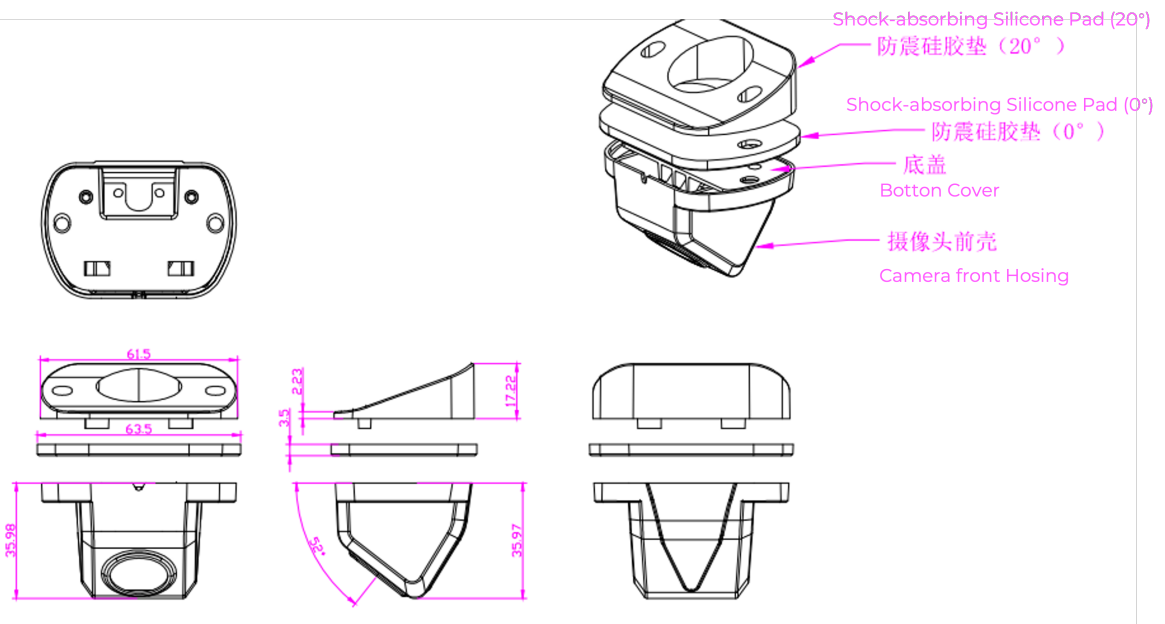
Item	Quantity
Camera Module	1pc
Quality Certificate	1pc

Product Images

Camera Module Overview



Dimensions (mm)



Technical Highlights

Ultra-Wide 210° Field of View

The camera's extreme 210° field of view enables:

- **Bird's-Eye View System:** When four cameras are mounted around the vehicle, the system stitches together a complete 360° overhead view
- **Minimal Blind Spots:** Ultra-wide coverage ensures maximum visibility around the vehicle
- **Parking Assistance:** Enhanced visibility for tight parking maneuvers
- **Obstacle Detection:** Clear view of obstacles in close proximity to the vehicle

0.01 Lux Low-Light Performance

The camera's exceptional low-light sensitivity provides:

- **Night Operation:** Clear images in extremely low-light conditions
- **Parking Garage Visibility:** Good performance in dimly lit parking structures

- **24/7 Monitoring:** Reliable operation day and night

AHD Technology Benefits

AHD (Analog High Definition) technology offers:

- 1080P HD video over standard coaxial cable
- Cost-effective installation using existing cabling
- Low latency for real-time surround view display
- Long-distance transmission capability

360° System Architecture

A typical 360° surround view system requires:

- **4 Cameras:** Front, rear, left, and right mounting positions
- **MDT600/Video Processor:** Stitches images from all four cameras
- **Calibration:** Proper calibration ensures seamless image stitching

System Integration

Compatible Vehicle Types

This camera is suitable for:

- Commercial vehicles (trucks, buses)
- Emergency vehicles

System Components Required

1. **4× IN-813-A200H Cameras** (one for each side)
2. **MDT600 Unit** (typically factory head unit or aftermarket display)
3. **Wiring Harness** (power and video cables)

Revision History

Version	Date	Description
1.0	October 10, 2025	Initial Release

Document prepared by: **InHand Mobility Team**