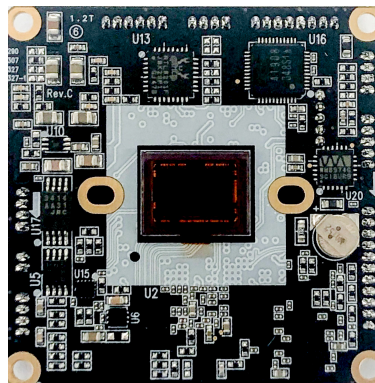


# SPECIFICATIONS

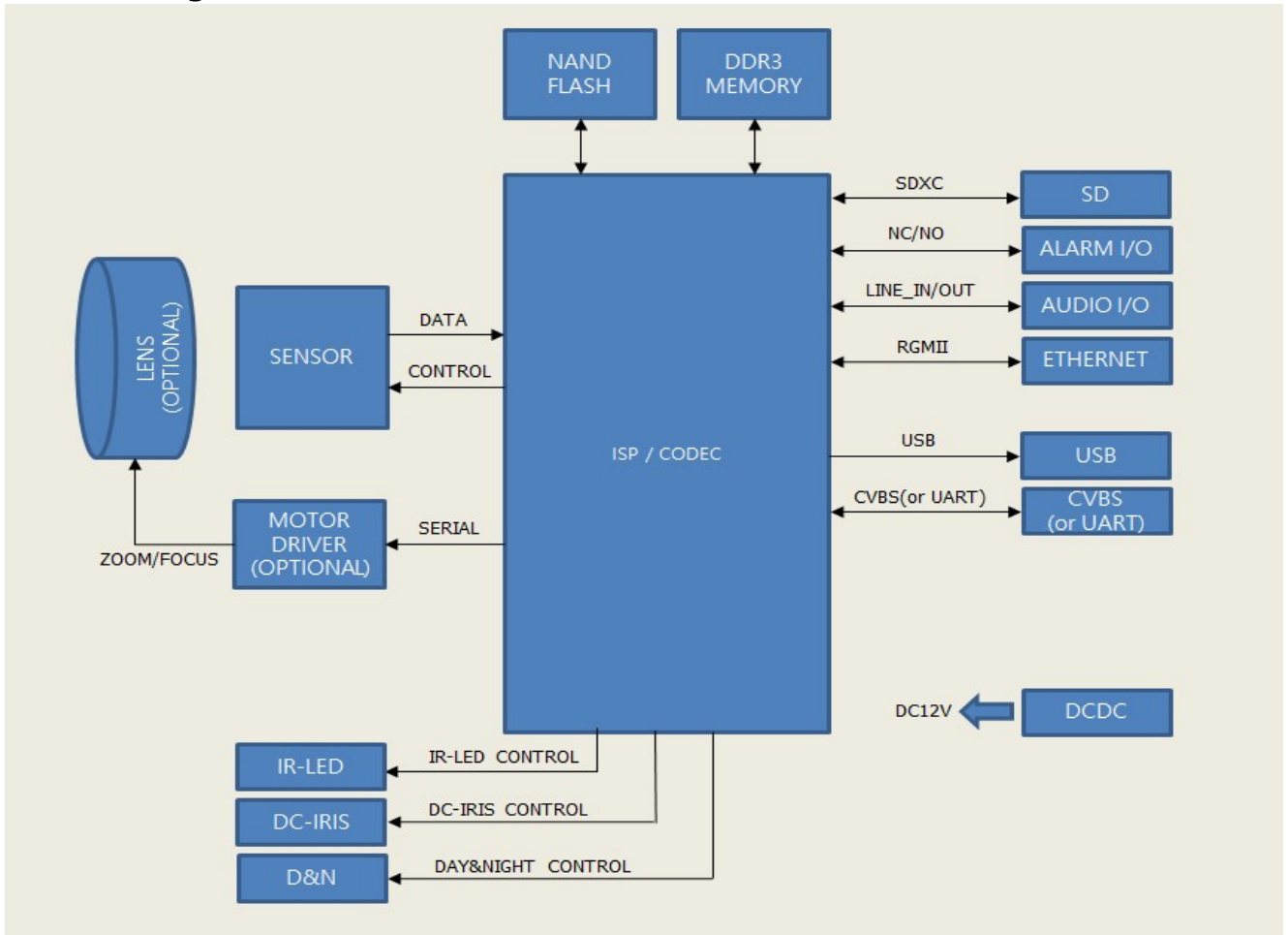
IP CAMERA MODULE

2MP

Model : IMO-2004

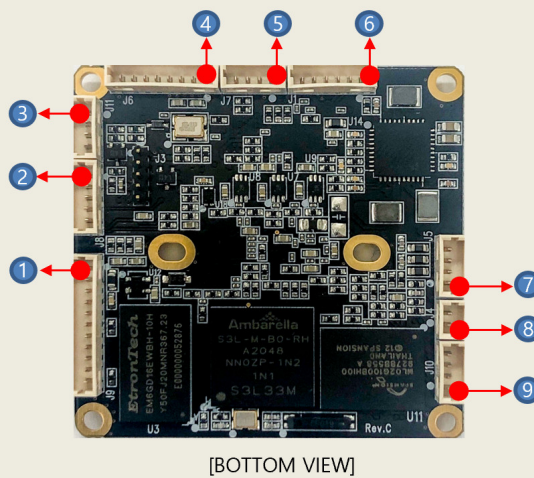
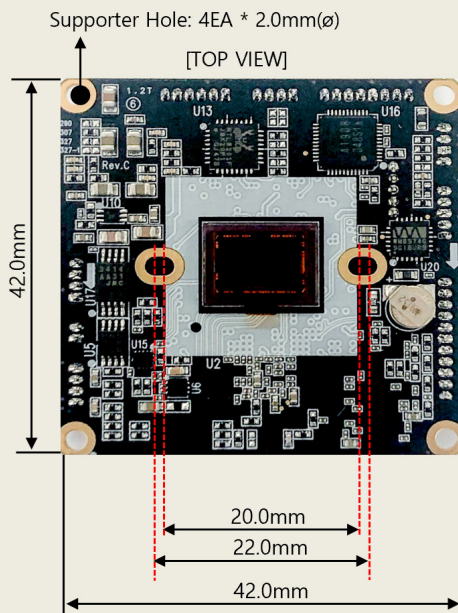


# 1. Block Diagram



# 2. Module Dimension

- ① 11p Connector: SD  
J9 : Molex, P/N : 53047-1110
- ② 5p Connector: Audio\_IO / Alarm\_IO  
J8 : Molex, P/N : 53047-0510
- ③ 4p Connector: IR\_LED  
J2 : Molex, P/N : 53047-0410
- ④ 8p Connector: Zoom/Focus(Optional)  
J6 : Molex, P/N : 53047-0810
- ⑤ 4p Connector: CVBS(or UART)  
J7 : Molex, P/N : 53047-0410
- ⑥ 6p Connector: Ethernet  
J1 : Molex, P/N : 53047-0610
- ⑦ 4p Connector: DC Iris  
J5 : Molex, P/N : 53047-0410
- ⑧ 2p Connector: D&N  
J4 : Molex, P/N : 53047-0210
- ⑨ 4p Connector: USB  
J10 : Molex, P/N : 53047-0410



### 3. Connectors

<b>J4 : DAY &amp; NIGHT, Molex P/N : 53047-0210</b>		
Pin No.	Pin Name	Description
1	Motor -	Night Mode : Active Low
2	Motor +	Day Mode : Active High

<b>J5 : DC IRIS, Molex P/N : 53047-0410</b>		
Pin No.	Pin Name	Description
1	Drive -	Normally connect to GND
2	Drive +	Iris motor drive
3	Control +	Iris motor control +
4	Control -	Iris motor control -

<b>J2 : IR_LED, Molex P/N : 53047-0410</b>		
Pin No.	Pin Name	Description
1	DC +12V	DC +12V Power output
2	IR_LED_INPUT	IR_LED CDS signal input from IR board
3	GND	GND
4	IR_LED ON/OFF OUTPUT	IR_LED_On/Off TTL signal output to IR board

<b>J6 : ZOOM/FOFUS, Molex P/N : 53047-0810 (Optional)</b>		
Pin No.	Pin Name	Description
1	Focus A-	Focus In-
2	Focus A+	Focus In+
3	Zoom A-	Zoom In-
4	Zoom A+	Zoom In+
5	Zoom B+	Zoom Out+
6	Zoom B-	Zoom Out-
7	Focus B-	Focus Out-
8	Focus B+	Focus Out+

<b>J1 : Power &amp; Network, Molex P/N : 53047-0610</b>		
Pin No.	Pin Name	Description
1	+12V	DC +12V input
2	PHY_TX+	Ethernet TX+ signal output
3	PHY_TX-	Ethernet TX- signal output
4	PHY_RX+	Ethernet RX+ signal input
5	PHY_RX-	Ethernet RX- signal input
6	GND	GND

<b>J9 : SD, Molex P/N : 53047-1110</b>		
Pin No.	Pin Name	Description
1	DAT2	SD data2
2	DAT3	SD data3
3	CMD	Command signal
4	PWR	Power +3.3V
5	CLK	Clock signal
6	GND	GND
7	DAT0	SD data0
8	DAT1	SD data1
9	CD	Card Detect signal
10	WP	Write Protection signal
11	FACTORY SWITCH	Factory reset signal input signal

<b>J8 : AUDIO/ALARM, Molex P/N : 53047-0510</b>		
Pin No.	Pin Name	Description
1	AUDIO_IN	Audio Line_In signal
2	AUDIO_OUT	Audio Line_Out signal

3	GND	GND
4	ALARM_IN	Alarm In signal
5	ALARM_OUT	Alarm Out signal

**J10 : USB, Molex P/N : 53047-0410**

Pin No.	Pin Name	Description
1	VSUB	USB power output DC5V
2	USB_DM	USB data -
3	USB_DP	USB data +
4	GND	GND

**J7 : CVBS (or UART), Molex P/N : 53047-0410**

Pin No.	Pin Name	Description
1	PHY_LINK	PHY Link indication output signal
2	GPIO7_1(or UART1_TXD)	GPIO(or UART1_Tx signal)
3	CVBS_OUT(or UART1_RXD)	Composite output signal(or UART1_Rx signal)
4	GND	GND

**4. Specifications**

<b>IMAGE</b>	
Image Sensor	Sony IMX307LQR-C, 1/2.8", RGB Bayer Array CMOS Sensor
Total Number of Pixels	1945(H) x 1109(V) approx. 2.16M pixels
Scanning Mode	Progressive Scan
<b>CAMERA</b>	
Wide Dynamic Range	DOL HDR (Digital Over Lab High Dynamic Range)
Day and Night Mode	Automatic, Day, Night
Noise Reduction	3D-NR
Auto Exposure Mode	Automatic, Manual
Shutter Speed Control	Automatic: Min. 1/30,000 sec ~ Max. 1/30 sec Manual: Min. 1/30,000 sec ~ Max. 1/30 sec
Gain Control	Automatic: Min. 0dB ~ Max. 69dB Manual: Min. 0dB ~ Max. 69dB
Auto White Balance Mode	Automatic, Outdoor, Shade, Clear sky, Fluorescent light, Light bulb, Manual
<i>Auto Focus (Optional)</i>	<i>One Push, Manual, (Automatic)</i>
<i>Optical Zoom (Optional)</i>	<i>Motorized 4.2x</i>
<i>Optical Zoom Speed (Optional)</i>	<i>1~6 Steps</i>
Digital Zoom	8x
On Screen Display	On/Off
Back Light Compensation	On/Off
High Light Compensation	On/Off
Image Effect	Mirror, Flip
Privacy Mask	Max.8 Area Selection
Tamper	On/Off
Video Motion Detection	Max.4 Area Selection
Corridor Format	90°/270°
Lens Distortion Compensation	On/Off
<b>NETWORK</b>	
Video Compression	H.265 Main profile, H.264(High, Main), MJPEG
Video Resolution	1920x1080, 1280x720, 1024x576, 768x432, 704x392, 640x360, 384x216
Video Frame Rate	Up to 30fps@1920x1080p
Video Streaming	Simultaneously H.265 and H.264 and MJPEG (Quad Streaming) Independent Frame Rate and Bandwidth Control, VBR/CBR Mode
Audio Streaming	Two way(G.711)
FTP Uploading	MJPEG Still Image
Event In	Onboot/Trigger/Network Loss/Tampering/Motion
Event Out Notification	E-mail, FTP
Login Authority	Administrator, Operator, Guest
Event Buffering	FTP : Pre/Post Event Time: 0~30sec, FPS: 1~2 fps

Manual Trigger	Still Image Capture
Security	Multi User Authority, IP Filtering, HTTPS
Network Time Sync	Synchronize Computer/NTP Server, Manual
Software Reset	Restart, Reset, Factory Default
Auto Recovery	Backup, Restore
Remote Upgrade	Using Web Browser
Protocols	TCP/IP, UDP, IPv4/v6, HTTP, HTTPS, FTP, UPnP, RTP, RTSP, RTCP, DHCP, ARP, Zeroconf, Bonjour, SNMP
Client Software	Built-In Web, ONVIF Compatible 3rd Party VMS
Max. User Connection	10 Users
SDK Support	API, ONVIF Profile S/T Compliant
<b>EXTERNAL IN/OUT</b>	
Ethernet Tx/Rx	RJ-45(10/100Base-T)
IR_LED Control	IR_LED Control On/Off
Day & Night Control	IR_Cut_Filter Exchange
Iris Control	DC-Iris, Fixed
Alarm Control	Alarm-In 1/Alarm-Out 1
Audio	Line-In/Line-Out
USB	USB 2.0
CVBS(or UART)	Composite Out(or Serial TX/RX)
<b>OPERATION ENVIRONMENTS</b>	
Operating Humidity	0~90% (non-condensing)
Operating Temperature	0°C ~ +50°C
Power Supply	DC12V
Power Consumption	4W(without IR_LED)
Dimension	42.0(W) x 42.0(D) x 7.3(H)mm
Weight	15g

※ Specifications are subject to change without notice in advance.

\*Cable (Option)

