

SPECIFICATIONS

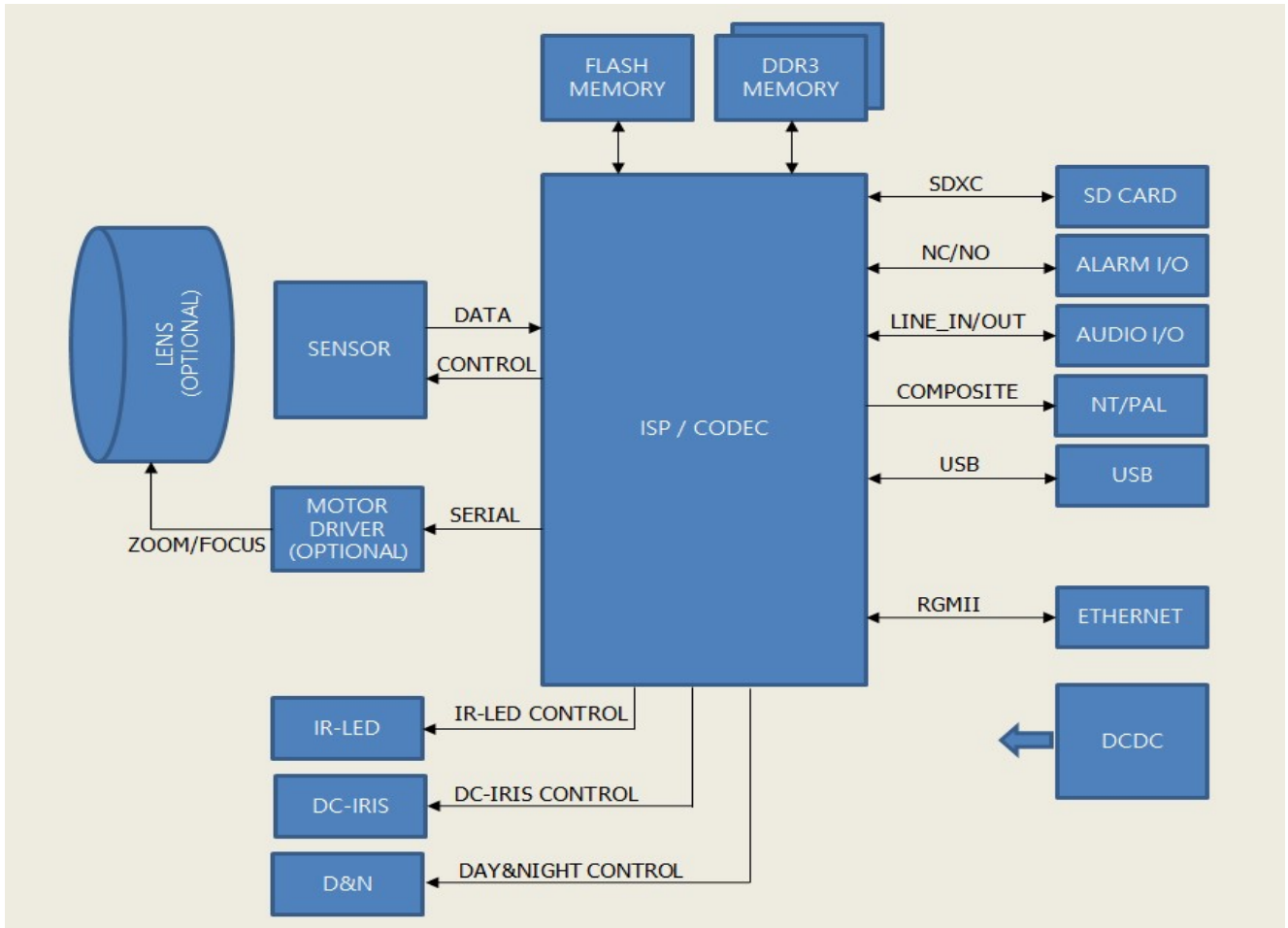
IP CAMERA MODULE

Model : IMO-2102-HC

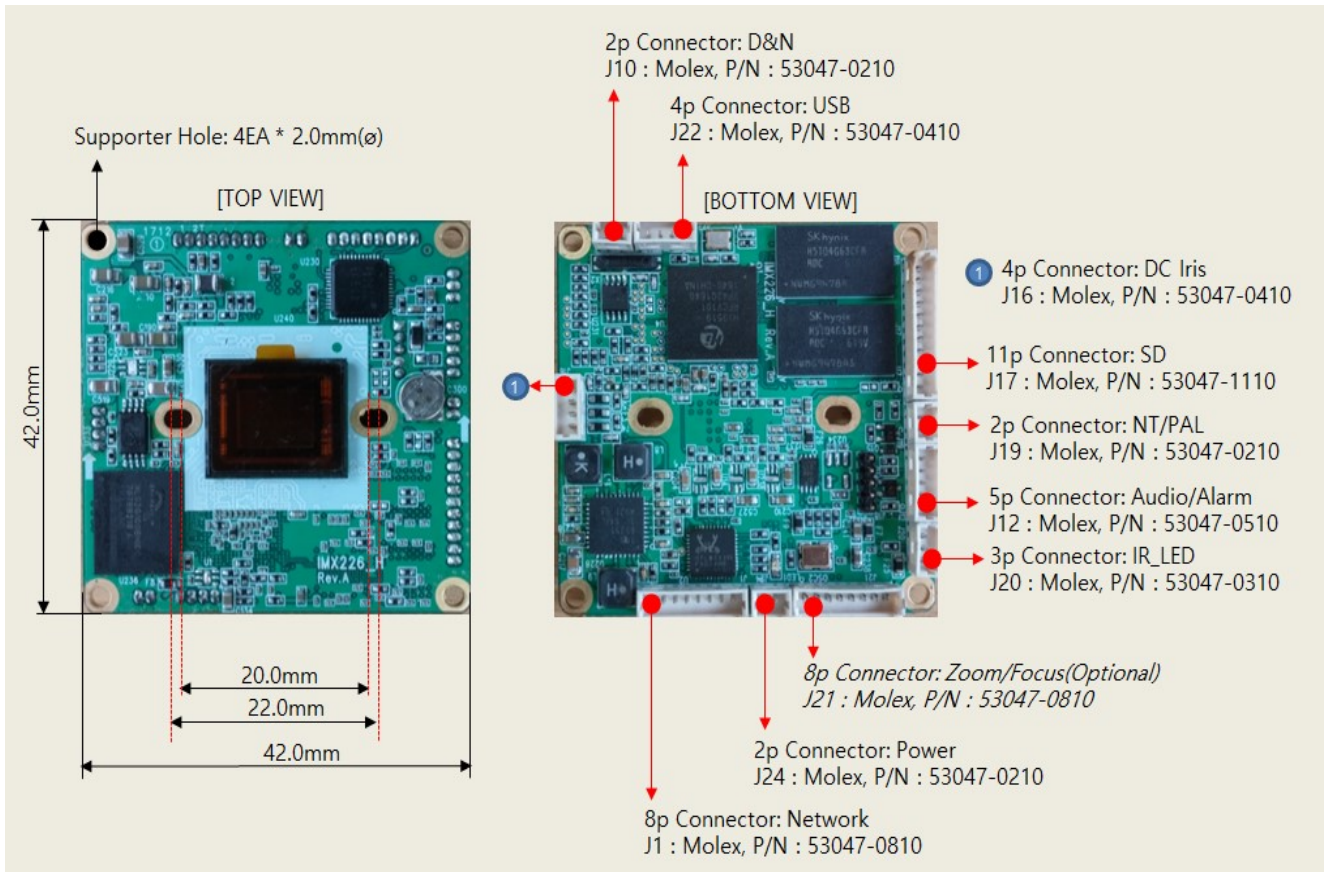
H.264 / H.265



1. BLOCK DIAGRAM



2. MODULE DIMENSION



3. CONNECTOR SPECIFICATIONS

J10 : DAY & NIGHT, Molex, P/N : 53047-0210		
Pin No.	Pin Name	Description
1	Motor -	Night Mode : Active Low
2	Motor +	Day Mode : Active High

J16 : DC IRIS, Molex, P/N : 53047-0410		
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 +

J20 : IR_LED, Molex, P/N : 53047-0310		
Pin No.	Pin Name	Description
1	DC +12V	DC +12V Power output
2	IR_LED_INPUT	IR_LED_On/Off TTL signal input from IR board
3	GND	GND

J21 : ZOOM/FOFUS, Molex, P/N : 53047-0810 (Optional)		
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+

J1 : Network, Molex, P/N : 53047-0810		
Pin No.	Pin Name	Description
1	MDIP0	1000Base-T: BI_DA+, 10/100Base-T: TX+ signal output
2	MDIN0	1000Base-T: BI_DA-, 10/100Base-T: TX- signal output
3	MDIP1	1000Base-T: BI_DB+, 10/100Base-T: RX+ signal input
4	MDIN1	1000Base-T: BI_DB-, 10/100Base-T: RX- signal input
5	MDIP2	1000Base-T: BI_DC+, 10/100Base-T: open
6	MDIN2	1000Base-T: BI_DC-, 10/100Base-T: open
7	MDIP3	1000Base-T: BI_DD+, 10/100Base-T: open
8	MDIN3	1000Base-T: BI_DD-, 10/100Base-T: open

J17 : SD, Molex, P/N : 53047-1110		
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

J12 : AUDIO/ALARM, Molex, P/N : 53047-0510		
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

J19 : NT/PAL, Molex, P/N : 53047-0210		
Pin No.	Pin Name	Description
1	NT/PAL	NT/PAL composite output signal
2	GND	GND

J22 : USB, Molex, P/N : 53047-0410		
Pin No.	Pin Name	Description
1	VSUB	USB Power +5.0V Out for USB Device
2	DM	USB Data -
3	DP	USB Data +
4	GND	GND

J24 : POWER, Molex, P/N : 53047-0210		
Pin No.	Pin Name	Description
1	GND	GND
2	DC +12V	DC +12V Input

4. MODULE SPECIFICATIONS

LENS (12MP)	
<i>Focal Length</i>	<i>1.85mm</i>
<i>F No.</i>	<i>F 2.0</i>
<i>Image Format</i>	<i>1/1.8"</i>
<i>Dimension(mm)</i>	<i>Φ34 × 29.27 mm</i>
<i>Field of View</i>	<i>H185° × V185°</i>
IMAGE	
Image Sensor	Sony IMX226CQJ-C 1/1.7" 12.76Megapixel RGB Bayer Array CMOS Sensor
Number of Effective Pixels	Mode 1/1.7(12M): 4,072(H) x 3,046(V) approx. 12.40M pixels 4:3 Mode 1/1.9(4K2K): 4,152(H) x 2,174(V) approx. 9.03M pixels 17:9
Scanning Mode	Progressive Scan
CAMERA	
Wide Dynamic Range	DOL True-WDR
Day and Night Mode	Automatic, Day, Night, External
Noise Reduction	2D-NR, 3D-NR
Auto Exposure Mode	Automatic (Priority: Frame rate/Low noise), Manual
Shutter Speed Control	Automatic: Min. 1/135,000 sec ~ Max. 1/60 sec Manual: Min. 1/10,000 sec ~ Max. 1/10 sec
Gain Control	Automatic: Min. 1.2dB ~ Max. 54dB Manual: Min. 1.2dB ~ Max. 54dB, Default 1.2dB
Auto White Balance Mode	ATW-Indoor/Outdoor, Shade, Clear sky, Fluorescent light, Light bulb, Flame, Manual
<i>Auto Focus (Optional)</i>	<i>One Push, Manual, (Automatic)</i>
<i>Optical Zoom (Optional)</i>	<i>Motorized 2.46x</i>
<i>Optical Zoom Speed (Optional)</i>	<i>1~6 Steps</i>
Digital Zoom	-
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	--°/--°
Defog	On/Off
Lens Distortion Compensation	On/Off
Digital Image Stabilization	On/Off
Video Content Analysis	Line Cross / Field Intrusion / Appear / Disappear
Fisheye Dewarping	One Panoramic / Two Panoramic / Four Normal / One Panoramic + Two Normal
NETWORK	
Video Compression	H.265 Main profile, H.264(High, Main, Base line profile), MJPEG
Video Resolution	4000x3000(12M), 3840x2160(4K2K), 2592x1944(5M), 2048x1536(QXGA), 1920x1080(Full-HD), 1280x1024(SXGA), 1280x720(HD), 704x480(4CIF/NT), 704x576(4CIF/PAL), 640x480(VGA), 352x288(CIF), 320x240(QVGA)
Video Frame Rate	Up to 20fps@4000x3000p, Up to 30fps@3840x2160p
Video Streaming	Simultaneously H.265 and MJPEG (Triple Streaming) or Simultaneously H.264 and MJPEG (Triple 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
Client Software	Built-In Web, ONVIF Compatible 3rd Party VMS
Max. User Connection	10 Users
SDK Support	API, ONVIF Profile S Compliant
EXTERNAL IN/OUT	
Ethernet Tx/Rx	RJ-45(10/100/1000Base-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
SD Card	-
Audio	Line-In/Line-Out
NT/PAL	-
USB	USB 2.0
POWER	DC +12V Input
OPERATION ENVIRONMENTS	
Operating Humidity	0~90% (non-condensing)
Operating Temperature	0°C ~ +50°C
Power Supply	DC12V
Power Consumption	7W(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.