

**CUSTOMER'S  
APPROVAL SHEET**

**( Model : AMA-2701 )**

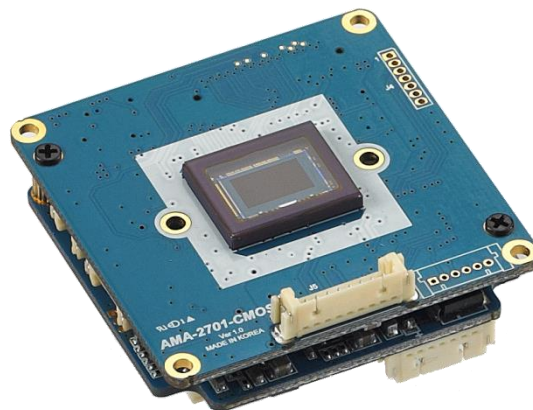
<b>CUSTOMER</b>	<b>APPROVED</b>		
<b>SUPPLIER</b>	<b>DRAWN</b>	<b>CHECK</b>	<b>APPROV</b>



## 2. Features

- 최대 2메가 픽셀( 1090 x 1080 )고해상도.
- Full HD 1080p, 30fps 영상 전송.
- 42 sized 2 Board type.
- Sony Exmor CMOS Image Sensor 적용.
- CVBS 외부 출력 지원
- POE(IEEE802.3at) 지원
- SD 메모리(최대 128GB) 저장 기능 지원 (option).
- ONVIF 19.12지원
- Web관리자 또는 전용프로그램을 통한 간편한 F/W updata.
- Motorized Focus Zoom Lens지원(option)

## 3. Product Picture



## 4. Image Spec

항 목	내 용	
Image	Image Sensor	Sony Exmor 2.07Mega Pixels Image Sensor
	Diagonal Size	8.35mm (Type 1/2)
	Scan method	Progressive Scan
	Total Pixels	1952(H) x 1113(V), 2.17 Mega Pixels
	Effective Pixels	1945(H)x 1097(V), 2.13 Mega Pixels
Function	Day & Night	Auto / Day(Color) / Night(BW), ICR Control
	Privacy Area	On / Off (8 Programmable Zones)
	Motion Detection	432 Zone, Sensitivity 1 ~ 5 Step, On/Off
	Ext. Video	CVBS 1.0Vp-p 75Ω
	W D R	Real WDR On( Adjust ) / Off
	D N R	2DNR, 3DNR, On( Adjust ) / Off
	Defog	Detects Foggy, On( Adjust ) / Off
	S L D C	Simple Lens Distortion Correction, On( Adjust ) / Off
	Elec. Shutter	Auto(1/30~1/30000), Suppress Rolling, Manual
	Color adjust	Bright / Contrast / Saturation / Sharp / Hue
	White Balance	Auto(indoor) / Auto(Outdoor) / Push/ User
	OSD display	Text, Date, Time, Event, On / Off
	Image Mirror	Normal / mirror(H) / Flip(V) / Both(HV)
Electrical	Power Supply	DC12[V] ±10%
	Current	Max 200[mA]
Environmental	Operating Temp.	0°C ~ +50°C
	Preservation Temp.	-10°C ~ +60°C
	Humidity	0% ~ 90%
Physical Spec	Dimension	42mm(W) X 42mm(H) X 14.5mm(D), without holder
	Weight	40g

## 5. Network Spec

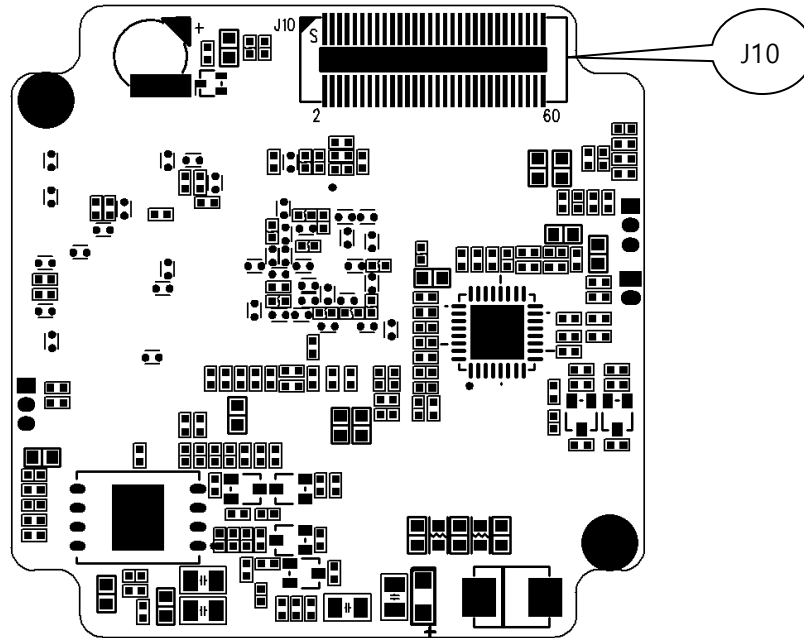
항 목		내 용
System	OS	Embedded Linux
Network	Interface	RJ45 10/100 Base-T PoE
	Protocol	TCP/IP,UDP/IP,RTP,RTSP,RTCP,NTP, HTTP,DHCP,FTP,SMTP,DNS,DDNS
	Onvif	Ver19.12
	Simultaneous Access	Max. 10 user
Video	Compress Format	H.265 / H.264 / MJPEG
	Resolution	1920x1080/1280x1024/1280x960/1280x720 /1024x768/640x480/320x240
	Max. Frame Rate	30fps @all resolution
	Video Quality	H.265 : Bitrate Control H.264 : Bitrate Control MJPEG : Quality Level Control
	Streaming	Triple Stream (Stream1,2,3) RTP/RTSP, UnicastRTP, Multicast RTP
Audio	Compress Format	G.711 u-law
	Streaming	Two way
Event	Sensor In	1 ( NC / NO )
	Alarm Out	1 (Digital Outut, Open Collector)
Web Browser	OS	Windows 7, 8, 10,
	Manager	IE 11이상, Firefox, Safari, Opera
	Viewer	IE only (Active-X)

## 6. MFZ Spec (option)

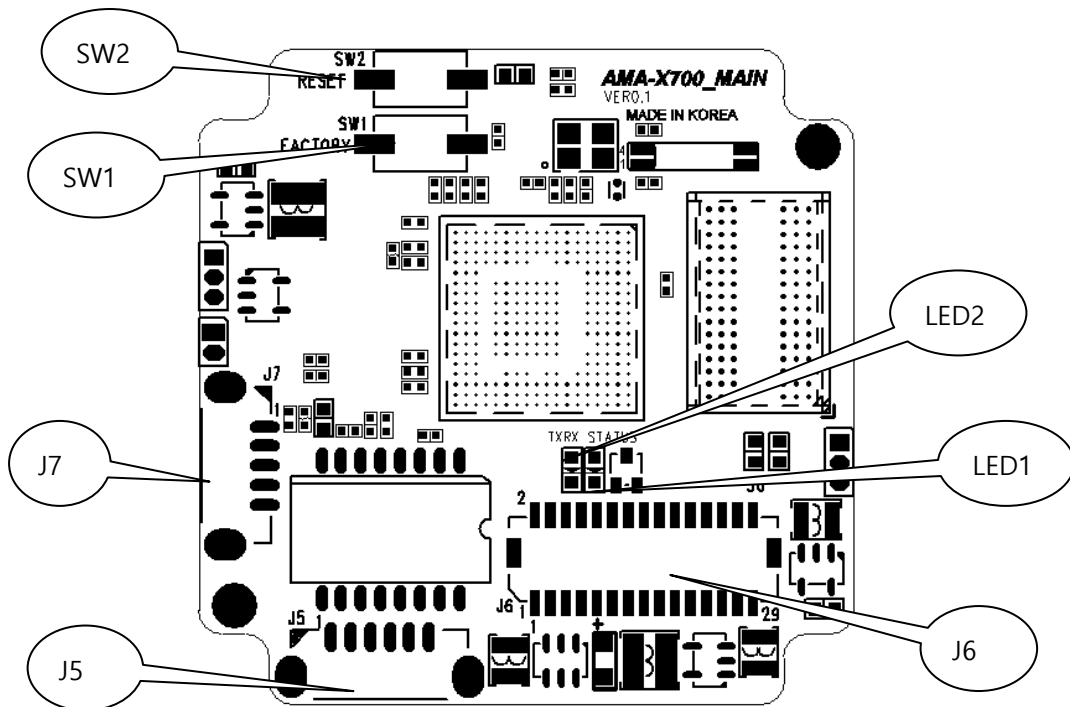
항 목	내 용
Max Power	3 Watt
Step Motor	2 pahse Bipolar
Motor Operating Volage	3.0 ~ 5.0 V
Support Lens	[ YTOT ] YT3010DB

### 7. Interface

7-1. Layout Main B/D Top



7-2. Layout Main B/D Bottom



## 7-1. J10 [SC-S0540275-060 ]- Ext. Board(Ex. CMOS B/D) Connection

No	Pin Name	Description	No	Pin Name	Description
1	VDD12V	DC +12V output	2	VDD12V	DC +12V output
3	GND	Power GND	4	GND	Power GND
5	IIC_SCL	for Sensor (option)	6	PCLK	PIXEL CLOCK
7	IIC_SDA	for Sensor (option)	8	CIN0	C DATA BIT0
9	MDRV_P	for ICR (option)	10	CIN1	C DATA BIT1
11	MDRV_N	for ICR (option)	12	CIN2	C DATA BIT2
13	UART_TX	Comm, TTL 3.3V	14	CIN3	C DATA BIT3
15	UART_RX	Comm, TTL 3.3V	16	CIN4	C DATA BIT4
17	UART_EN1	Ctrl , TTL 3.3V (option)	18	CIN5	C DATA BIT5
19	UART_EN2	Ctrl , TTL 3.3V (option)	20	CIN6	C DATA BIT6
21	RESET ISP	Ctrl , TTL 3.3V (option)	22	CIN7	C DATA BIT7
23	PWM_DRV	For IRIS ( No use )	24	YIN0	Y DATA BIT0
25	PWM_CNT	For IRIS ( No use )	26	YIN1	Y DATA BIT1
27	VD	V_Sync input	28	YIN2	Y DATA BIT2
29	HD	H_Sync input	30	YIN3	Y DATA BIT3
31	CAM_CS	For Sensor (option)	32	YIN4	Y DATA BIT4
33	CAM_SCK	For Sensor (option)	34	YIN5	Y DATA BIT5
35	CAM_SOUT	For Sensor (option)	36	YIN6	Y DATA BIT6
37	CAM_OUTCLK	For Sensor (option)	38	YIN7	Y DATA BIT7
39	CAM_XCLR	For Sensor (option)	40	-	No use
41	FUNC1	Ctrl , TTL 3.3V (option)	42	GND	Power GND
43	IIC1_SCL	(option)	44	GND	No use
45	IIC1_SDA	(option)	46	GND	No use
47	UART2_TX	Comm, TTL 3.3V (option)	48	GND	No use
49	UART2_RX	Comm, TTL 3.3V (option)	50	CVBS	CVBS output
51	-	No use	52	VDD1.8V	DC +1.8V output
53	GND	Power GND	54	GND	Power GND
55	VDD3.3V	DC +3.3V output	56	VDD3.3V	DC +3.3V output
57	GND	Power GND	58	GND	Power GND
59	VDD5.0V	DC +5.0V output	60	VDD5V	DC +5.0V output

표7-2 J6 [ BM30B-SRDS-G-TF, JST , Housing: SHDR-30V-S-B ] - Option 기능 결선용

No	Pin Name	Description	No	Pin Name	Description
1	VDD12V	POE DC+12V Input	2	VDD3V3	DC +3.3V for LED
3	GND	Power GND	4	Ext VIDEO	CVBS output
5	CRDX	LAN_CRX to POE,	6	GND	Power GND
7	CTDX	LAN_CTX to POE	8	-	do not connect
9	ALARM_OUT	Open Collector	10	STATUS_LED	Statue, to Cathode
11	ALARM_IN	Open / Close(Low)	12	LED_OFF	LED Off, DC3.3V Input
13	LINE_IN	Audio Line Input	14	RESET	System Reset, Low
15	LINE_OUT	Audio Line Out	16	FACT	Factory Default, Low
17	TxRx_LED	LAN Link, to Anode	18	-	do not connect
19	GND	Power GND	20	-	do not connect
21	SD_WP	SD CARD Write Protect	22	VDD3V3	DC +3.3V for SD CARD
23	SD_CLK	SD CARD DATA CLOCK	24	GND	Power GND
25	SD_DATA3	SD CARD DATA Bit 3	26	SD_DET	SD CARD Detect
27	SD_DATA2	SD CARD DATA Bit 2	28	SD_CMD	SD CARD CMD
29	SD_DATA1	SD CARD DATA Bit 1	30	SD_DATA0	SD CARD DATA Bit 0

표7-3. J5 [ 12505WS-06, Yeon Ho Electronic, Housing : 12505HS-06] - Power &amp; LAN 연결

No	Pin Name	Description
1	VDD12V	DC +12V Input,
2	GND	Power GND
3	RDX-	ETHERNET Rx-
4	RDX+	ETHERNET Rx+
5	TDX-	ETHERNET Tx-
6	TDX-	ETHERNET Tx+

표7-4. J7 [ 12505WS-05, Yeon Ho Electronic , Housing : 12505HS-05] - IR LED 전원 및 컨트롤

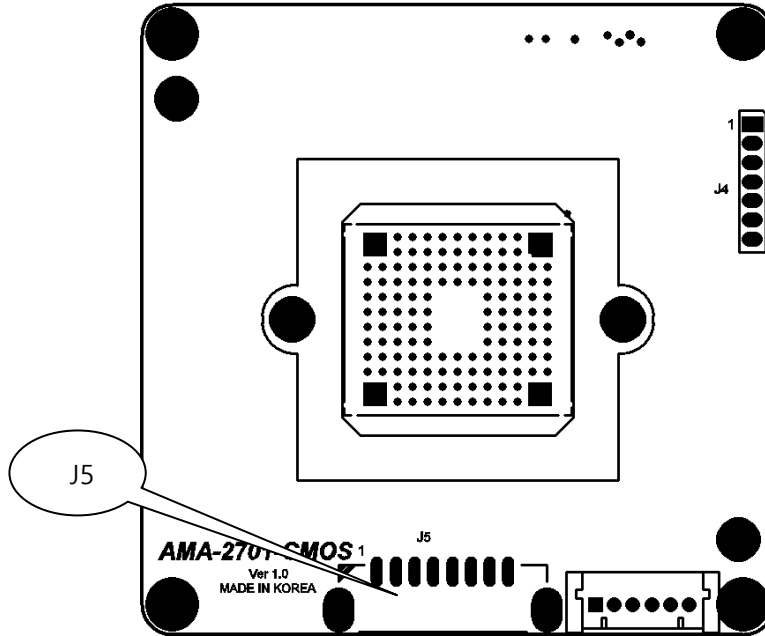
No	Pin Name	Description
1	VDD12V	DC +12V Output for IR LED, Max 500mA
2	IR_CTL-1	IR LED Control, TTL 3.3V, On/Off (option)
3	CDS_IN	CDS sensor Input, 3.3V 100KΩ Pull up
4	GND	Power GND
5	IR_CTL-2	IR LED Control, TTL 3.3V, On/Off (option)



표7-5. ETC

No	Name	Description
1	SW1	Factory Default Switch, 6초 이상 누르면 동작됨
2	SW2	No use
3	LED1	Module Status 상태 LED, RED color, 전원인가시 켜짐
4	LED2	ETHERNET 상태 LED, BLUE color , 통신 중 점멸

7-3 Layout Camera B/D Top



7-3 Layout Camera B/D Bottom

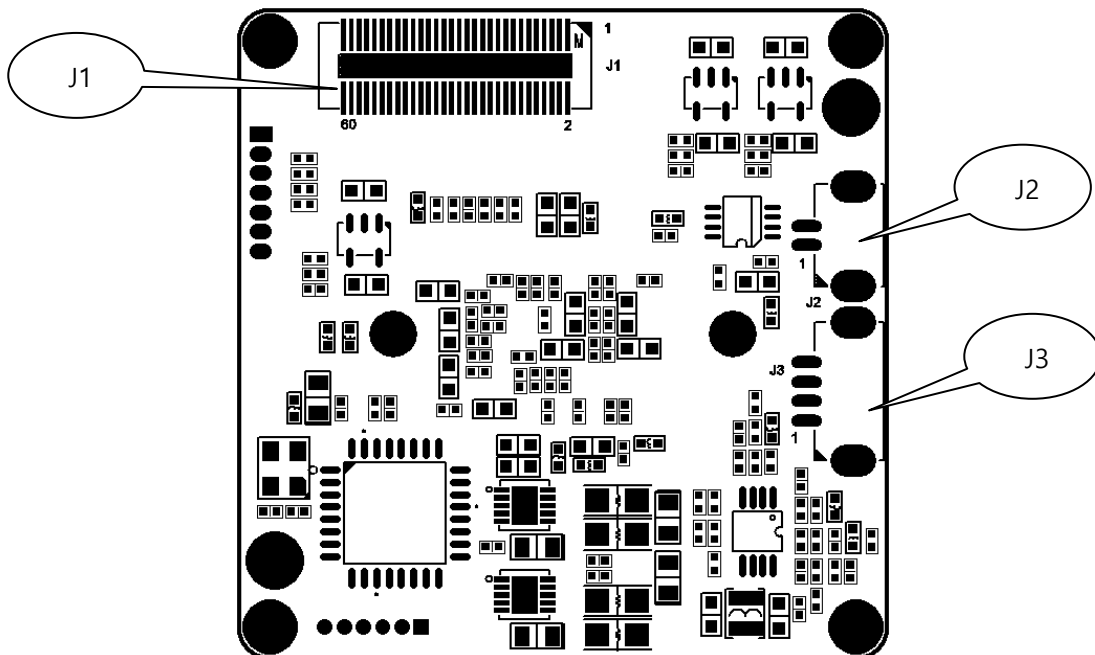


표7-6. J2 [ 12505WR-02, Yeon Ho Electronic, housing: 12505HS-02 ] - ICR 컨트롤

No	Pin Name	Description	Hold	Day	Night
1	MOTOR+	D&N Motor Control	H	L	H
2	MOTOR-	D&N Motor Control	H	H	L

표7-7. J3 [ 12505WR-04, Yeon Ho Electronic , housing : 12505HS-04] - Mechanical IRIS LENS

No	Pin Name	Description
1	DMP+	Mechanical IRIS Damping +
2	DMP-	Mechanical IRIS Damping -
3	DRV+	Mechanical IRIS Driver +
4	DRV-	Mechanical IRIS Driver -

표7-8. J5[ 12505WS-08, Yeon Ho Electronic , Housing : 12505HS-08] - Zoom &amp;, Focus Motor(옵션)

No	Pin Name	Description
1	FOCUS A-	FOCUS Pulse out
2	FOCUS A+	FOCUS Pulse out
3	ZOOM A-	ZOOM Pulse out
4	ZOOM A+	ZOOM Pulse out
5	ZOOM B+	ZOOM Pulse out
6	ZOOM B-	ZOOM Pulse out
7	FOCUS B-	FOCUS Pulse Out
8	FOCUS B+	FOCUS Pulse Out

8. IO description

그림7-1. ALARM\_IN

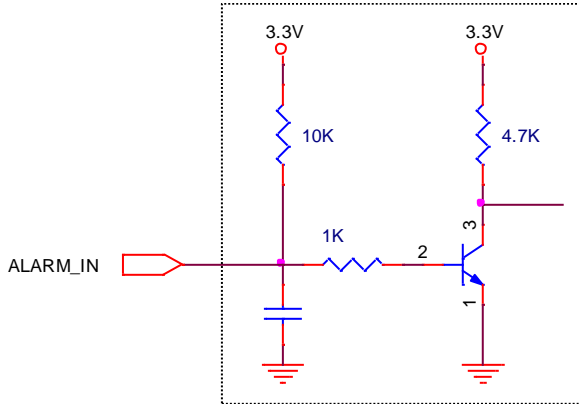


그림7-2 ALARM\_OUT

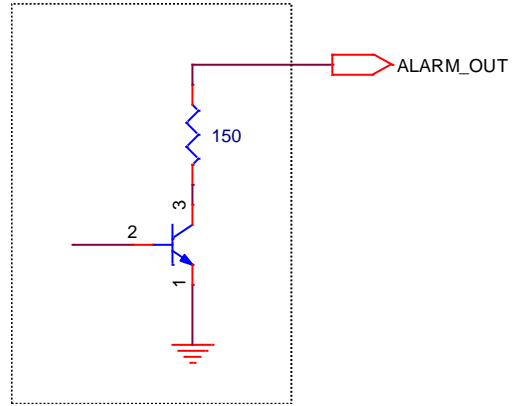


그림7-3. CDS

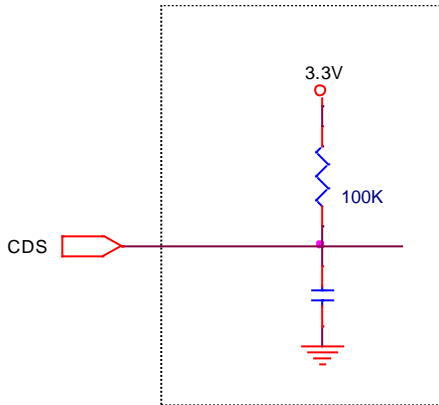


그림7-4. IR\_CTL

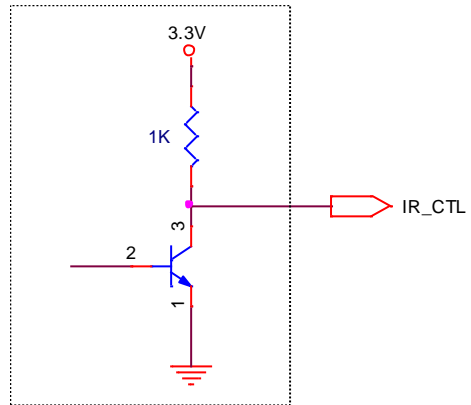


그림7-5.LINE\_IN

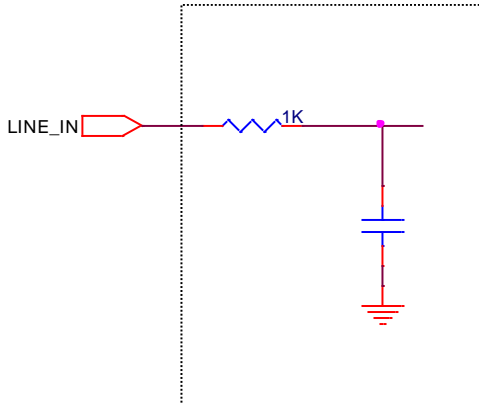
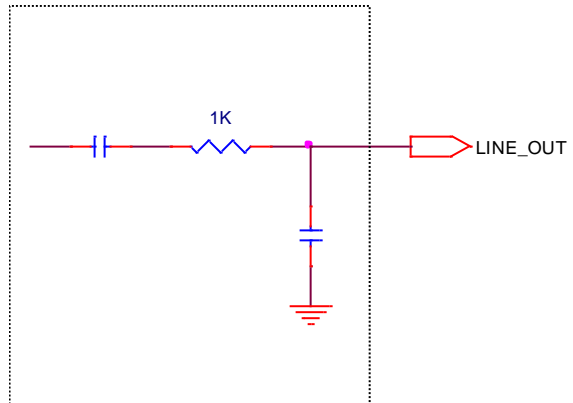


그림7-6.LINE\_OUT



### 9. PCB Dimension

#### 9-1 Main Board Dimension

