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**< FlexWATCH® Module >**

**JAN. 2014.**

**Strategic Business Department**

**FlexWATCH® - Seyeon Tech Co., Ltd.**



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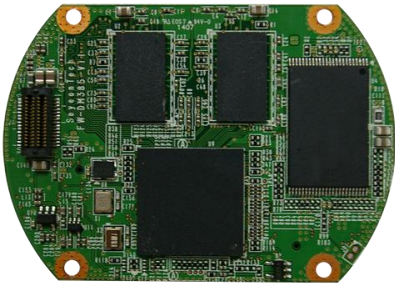
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# 1. IP Module (Main Board)

## Key Features (Main Board)

1. Motion JPEG and H.264 Dual Streaming
2. Controllable frame rate and bandwidth
3. 8 bit PCM (G.711-u-low), Sampling rates 8KHz, Mono Audio, 1ch in & 1ch out
4. 10/100 BaseT Ethernet
5. Wireless connectivity by USB interface (IEEE 802.11b/g)
6. Serial Interface COM Port : UART, TTL level, ports for console, serial input/output device
7. Supports Protocols  
ONVIF, HTTP, HTTPS, IPv4/IPv6, RTP/RTSP, TCP/IP, FTP, Telnet, DHCP, SNMP  
SMTP client(e- mail), NTP
8. Dimension : 42 mm(W) x 42 mm(H) x 5 mm(D)

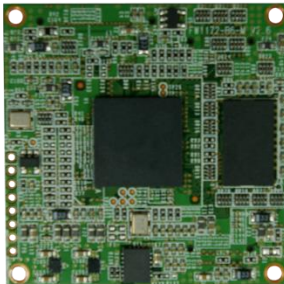
## 3M / IP Module Main Board



### MODEL NAME : FW1172-T6-M

CPU : 32Bit RISC CPU over Embedded Linux System  
Flash 128Mbytes / DDR3 : 512Mbytes  
Supports 2M (60fps) / 3M (30fps) / 5M (15fps)  
Motion JPEG and H.264 Dual Streaming  
Supports PTZ& UART Control, Audio, DI/DO, SD, USB

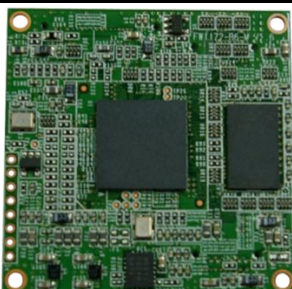
## 2M (1080P) / IP Module Main Board



### MODEL NAME : FW1172-C6-M

CPU : 32Bit RISC CPU over Embedded Linux System  
Flash 128Mbytes / SDRAM : 128Mbytes  
Supports Full-HD (1920 x 1080) / Up to 30fps  
Motion JPEG and H.264 Dual Streaming  
Supports PTZ& UART Control, Audio, DI/DO, SD, USB

## 1.3M / IP Module Main Board



### MODEL NAME : FW1172-B6-M

CPU : 32Bit RISC CPU over Embedded Linux System  
Flash 128Mbytes / SDRAM : 128Mbytes  
Supports 1.3M, HD(720P), D1 up to 30fps  
Motion JPEG and H.264 Dual Streaming  
Supports PTZ& UART Control, Audio, DI/DO, SD, USB

## 2. Sub Board

### LVDS Camera Interface Sub Board



#### MODEL NAME : FW1172-L6-S

- HD Sony LVDS Camera Micro Coaxial Cable Interface
- Up to Full HD ( 1920 x 1080 )
- V-OUT Interface : CVBS (NTSC only now)
- Interface for external PoE (IEEE 802.3af)
- VISCA TTL Interface for HD zoom module
- UART0 port for Console (RS232 Level)
- UART1 port for PTZ Control  
(TTL Level : TXD/RXD/DIR)
- Supports FW1172-B6-M, FW1172-C6-M
- Dimension : 42mm(H) x 42mm (V) x 10mm(H)

### Digital Interface Sub Board



#### MODEL NAME : FW1172-B6-S

- 8bit, 16bit Digital Video interface
- LAN Interface 10/100 Base-T Ethernet
- IEEE 802.3af PoE (Option) Support
- Micro SD I/F with FW-SD board
- 1 Digital input, 1 Digital output
- 1USB I/F, AUDIO IN, OUT I/F,  
1 UART(TTL) I/F, 1 RS485 I/F
- Supports FW1172-B6-M, FW1172-C6-M
- Dimension : 42mm(H) x 42mm (V) x 10mm(H)

### CVBS Analog Interface Sub Board



#### MODEL NAME : FW1172-A6-A1

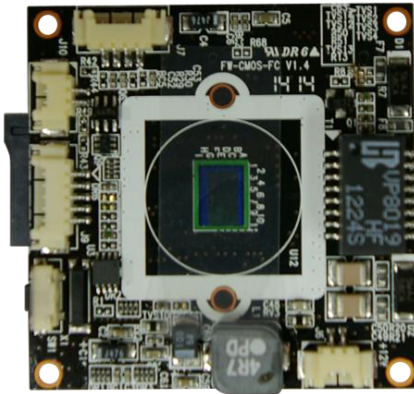
- Analog Video Input (CVBS)
- LAN Interface 10/100 Base-T Ethernet
- Interface for external PoE (IEEE 802.3af)
- VISCA TTL Interface for HD zoom module
- UART0 port for Console (RS232 Level)
- UART1 port for PTZ Control (TTL Level : TXD/RXD/DIR)
- 3D De-interlaced filter for Video quality
- Supports FW1172-B6-M
- Dimension : 42mm(H) x 42mm (V) x 10mm(H)

### 3. Sensor Board (for IP Module)

#### Sensor Board – Key Features

1. Day & Night Control – Auto, Color, Black & White
2. 2D Noise Filter, 3D Noise Filter, WDR, BLC
3. Video Output (Option)
4. AWB / AE / AF (for one-click focus)
5. DI/DO Interface : 1 TTL input and 1 TTL output (Option)
6. 2Way Audio Interface (Line In / Line Out, without Amplifier)
7. Serial Input / Output Device
8. Dimension : 42mm(H) x 42mm(V) x 10mm(H)

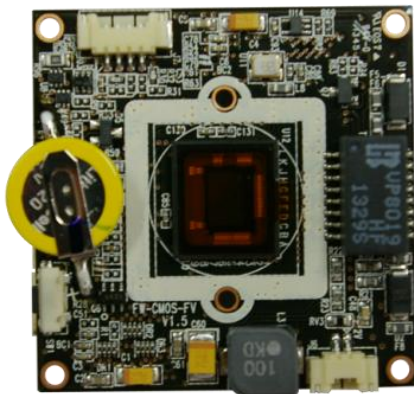
#### 2MegaPixel IP Camera Module Sensor Board



##### MODEL NAME : FW-CMOS-FC

- 1/2.7" 2.07M OV2710(Omnivision) CMOS Image Sensor
- Effective Pixel : 1920(H) x 1080(V)
- Resolution / 5 Level EX :  
HD(1920x1080), HD(1280x720),  
VGA(640x352), CIF(320x176), QCIF(160x96)
- UART ports for console
- IR LED Control Interface
- Built-in MicroSD Card Interface
- TDN (ICR) control Interface
- DI / DO Interface
- Audio Interface
- Video Out Interface (CVBS, NTSC Only)
- Supports Fixed Lens
- Supports FW1172-C6-M

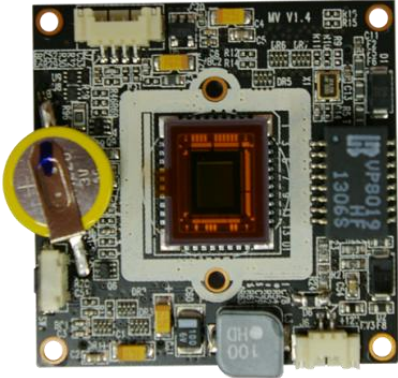
#### 2MegaPixel IP Camera Module Sensor Board



##### MODEL NAME : FW-CMOS-FV

- 1/2.9" 2.43M IMX122(Sony) CMOS Image Sensor
- Effective Pixel : 1984(H) x 1105(V)
- Resolution / 5 Level EX :  
HD(1920x1080), HD(1280x720), VGA(640x352),  
CIF(320x176), QCIF(160x96)
- IR LED control interface, DC-IRIS
- TDN (ICR) control Interface
- DI / DO Interface
- Video Out Interface (CVBS, NTSC Only)
- Supports Vari-focal Lens (DC IRIS) / Fixed Lens
- Supports FW1172-C6-M

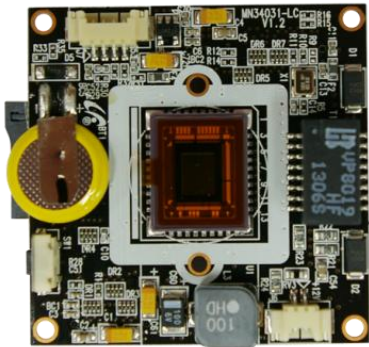
### 1.3MegaPixel IP Camera Module Sensor Board



#### MODEL NAME : FW-CMOS-MV

- 1/3" 1.3M MN34031(Panasonic) MOS Image Sensor
- Effective Pixel : 1280(H) x 1024(V)
- Resolution / 5 Level EX :  
1.3M(1280x1024), D1(720x480), VGA(640x352),  
CIF(320x176), QCIF(160x96)
- IR LED control interface, DC-IRIS
- TDN(ICR) control interface
- DI / DO Interface
- Video Out Interface (CVBS, NTSC Only)
- Supports Vari-focal Lens (DC-IRIS) / Fixed Lens
- Supports FW1172-B6-M (C6-M)

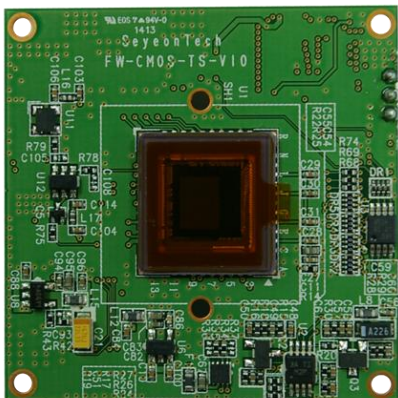
### 1.3MegaPixel IP Camera Module Sensor Board



#### MODEL NAME : FW-CMOS-MC

- 1/3" 1.3M MN34031(Panasonic) MOS Image Sensor
- Effective Pixel : 1280(H) x 1024(V)
- Resolution / 4 Level EX :  
1.3M(1280x1024), D1(720x480), VGA(640x352),  
CIF(320x176), QCIF(160x96)
- Built-in MicroSD Interface
- DI / DO Interface
- Video Out Interface (CVBS, NTSC Only)
- Supports Fixed Lens
- Supports FW1172-B6-M (C6-M)

### 3MegaPixel Camera Sensor Board

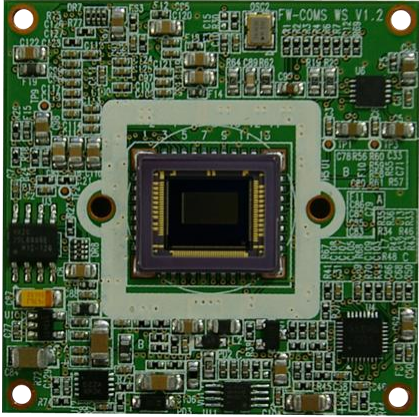


#### MODEL NAME : FW-CMOS-TS

- 1/2.8" 3.27M IMX036(Sony) CMOS Image Sensor
- Effective Pixel : 2096(H) X 1564(V)
- Resolution / 6 Level EX :  
QXGA(2048x1536), HD(1280x1024), 4CIF(704x480),  
VGA(640x480), CIF(320x240), QCIF(160x112)
- IR LED Control Interface, DC-IRIS Control Interface
- TDN (ICR) Control Interface
- Video Out Interface (CVBS, NTSC Only)
- Supports Vari-focal Lens (DC-IRIS) / Fixed Lens
- Supports FW1172-C6-M

**[ 3Layer Type : CMOS-TS + MainBoard + SubBoard ]**

## 2MegaPixel WDR Sensor Board



### MODEL NAME : FW-CMOS-WS

- 1/3" 2.1M Progressive Scan CMOS
- Total Number of pixels : 2010(H) X 1108(V)
- Resolution : 1920x1080, 1280x720,  
640x352, 320x176, 160x96
- Maximum frame rate in all-pixel scan mode : 60/30 fps
- WDR(30fps), 3D DNR, DIS, Auto White Balance,  
Day & Night (Auto, B&W, Color, Off), AGC Control
- IR LED Control Interface, Supports Vari-focal Lens (DC-IRIS)
- TDN (ICR) Control Interface
- Video Out Interface (CVBS, NTSC, PAL)
- Supports FW1172-C6-M

**[ 3Layer Type : CMOS-WS + MainBoard + SubBoard ]**

## 4. Option Board

### Full Option Board (LVDS Camera Interface Module Board)

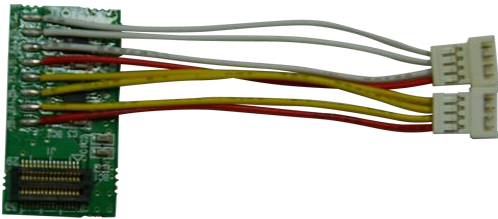


**MODEL NAME : FW1172-B6-O**

- Audio In / Out (Mic, Spk)
- Digital In / Out
- MicroSD Interface
- USB Interface for Wi-Fi USB Dongle
- Motorized Lens Control
- Video Interface Option

***Built-in 42x42 board can be inserted between Sensor board and Main board***

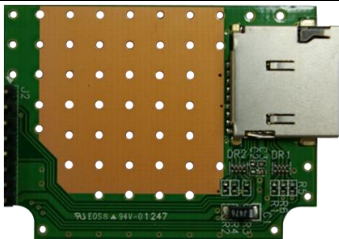
### 2Motor Lens Controller Option Board



**MODEL NAME : FW-MMM**

- Motor Control  
Allegro A3901  
Dual Full Bridge Low Voltage Motor Driver
- Output Specification  
Output Current : 300mA
- Dimension :  
28.2 mm(H) x 14.6 mm(V) x 1 mm(H)

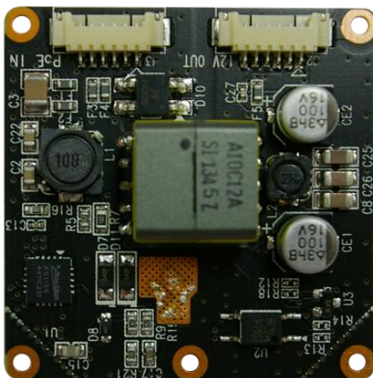
### MicroSD Card Slot Option Board



**MODEL NAME : FW-SD**

- Push Type (with post)
- 8PIN + Switch
- Blade Switch : Normally Open
- Dimension : 38 mm(H) x 38 mm(V) x 1 mm(H)

### IEEE 802.3af PoE Controller Option Board



**MODEL NAME : FW-PoE-S**

- Akros AS1135 Low-emission DC-DC Controller
- Input Voltage : 36 V to 57 VDC
- External Input Voltage : 12-24 VDC
- Output Voltage : 12 VDC MAX 12.95 watt
- Protection
  1. Input surge protection
  2. Over temperature protection
  3. Over load and short circuit protection
  4. 1500 Volt DC isolation (Input to Output)
- Dimension : 42 mm(H) x 42 mm(V) x 14 mm(H)



## 5. Contact Information

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