**8MP IMX415 Starlight AI ISP IPC Module**

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  **Product Feature:**

* Video resolution：3840\*2160/30fps
* Video encoding:H.265/H.264/MJPEG
* Integrated neural network acceleration engine, computing power up to 2.5Tops INT8
* Dual ARM Cortex A55@1.2GHz processor, 32KB I-Cache, 32KB D-Cache ,256KB L3 cache
* Support AI super noise reduction, 3D noise reduction, 2D noise reduction, image edge enhancement, defogging, dynamic contrast enhancement, etc.
* Support to remove fixed pattern noise (FPN)
* Support automatic restart function after power failure/accidental failure
* HDMI output optional(need buy expand board,video resolution is 1080P 30fps)
* USB3.0 output optional(Need buy expand board,video resolution is 3840\*2160)
* CVBS+DC auto iris output optional(Need buy expand board,video resolution is 704\*756)

**Datasheet：**

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| Order Model | M415H19D\_L21\_EN |
| System |
| CPU | HI3519DV500 Dual ARM Cortex A55@1000MHz |
| Algorithm | 2.5 Tops INT8 |
| Flash | 256Mbit SPI Nor Flash |
| DDR | 8Gbit DDR4 (2x 4Gbit)  |
| Image |
| Sensor | SONY IMX415，1/2.8″ Progressive Scan CMOS Sensor |
| Wide Dynamic Range | 120dB |
| Video Resolution | 8MP/3840\*2160 |
| Video Encoding | H.265/H.264/MJPEG |
| Video Resolution | Main stream | 3840\*2160 2592\*1944 2560\*1440 1920\*1080 (30fps) |
| Sub stream | 1280\*720 /704\*576/640\*480/ 352\*288 (30fps) |
| Video Bit rate | 32kbps~60Mbps，CBR/VBR adjustable |
| S/N Ratio | ≥50dB |
| Min Illumination | Color 0.02 Lux@F1.2 |
| Audio |
| Audio I/O | 1ch line in Or 1ch mic in,1ch line out,support two-way voice intercom  |
| Audio Encoding | G.711A、G.711U |
| Function |
| AE | Support |
| AGC | Support |
| AWB | Support |
| Noise Reduction | 2D noise reduction/3D noise reduction/ AI super noise reduction |
| Private Masking | 4 Privacy mask area  |
| Interesting Area Code | Support |
| Video Record Off Network | Support |
| Motion Detection | 4 detection area |
| Video Adjust | Adjust image contrast, brightness, saturation, sharpness and image mirroring, flipping, fog penetration, strong light suppression, backlight compensation, noise reduction level, digital wide dynamic, etc. |
| Remote Management | System setting/Video stream management/Account management/Network management |
| Alarm Detection | E-mail alarm,PC VMS alarm,Motion detection alarm |
| Hardware Interface | Reset(restore factory setting) |
| 2 Group TTL Serial Port ,communication with device or control PTZ Pan（One group can set to RS485 serial port）  |
| Default support 1ch alarm in ,（1ch alarm out need add expand board） |
| Support SD/TF storage，max support 1.0T （need add expand board） |
| OSD Overlay | OSD place ,color ,words can be setting |
| Network |
| Ethernet Interface | RJ45 10M/100M |
| Video Stream | Dual stream |
| Network Protocol | TCP/IP、UDP、RTP、RTSP、RTCP、RTMP、HTTP、HTTPS、802.1X、DNS、DDNS、DHCP、NTP、PPPOE、SMTP、UPNP |
| ONVIF | ONVIF Profile S |
| CGI | Support |
| General |
| Working Temperature | -20°~+70° |
| Working Humidity | 10%~90% |
| Power Adaptor | DC12V |
| Module Size |
| PCB Size | CPU Board | Board size:42mm\*42mm，Screw hole distance:34mm\*34mm； |
| Sensor Board | Board size :38\*38mm, Screw hole distance:34mm\*34mm,Lens holder distance:20mm |

  **Pin definition:**

