

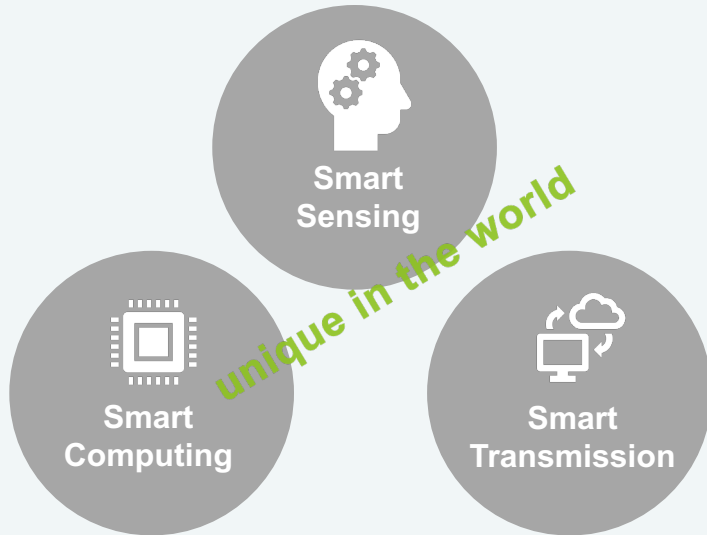
# Artosyn's Thermal & Night Vision Technologies

ONE-STOP DESIGN SERVICE FOR  
NIGHT VISION, THERMAL IMAGING AND FUSION PRODUCTS

SCOPES • MONOCULARS • BINOCULARS • OUTDOORS • WEARABLES

# About Artosyn Microelectronics (Est.2011)

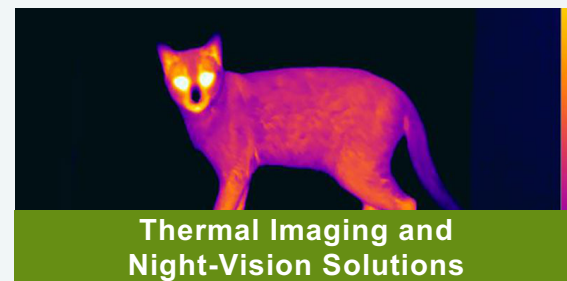
## core technologies



## products

Proprietary  
core IP and  
chips

## We offer solutions in the following directions



# Expertise



Thermal Scope Solution



Dual-spectrum Scope Solution



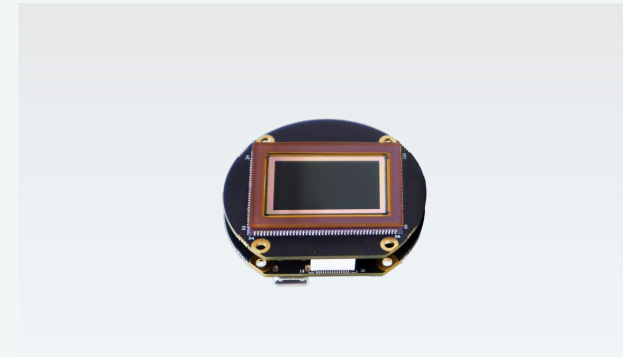
Night-Vision Goggles Solution



Long-distance  
Video transmission Solution



Drone Solution



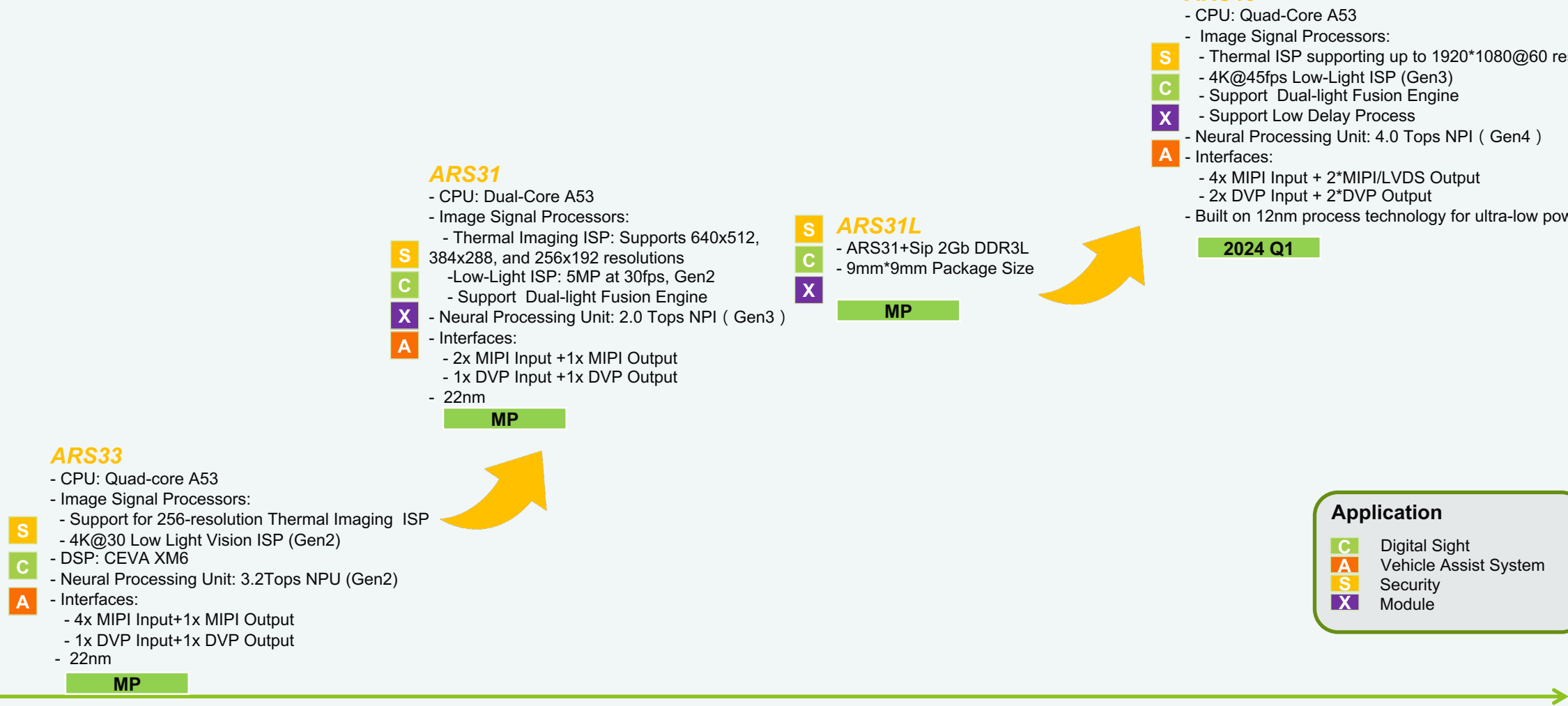
Night-Vision Module

# Available Solutions

Category	Description
Thermal Scope Solution	We provide the <b>256 / 384 / 640 solutions based on standard and customized InfiRay and Guide thermal modules</b> , ensuring that customers don't have to worry about issues such as sensor contamination, damage, or intricate packaging processes, and we can expand to 1280 and 1920 solutions as needed.
Dual-spectrum Scope Solution	We supports dual-light fusion and a picture-in-picture feature for both infrared and visible light channels.
Low-light Helmet Solution	<ol style="list-style-type: none"> <li>1. 800*600 resolution, 8um Pixel Size, 1/1.8 inch; latency &lt; 20ms; power &lt; 0.8W.</li> <li>2. 800*600 resolution, 16um Pixel Size, 1 inch; latency &lt; 20ms; power &lt; 0.8W.</li> </ol>
Long-distance Video transmission Solution	Artosyn offers solutions with <b>large bandwidth, ultra-long distance, strong anti-interference ability and low delay</b> for the three major characteristics of wireless image transmission: high definition, real-time and long distance. It can be widely used in drones, security monitoring, construction sites, TV broadcast, wireless medical treatment, special patrol and other fields to meet the needs of customers for rapid development and application.
Drone Solution	Artosyn provides customized schemes for the whole UAV, including bi-light UAV, obstacle avoidance UAV, fishing UAV and other models.

# Artosyn SOC Road Map for Thermal&Low-Light

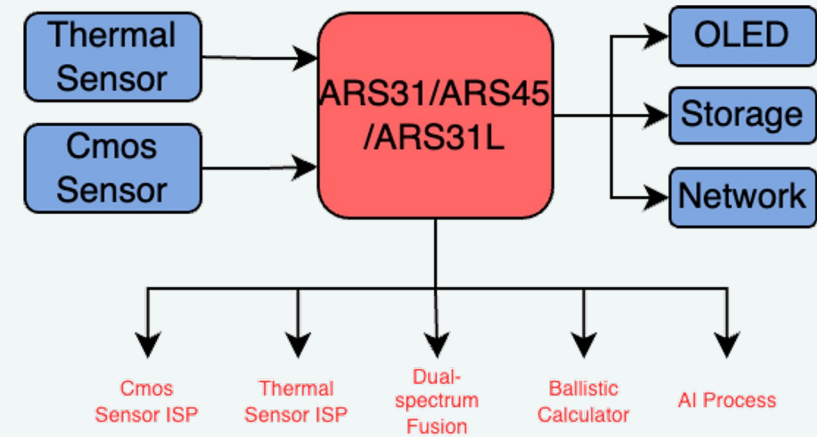
Performance



# Thermal Scope Solution



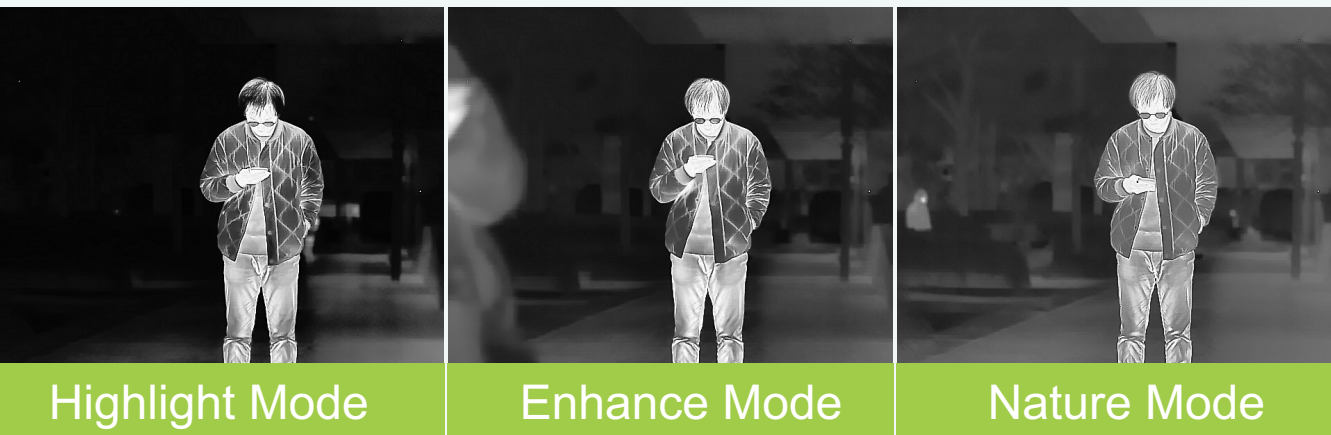
- **12um 256\*192, 384\*288, 640\*512** resolution thermal imaging detectors
- exceptionally clear images and excellent thermal sensitivity in all weather conditions.



- highly integrated SOC
- directly drive thermal imaging detectors
- dual optical fusion, AI algorithms, etc.,
- eliminating the need for FPGAs or specialized ASIC chips.



# Thermal Scope Solution



Supports **various lighting adjustment modes**, user-friendly debugging tools, and image quality that can adapt to multiple modes such as search and temperature measurement



VS

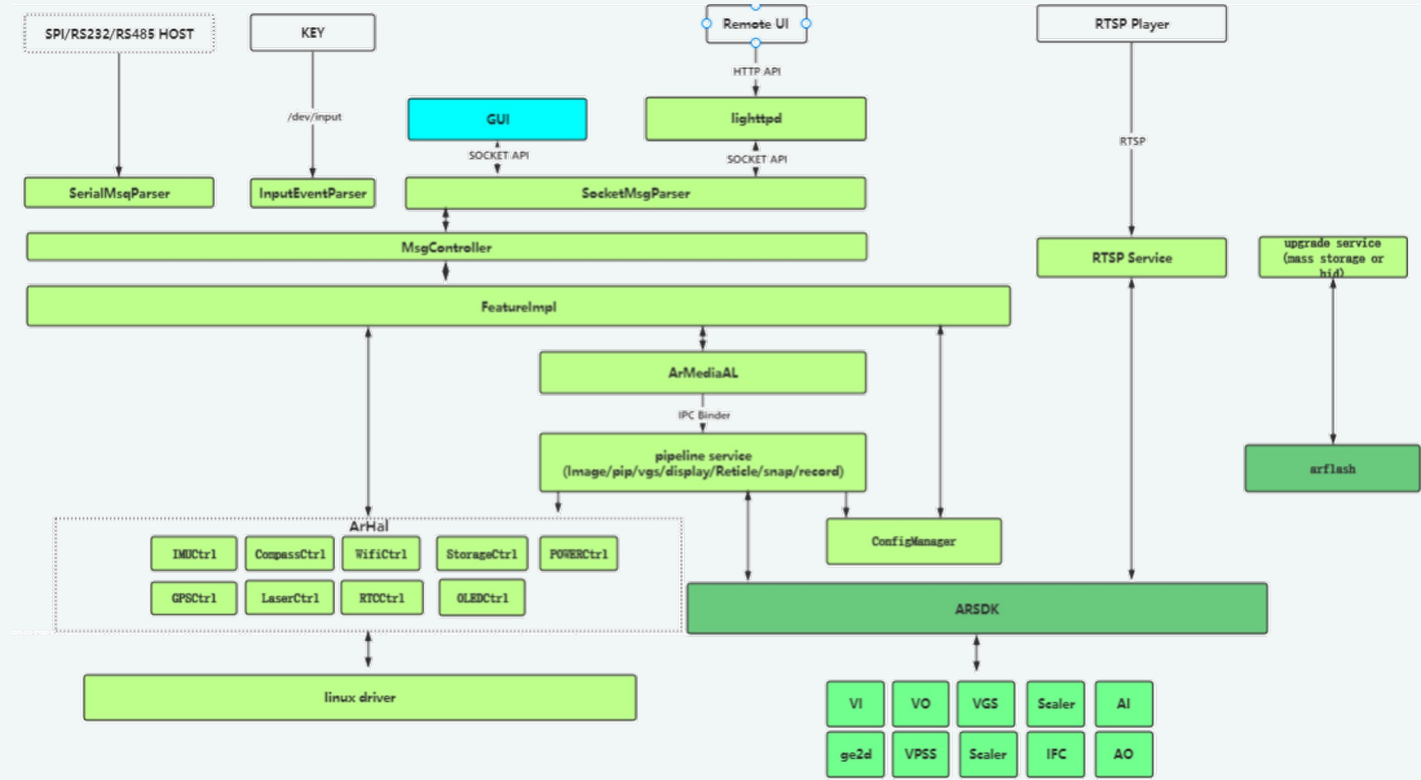
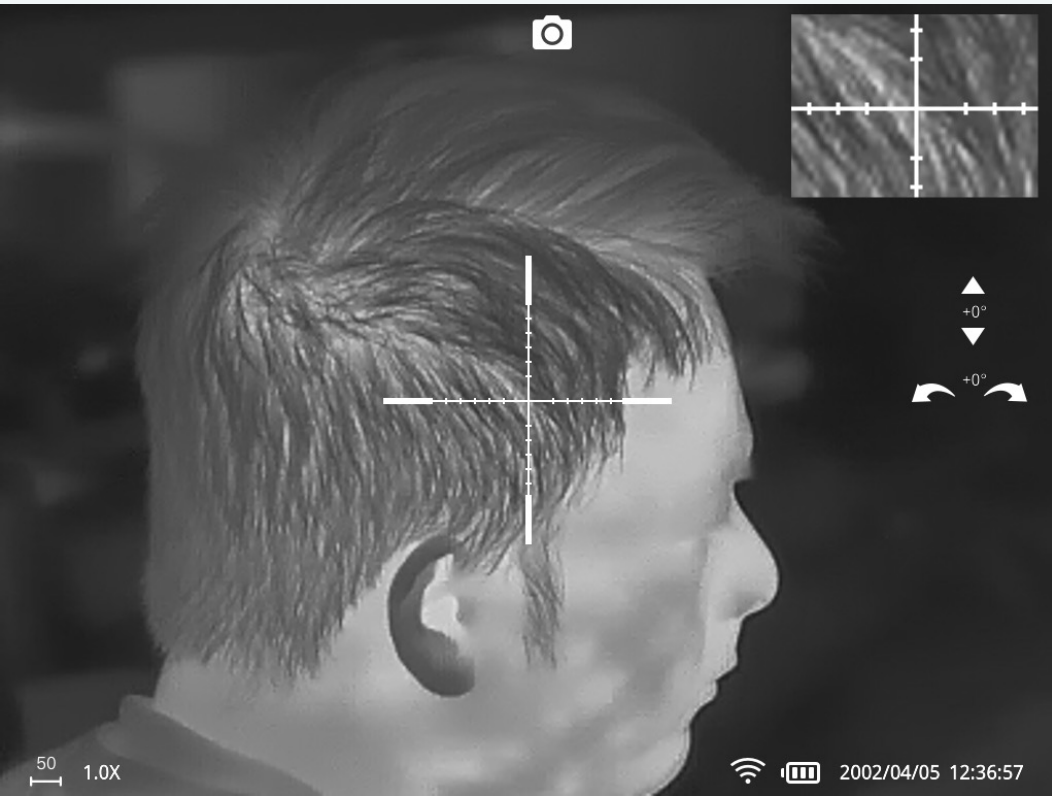


ARS31 SOC  
+ Artosyn Customized  
(256\*192) Module

HIKMICRO LE10  
(256\*192)

Artosyn's proprietary SOC combined with a **customized detector module** delivers superior image quality.

# Software Solution



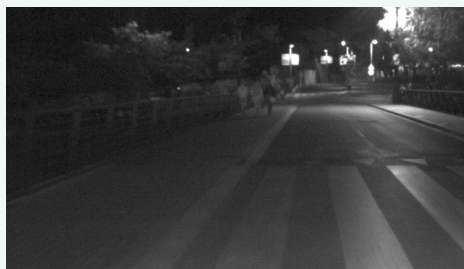


# Dual-spectrum fusion



Thermal image

+



CMOS image



Fusion Result Mode 1



Fusion Result Mode 2

- The SOC integrates nearly 10 dual-light fusion algorithms, adaptable for various scenarios such as drones, night vision devices, and search and rescue.
- It supports modes like edge extraction and information highlighting.

# Night-Vision Googles Solution



1/1.8 inch, 800\*600 resolution, 8um pixel size

**> 20m**

Under the clear starry sky,  
the human recognition  
distance

**27° × 20°**

Field of view

**180g**

Host weight

**1x**

Magnification

**-30°C ~ + 55°C**

Working temperature

**IP67**

Protection rating

# Night-Vision Googles Solution

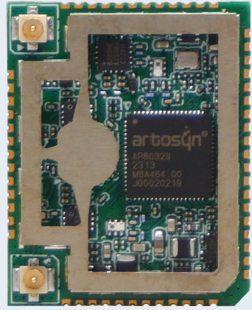


1-inch, 800\*600 resolution, 12um , 0.001Lux

Using a 6mm lens, it can detect the presence of a person at a distance of 150m.

When incorporated into a head-mounted solution, it can surpass the capabilities of 3rd photomultiplier tubes.

# Long-distance Video transmission Solution



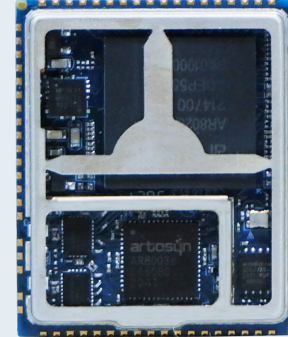
**P401-D  
Module**

- Operating bands: 2.4GHz & 5.8G
- Maximum transmission distance : 15km
- AR8030 Solution
- Maximum Transmit Power: 28dbm



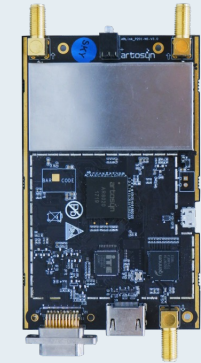
**P301-D  
Module**

- Operating bands: 2.4GHz & 5.8G
- Maximum transmission distance : 15km
- AR9201+AR8003S Solution
- Maximum Transmit Power: 28dbm



**C201-D/S  
Module**

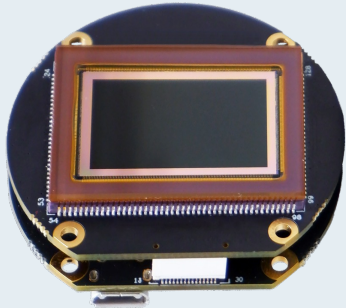
- Operating bands: 2.4GHz & 5.8G
- Maximum transmission distance : 10km
- AR8020+AR8003S Solution
- Maximum Transmit Power: 24dbm



**P201-WS  
Module**

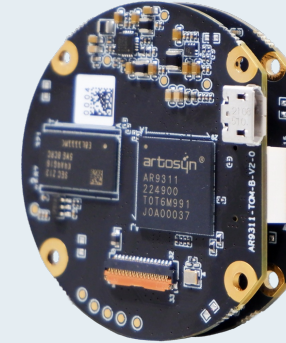
- Operating bands: 600MHz~800Mhz
- Maximum transmission distance : 20km
- AR8020+AD9363 Solution
- Maximum Transmit Power: 26dbm

# Night-Vision Module



**Core-12**

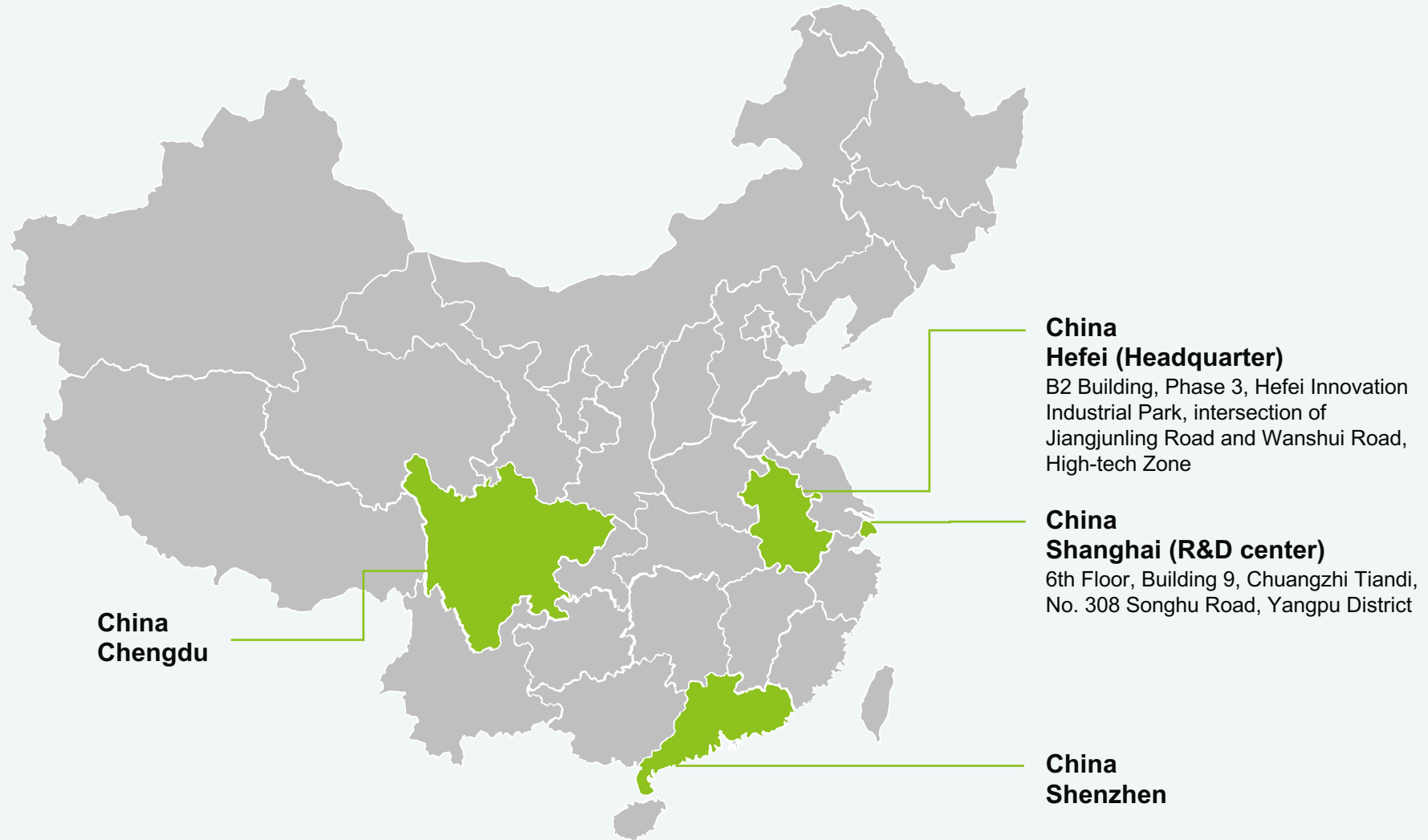
- Resolution: 1280\*800, 1inch
- Pixel Size: 12um
- Minimum illumination: 0.0001Lux @f1.0
- Output : CVBS、DVP、UVC



**Core-32**

- Module Name: Core-32
- Resolution: 1920\*1080, 1/1.8 inch
- Pixel Size: 4um
- Minimum illumination: 0.001Lux @f1.0
- Output: CVBS、DVP、UVC

# Contact Us





The background features a 3D grid of light blue squares. Several blocks of different colors and heights are scattered across the grid: a white block in the top left, a red block in the top right, a yellow block in the middle left, and several green blocks of varying heights in the center and right. Molecular structures, represented by white spheres connected by lines, are visible in the top right and middle left areas.

**THANKS**