

Soluciones AIoT. Sistemas de  
automatización y Sistemas de seguridad  
en automoción  
AXIOMTEK & VIA

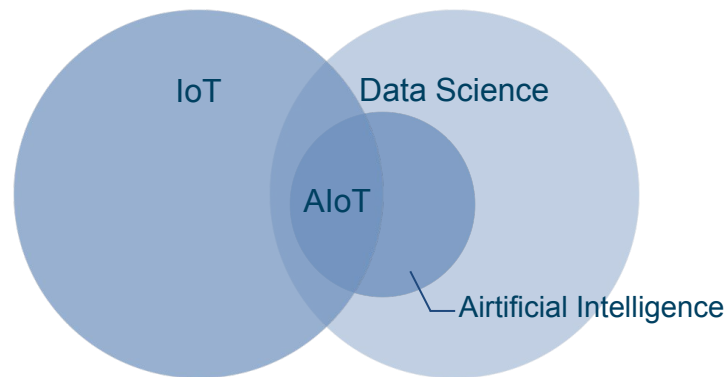
Carlos González (FAE)

Helping  
Innovation

- **Introducción Sistemas Inteligentes**
- **Soluciones AIoT:**
  - **AXIOMTEK:**
    - Sistemas *Edge AI*
      - NVIDIA Jetson
    - Plataformas *Edge AI*
    - Sistemas *Machine Vision*
  - **VIA:**
    - Soluciones *Edge AI*
    - Soluciones de Automoción Inteligentes:
      - VIA Mobile360
- **Preguntas**

## IoT, Big Data, AI

- **IoT:**
  - Red de sensores que recogen información para almacenarla y analizarla
- **Big Data:**
  - Procesos para revelar tendencias, patrones o correlaciones ocultas
- **Artificial Intelligence (AI):**
  - Una máquina (artificial) imita las funciones cognitivas (inteligencia) de los humanos.
    - Entender los datos
    - Nuevos algoritmos para resolver problemas complejos sin que el programador los programe

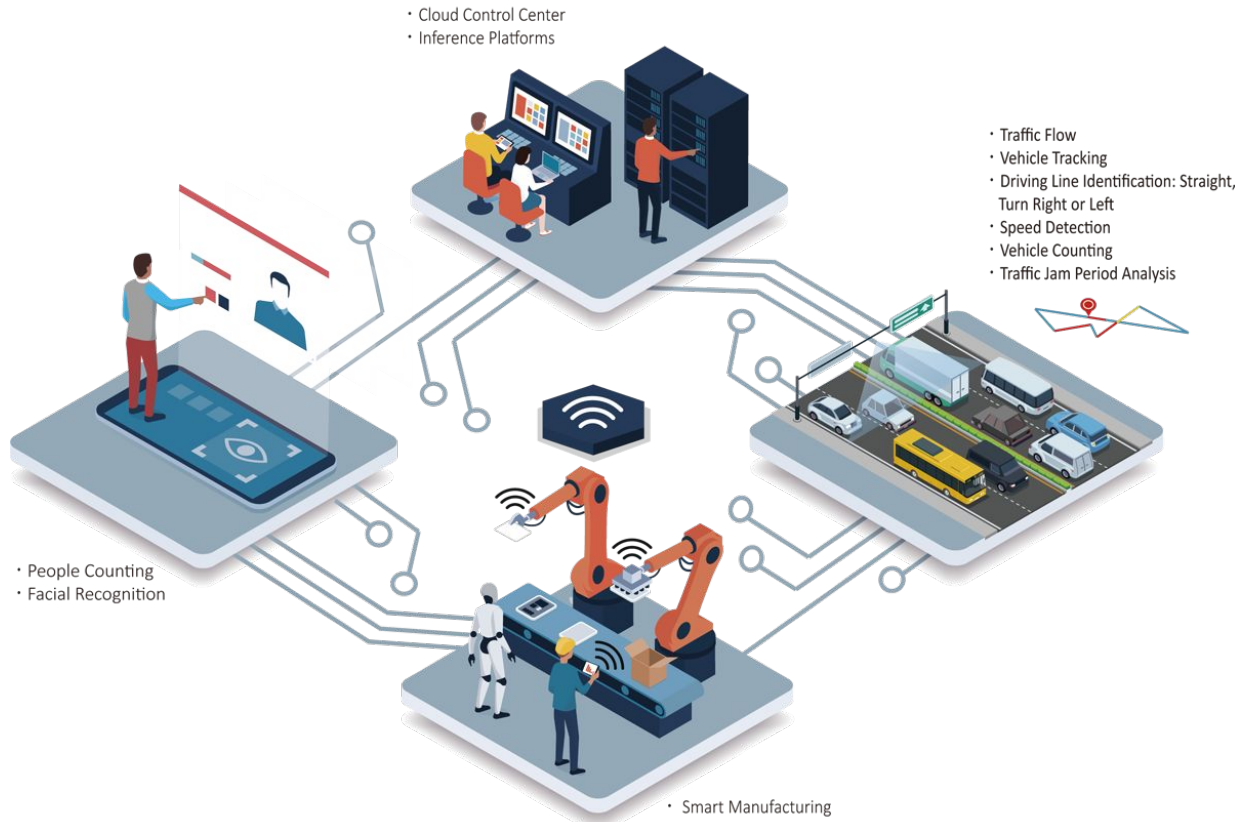


AI + IoT = **AIoT**

- Sistemas inteligentes y conectados con capacidad de tomar decisiones por ellos mismos, analizar los resultados de estas decisiones y mejorarlos con el tiempo

## AIoT

- **Cloud AI:**
  - Con el avance de las aplicaciones de la Inteligencia Artificial y su crecimiento, la computación en la nube se convirtió en una parte central de la evolución de la IA
- **Edge AI:**
  - Sistema que utiliza algoritmos de Machine Learning para procesar datos generados por un dispositivo de hardware **a nivel local**
    - Reduce los costes y los tiempos de latencia (Aplicaciones en tiempo real)
    - Aumenta el nivel de seguridad. Los datos son procesados sin necesidad de la nube
    - Reducción en los costes del servicio de internet al reducir drásticamente los datos a enviar
    - Menor mantenimiento especializado. Tecnología autónoma que muestra los datos para su monitorización





## Soluciones AIoT - Axiomtek



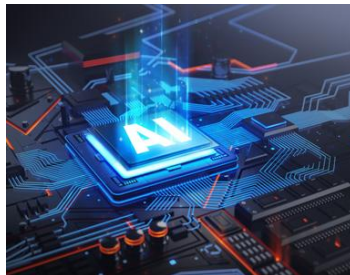
Fundada en 1990, Axiomtek es una empresa líder en diseño y fabricación de ordenadores industriales y sistemas embebidos. Desde sus inicios, Axiomtek ha conseguido reconocimiento mundial por sus diseños innovadores y una excelente satisfacción del cliente.

Como fabricante líder industrial, Axiomtek se dedica a la producción de soluciones de última generación que apoyan a los usuarios en el logro de sus objetivos.

Sus líneas de producto incluyen la placas embebidas, sistemas en módulos, ordenadores en placas, sistemas embebidos, gateways, paneles PCs táctiles, soluciones médicas, industriales y para señalización digital.



**Detección de Incendios**



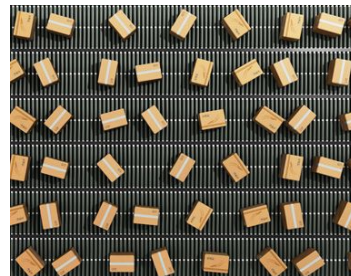
**GPU Edge Computing**



**Gestión de Identidad**



**Plataformas Edge AI**



**Automatización de Almacenes**





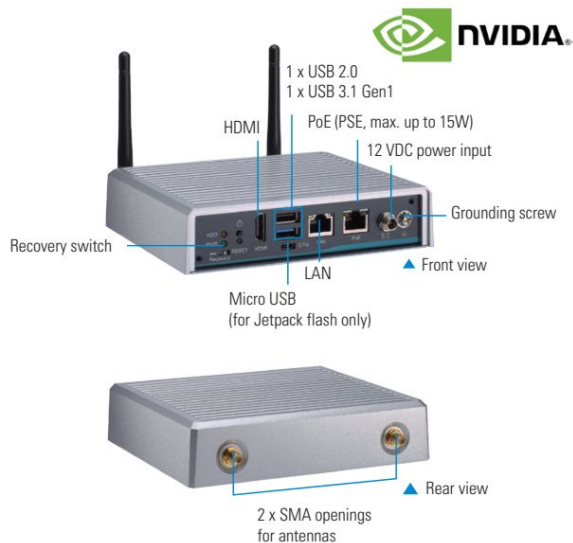
## Plataformas Edge AI

## JETSON FAMILY SPECS

	JETSON NANO	JETSON TX2	JETSON XAVIER NX	JETSON AGX XAVIER
<b>GPU</b>	128-core NVIDIA Maxwell 0.5 TFLOPS (FP16)	256-core NVIDIA Pascal 1.3 TFLOPS (FP16)	384-core Volta 21 TOPS (INT8)	512-core Volta + NVDLA 10 TFLOPS (FP16) 32 TOPS (INT8)
<b>CPU</b>	4-core ARM A57	6-core Denver and A57 (2x) 2 MB L2	6-core Carmel ARM CPU (3x) 2 MB L2 + 4 MB L3	8-core Carmel ARM CPU (4x) 2 MB L2 + 4 MB L3
<b>Memory</b>	4 GB 64-bit LPDDR4 25.6 GB/s	4 GB 128-bit LPDDR4 51 GB/s  8 GB 128-bit LPDDR4 58 GB/s	8 GB 128-bit LPDDR4x 51.2 GB/s	16 GB 256-bit LPDDR4x 137 GB/s
<b>Storage</b>	16 GB eMMC	16 GB eMMC  32 GB eMMC	8 GB eMMC	32 GB eMMC
<b>Encode</b>	4K @ 30 (H.265)	4K @ 60 (H.265)	2x 4K @ 30 (H.265)	4x 4K @ 60 (H.265)
<b>Decode</b>	4K @ 60 (H.265)	2x 4K @ 60 (H.265)	2x 4K @ 60 (H.265)	6x 4K @ 60 (H.265)
<b>Camera</b>	12 (3x4 or 4x2) MIPI CSI-2 D-PHY 1.1 lanes (18 Gbps)	12 lanes MIPI CSI-2 D-PHY 1.2 (30 Gbps) C-PHY (41 Gbps)	12 lanes (3x4 or 6x2) MIPI CSI-2 D-PHY 1.2 (30 Gbps)	16 lanes MIPI CSI-2 8 lanes SLVS-EC D-PHY (40 Gbps) C-PHY (59 Gbps)
<b>Mechanical</b>	69.6 mm x 45 mm 260-pin edge connector	87 mm x 50 mm 400-pin connector	69.6 mm x 45 mm 260-pin edge connector	100 mm x 87 mm 699-pin connector
<b>Software</b>	NVIDIA JetPack SDK — Unified software release across all Jetson products			

## AIE100-903-FL

Fanless Edge AI System with NVIDIA® Jetson Nano™, HDMI, GbE LAN, GbE PoE, and 2 USB



## Features

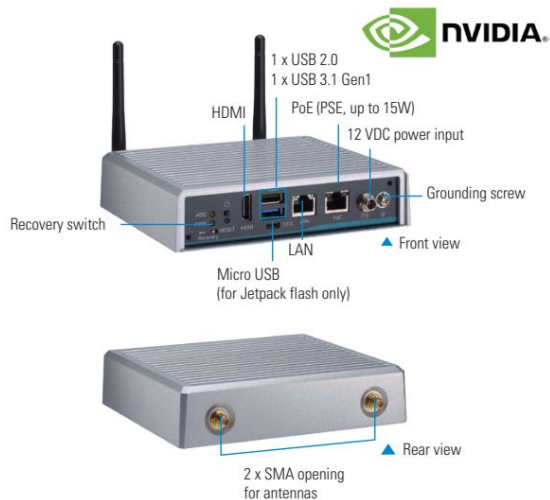
- NVIDIA® Jetson Nano™ with Maxwell™ GPU architecture with 128 NVIDIA CUDA® cores
- High AI computing performance for GPU-accelerated processing
- Ideal for edge AI smart city applications
- Optional IP42 cover kit for semi-outdoor applications
- Supports one 15W GbE PoE for camera
- Wide operating temperature from -30°C to +60°C
- JetPack supported

NVIDIA® Jetson Nano™ will be available until 2025\*  
The official end of life notice will be sent at least 8 months before the last shipment.



## AIE100-T2NX

Fanless Edge AI System with NVIDIA® Jetson™ TX2 NX, HDMI, GbE LAN, GbE PoE, 2 USB, and Allxon Device Management Solutions



## Features

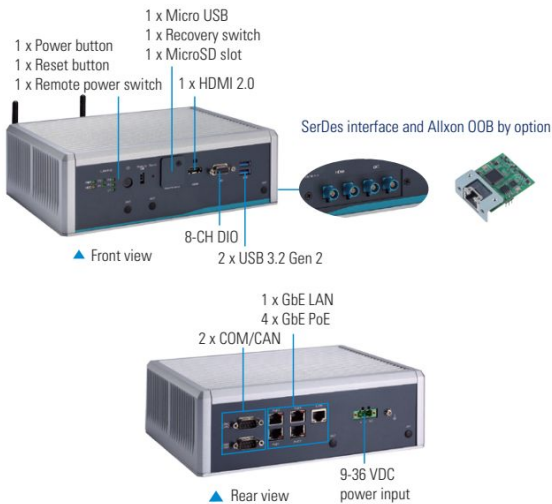
- NVIDIA® Jetson™ TX2 NX with Pascal™ architecture GPU with 256 CUDA cores
- High AI computing performance for GPU-accelerated processing
- Ideal for edge AI smart city applications
- Supports one 15W GbE PoE for camera
- Wide operating temperature from -30°C to +60°C
- Supports JetPack
- Supports Allxon Device Management Solutions (Allxon DMS)

NVIDIA® Jetson™ TX2 NX will be available until 2026\*  
The official end of life notice will be sent at least 8 months before the last shipment.



## AIE900-XNX

Fanless Edge AI System with NVIDIA® Jetson Xavier™ NX,  
1 HDMI, 1 GbE LAN, 4 GbE PoE, 8-CH DI/DO, and 2  
COM/CAN for 5G and AMR Applications



## Features

- NVIDIA® Jetson Xavier™ NX with 384-core NVIDIA Volta™ GPU
- 1 M.2 Key B slot for 5G
- Wide power input range of 9 to 36 VDC (ignition by option)
- Supports four PoE for GigE cameras and LiDAR connectivity
- -30°C to +60°C operating temperature range
- Supports device management and optional out-of-band service powered by Allxon
- Optional SerDes FPD-LINK III

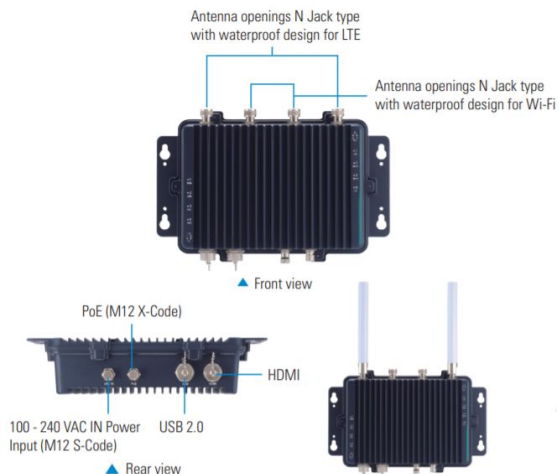
NVIDIA® Jetson Xavier™ NX will be available until 2026\*

The official end of life notice will be sent at least 8 months before the last shipment.



## AIE800-904-FL

Rugged IP67-rated Fanless Edge AI System with NVIDIA® Jetson Xavier™ NX, 1 HDMI, 1 GbE PoE, 1 USB and 100 to 240 VAC Power Input (9 to 36 VDC coming soon)



## Features

- IP67-rated design, specifically for outdoor environments
- NVIDIA® Jetson Xavier™ NX with Volta™ GPU architecture with 384 NVIDIA CUDA® cores
- High AI computing performance for GPU accelerated processing
- -30°C to +50°C operating temperature range
- 100 to 240 VAC wide range power input with 10kV surge protection
- 4 N-jack antenna openings with water proof design
- Features M12 lockable I/Os
- 1 IEEE 802.3at GbE PoE (30W)

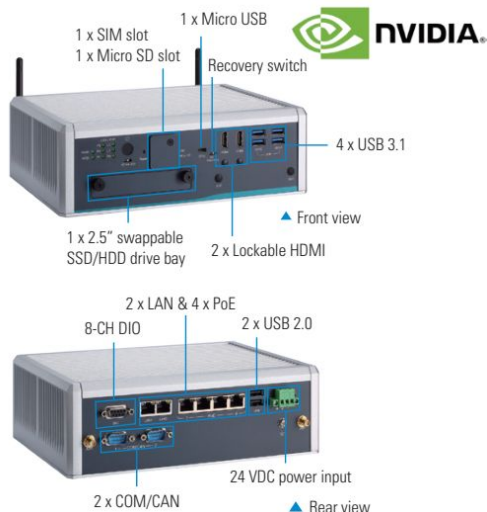
NVIDIA® Jetson Xavier™ NX available through to 2026\*

The official end of life notice will be sent for at least 8 months before the last shipment.



## AIE900-902-FL

Fanless Edge AI System with NVIDIA® Jetson AGX Xavier™, 2 HDMI, 2 GbE LAN, 4 GbE PoE, 6 USB, 2 COM or 2 CAN, and 8-CH DI/DO



## Features

- NVIDIA® Jetson AGX Xavier™ with 512-core Volta GPU with 64 Tensor cores GPU
- High AI computing performance for GPU-accelerated processing
- Ideal for intelligent edge applications, AGV, AMR, and computer vision
- Supports M.2 NVMe PCIe x4 SSD slot
- Wide operating temperature from -30°C to +50°C
- Supports JetPack

NVIDIA® Jetson AGX Xavier™ will be available until 2025  
The official end of life notice will be sent at least 8 months before the last shipment.





## Plataformas Edge AI



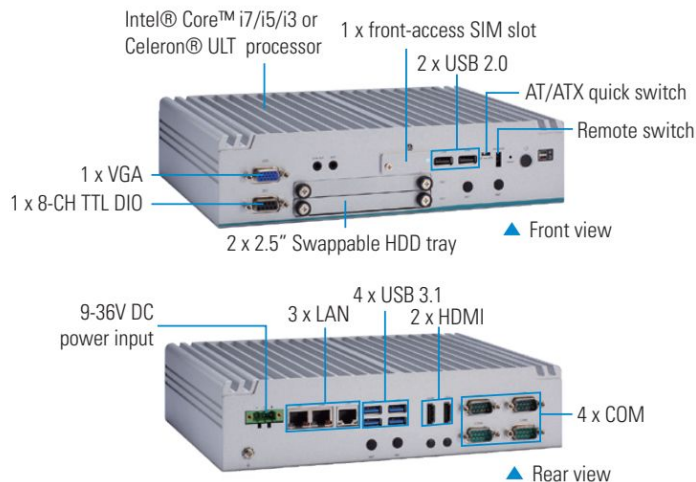


## Light Edge AI

The embedded system that utilizes trained model can detect PPE and monitors breach of danger zone.

## eBOX630-528-FL

Fanless Embedded System with 8th Gen Intel® Core™ i7/i5/i3 or Celeron® ULT Processor, 2 HDMI, 1 VGA, 3 GbE LAN, 6 USB, Dual PCI Express Mini Card Slots, and 9 to 36 VDC



## Features

- 8th gen Intel® Core™ i7/i5/i3 or Celeron® ULT processor (Whiskey Lake-U)
- Dual-channel DDR4 2400 SO-DIMM for up to 64GB of memory
- Supports 2 HDMI, VGA, 3 GbE LAN, 4 COM, and 6 USB
- Trusted platform module (TPM 2.0 onboard)
- Fanless -40°C to +70°C\* operating temperature
- 9 to 36 VDC wide range DC power input
- Hailo-8™ AI acceleration modules compatible\*\*

\* -40°C to +70°C operating temp. at 0.7 m/s air flow

\*\* 0°C to +50°C operating temp. with Hailo-8™ AI acceleration module



## Advanced Edge AI

The modular autonomous vehicle system can gather real-time data and analytics to improve driving safety.



## IPC970

Industrial System with LGA1200 Socket 10th Gen Intel® Xeon® or Core™ i7/i5/i3 Processor, Intel® W480E, Front-access I/O, and PCIe Slots

### Features

- 10th Gen Intel® Xeon® or Core™ i7/i5/i3 processor, up to 80W
- Intel® W480E chipset
- Supports NVIDIA® GeForce RTX 3090 graphics card
- Supports M.2 Key B slot for 5G wireless connection
- Supports M.2 Key E slot for Wi-Fi connection
- Supports power-on delay function
- Supports TPM 2.0
- Supports Intel® AMT



- |  |                                |
|--|--------------------------------|
| 1. 1 x HDD/SSD access LED & 3 x user's LED | 10. 4-pin terminal block       |
| 2. Power on/off button w/LED               | 11. Flexible system I/O window |
| 3. Line-out                                | (1) AX93511                    |
| 4. Remote power switch & reset switch      | (2) AX93512                    |
| 5. VGA, HDMI & AT/ATX selectable switch    | (3) AX93516                    |
| 6. 6 x USB 3.2 Gen.2                       | (4) AX93519                    |
| 7. 2 x USB 3.2 Gen.1                       | (5) Blank I/O cover            |
| 8. 2 x LAN                                 | 12. 2 x 2.5" SSD/HDD bay       |
| 9. Ground terminal                         | 13. Expansion slots            |



## High-Performance AI Computing

The high-performance GPU workstation renews the AI model to continually optimize the procedure.



Optimized Model



iHPC300



## iHPC300

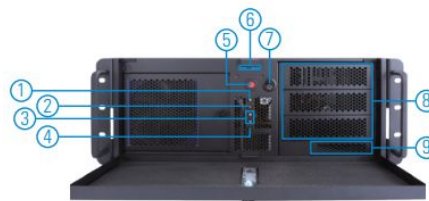
4U Rackmount GPU Workstation with 3rd Generation Intel® Xeon® Scalable Processors, and Multiple Accelerator Cards

### Features

- LGA4189 socket 3rd gen Intel® Xeon® Scalable processors, up to 270W, 40 cores
- 6 DDR4-3200 R-DIMM un-buffered non-ECC/ECC memory, up to 384GB
- PCIe x16 and 3 PCIe x8 in support of up to 6 accelerator cards
- Supports M.2 Key M 2280
- TPM 2.0 supported (optional)

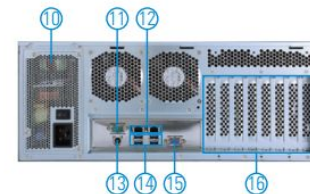


▲ Side view



▲ Front view

1. Power LED
2. HDD LED
3. LAN activity LED
4. Programmable LED
5. System reset
6. 2 x USB 3.1 Gen1
7. Power switch
8. 3 x 5.25" HDD drive bay



▲ Rear view

9. 1 x 3.5" HDD drive bay
10. 1200W or 2000W power supply
11. COM port
12. 2 x LAN
13. PS/2 Combo Port
14. 4 x USB 3.1 Gen1
15. VGA
16. Expansion slots

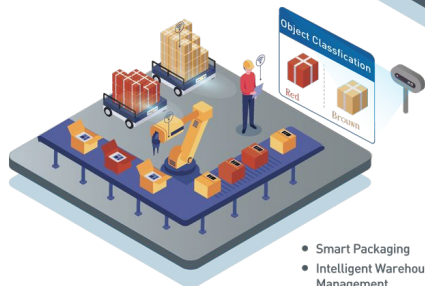


## Machine Vision

- Security and Surveillance
- Personal Protection
- Equipment Detection
- Access Control

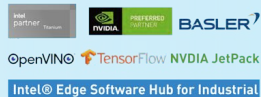


- Automated Optical Inspection (AOI)
- Human Machine Interface
- AMR - Robotic Control System
- Quality Control

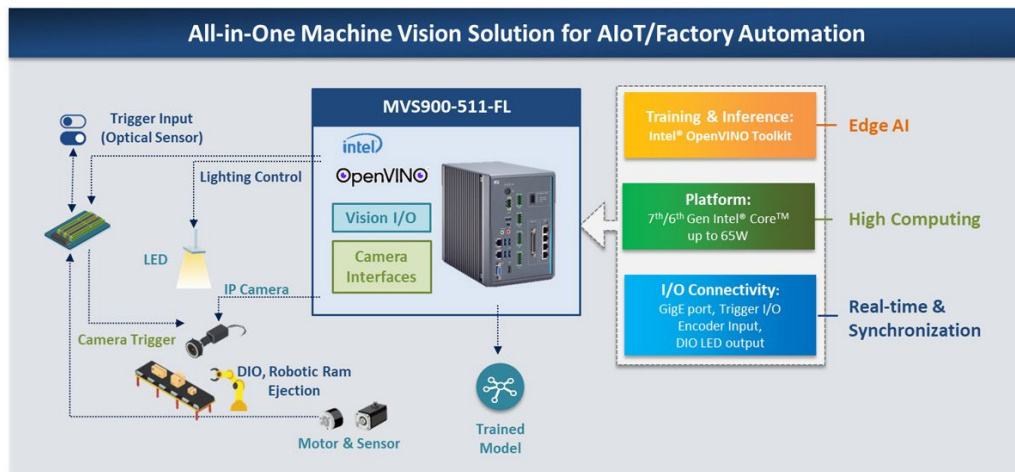


- Smart Packaging
- Intelligent Warehouse Management
- Smart Logistics

### Partnership on AI Deployment



## All-in-One Machine Vision Solution for AIoT/Factory Automation





## MVS900-511-FL

Fanless Vision System with LGA1151 Socket 7th/6th Gen Intel® Core™ i7/i5/i3 & Celeron® Processor, Intel® H110, Vision I/O, 4-CH PoE and 4-CH LED Output



1. Reset switch  
2. Remote switch  
3. Mic-in & Line-out  
4. 2 x LAN

5. Power switch  
6. Terminal block  
7. 2 x RS-232/422/485  
8. VGA  
9. 4 x USB 3.2 Gen1  
10. HDMI

11. Vision I/O: 4-in/4-out trigger I/O, 8-in/8-out DIO with isolated  
12. LED lighting control: trigger and strobe mode  
13. 4 x IEEE802.3at GbE LAN port

## Features

- Integrated real-time vision I/O
  - 4-CH trigger input
  - 4-CH trigger output
  - 4-CH LED lighting control
  - 2-CH quadrature encoder input
  - 16-CH isolated DIO
- Supports camera interfaces
  - 4 IEEE802.3at GbE LAN ports (PoE)
- Power input: 24 VDC (uMin=19V/uMax=30V)
- -10°C to +60°C operating temperature range with W.T. SSD
- Supports 2 swappable 2.5" HDD
- Supports TPM 2.0





## Soluciones AIoT - VIA Technologies

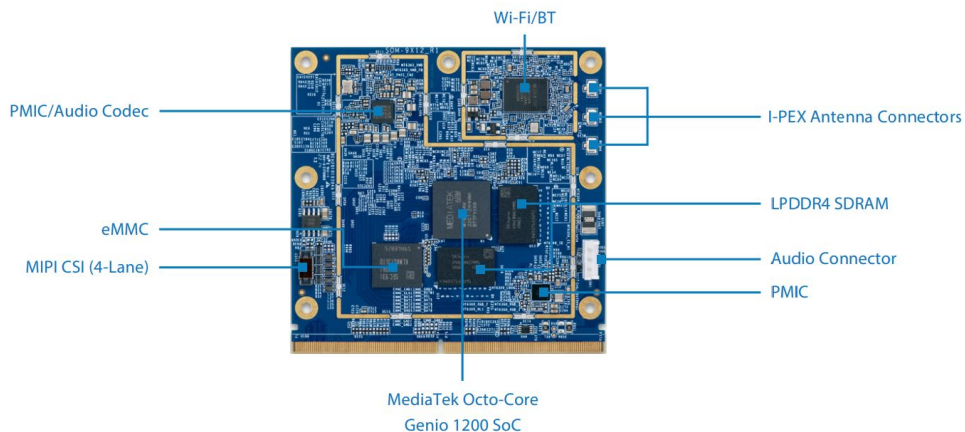


VIA Technologies, Inc., con sede en Taiwán, es un líder mundial en la conexión de empresas con tecnología avanzada de Inteligencia Artificial, IoT y Visión Artificial a través de soluciones inteligentes innovadoras para aplicaciones de transporte, industria, ciudades inteligentes y centros de datos.

VIA proporciona el hardware, el software y los componentes básicos para crear sistemas y dispositivos integrados innovadores.

## VIA SOM-9X12

Fanless low-power platform  
for AIoT applications with  
Octo-Core MediaTek Genio  
1200 processor



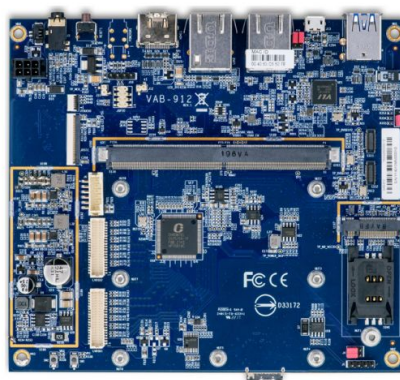
### Specifications

<b>Model Name</b>	<b>SOM-9X12-V4</b>
<b>Processor</b>	MediaTek Genio 1200 Octo-Core SoC - Four Cortex A78 @ 2.2GHz - Four Cortex A55 @ 2.0GHz
<b>System Memory</b>	4GB LPDDR4 SDRAM
<b>Storage</b>	16GB eMMC Flash Memory
<b>Graphics</b>	ARM Mali-G57 MCS High Performance GPU 3D graphic accelerator capable of processing 17600M pixel/sec @ 880MHz Graphics engine supporting OpenGL® ES 3.2, OpenCL ES 2.0, and Vulkan 1.1 hardware acceleration Supports H.265 and H.264 video decoding up to 4K@90fps Supports H.265 and H.264 video encoding up to 4K@60fps Supports Cadence® Tensilica® Vision HiFi 4 DSP
<b>Wireless Connectivity</b>	MediaTek MT7921 Dual-band Wi-Fi 6 with MU-MIMO Bluetooth 5.2
<b>Ethernet</b>	Realtek RTL8211E-VL-CG 10/100/1000M Ethernet Transceiver
<b>PMIC/Audio Codec</b>	MediaTek MT6365
<b>HDMI</b>	Integrated HDMI 2.0 Transmitter
<b>Supported I/O through Golden Finger</b>	2 4-Lane MIPI DSI 2 MIPI CSI-2 (1 x 4-Lane, 1 x 2-Lane) 1 HDMI 1 Display Port 1 USB 3.1 3 USB 2.0 1 GLAN 2 SPI 2 I2S 3 I2C 2 UART 1 PCIe x 2 1 SDIO 4.3V DC-in
<b>Onboard I/O</b>	4-Lane MIPI CSI connector 3 I-PEX connectors for Wi-Fi and Bluetooth antennas Audio connector for Earphone out and MIC-in
<b>Operating System</b>	Android 11, Yocto 3.5
<b>System Monitoring and Management</b>	Watchdog Timer, System Management, Boot Select
<b>Operating Temperature</b>	0°C ~ 60°C
<b>Operating Humidity</b>	0% ~ 95% (relative humidity ; non-condensing)
<b>Form Factor</b>	82mm x 80mm (3.22" x 3.15")
<b>Compliance</b>	SMARC 2.11

## VIA SOM-9X12

Fanless low-power platform  
for AIoT applications with  
Octo-Core MediaTek Genio  
1200 processor

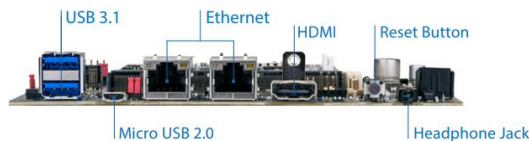
SOM-9X12 Carrier Board



SOM-9X12 Carrier Board Front Panel I/O



SOM-9X12 Carrier Board Back Panel I/O

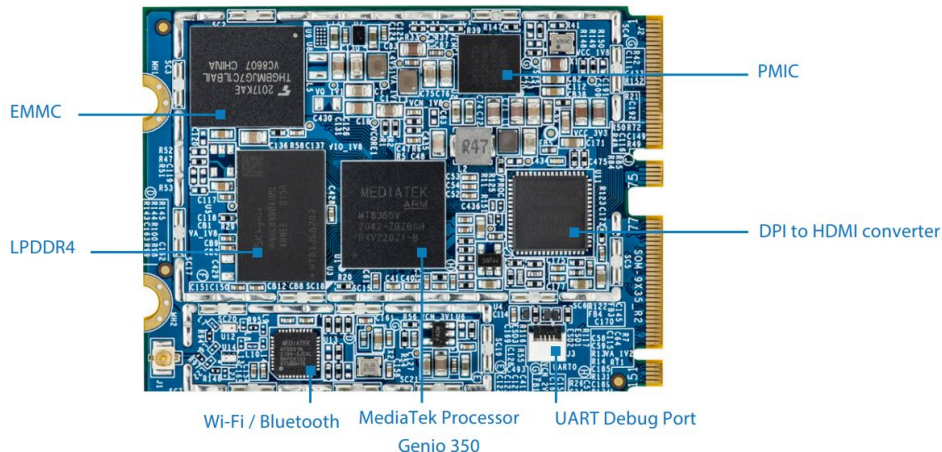


## Specifications

<b>Model Name</b>	<b>SOM-9X12 Carrier Board</b>
<b>LVDS</b>	Chronitel CH7515 eDP/DP to LVDS Converter
<b>Ethernet</b>	Realtek RTL8153 GbE USB 3.0 Ethernet Network Interface Controller
<b>MCU</b>	STMicroelectronics STM32L011F4P6 32-bit MCU
<b>Onboard I/O</b>	<ul style="list-style-type: none"> <li>2 4-Lane MIPI-DSI connectors (One by ODM request)</li> <li>2 LVDS dual-channel connectors (up to QSXGA 2560x2048@60Hz)</li> <li>2 MIPI CSI-2 connectors (1 x 4-Lane, 1 x 2-Lane)</li> <li>1 MicroSD card slot</li> <li>1 SIM card slot</li> <li>1 M.2 B-key slot (supports PCIe x1/USB3.1/USB 2.0/SIM)</li> <li>1 ADC/GPIO pin header (for multiplexed Analog inputs/GPIOs)</li> <li>1 Optional RTC battery connector (by customized request)</li> <li>1 Console connector</li> <li>1 12V DC-in power connector</li> </ul>
<b>Front Panel I/O</b>	<ul style="list-style-type: none"> <li>1 Download/Volume+ button</li> <li>1 Volume- button</li> <li>1 MicroSD card slot</li> </ul>
<b>Back Panel I/O</b>	<ul style="list-style-type: none"> <li>1 HDMI port</li> <li>2 USB 3.1 ports</li> <li>1 Micro USB 2.0 port (for image download)</li> <li>2 GLAN ports</li> <li>1 3.5mm phone jack (supports Headphone-out and MIC-in)</li> <li>1 Reset button</li> <li>1 Power button with LED</li> </ul>
<b>Power Supply</b>	12V DC-in
<b>Operating Temperature</b>	0°C ~ 60°C
<b>Operating Humidity</b>	0% ~ 95% (relative humidity ; non-condensing)
<b>Form Factor</b>	3.5" SBC, 146mm x 102mm (5.75" x 4.17")
<b>Compliance</b>	CE, FCC, UKCA

## VIA SOM-9X35

Fanless low-power platform  
for AIoT applications with  
Quad-Core MediaTek Genio  
350 SoC



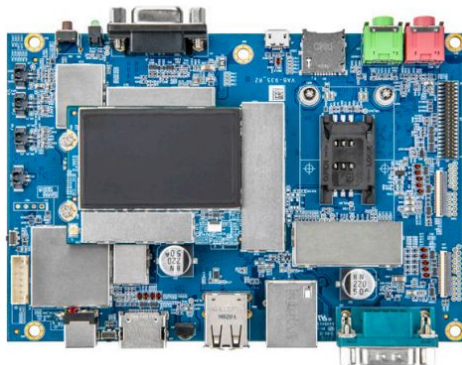
### Specifications

<b>Model Name</b>	<b>SOM-9X35</b>
<b>Processor</b>	2.0GHz MediaTek Genio 350 Cortex-A53 Quad-Core SoC
<b>System Memory</b>	2GB LPDDR4 SDRAM (1GB/4GB optional)
<b>Storage</b>	16GB eMMC Flash Memory
<b>Graphics</b>	ARM Mali-G52 3EE MC1 GPU 3D graphic accelerator capable of processing 1600M pixel/sec @ 800MHz Graphics engine supporting OpenGL® ES 3.2, OpenCL ES 2.0, and Vulkan 1.1 hardware acceleration Supports H.265 and H.264 video decoding up to 1080p@60fps Supports Cadence Tensilica Vision P6 and HIFI4
<b>Wireless Connectivity</b>	MediaTek MT6631 Dual band (2.4GHz & 5GHz) single stream Wi-Fi 802.11 a/b/g/n/ac RF Bluetooth 5.0
<b>PMIC/Audio Codec</b>	MediaTek MT6357/MT6390
<b>HDMI</b>	Lontium LT86185XB Digital Parallel Interface to HDMI 1.4 transmitter
<b>Supported I/O through Golden Finger</b>	1 4-Lane MIPI DSI 2 4-Lane MIPI CSI 1 HDMI 1.4 1 USB 2.0 Host 1 USB 2.0 OTG 1 SPI 3 I2C 2 UAR 2 MIC-in 1 Line-out 1 ADC 1 SDIO3.0 6 GPIO 2 PWM 1 Battery Gas Gauge 1 3.4~4.2V DC-in
<b>Onboard I/O</b>	1 RF I-PEX (for RF antenna for Wi-Fi and Bluetooth) 1 Debug UART (for USB to UART debug board)
<b>Operating System</b>	Android 10, Yocto 3.1
<b>Operating Temperature</b>	-40°C ~ 85°C (Under VIA's specific test environment)
<b>Operating Humidity</b>	0% ~ 95% (relative humidity ; non-condensing)
<b>PCBA Form Factor</b>	60mm x45mm
<b>Top heat spreader size</b>	50mm x 32mm
<b>Bottom heat spreader size</b>	48mm x 43mm
<b>Dimensions (with two-side heat spreader)</b>	60mm x 45mm x 6.8mm (W x D x H)

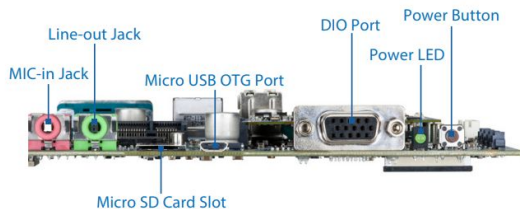
## VIA SOM-9X35

Fanless low-power platform  
for AIoT applications with  
Quad-Core MediaTek Genio  
350 SoC

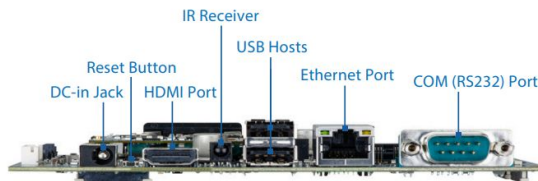
### VAB-935 Carrier Board



#### VAB-935 Carrier Board Front Panel I/O



#### VAB-935 Carrier Board Back Panel I/O

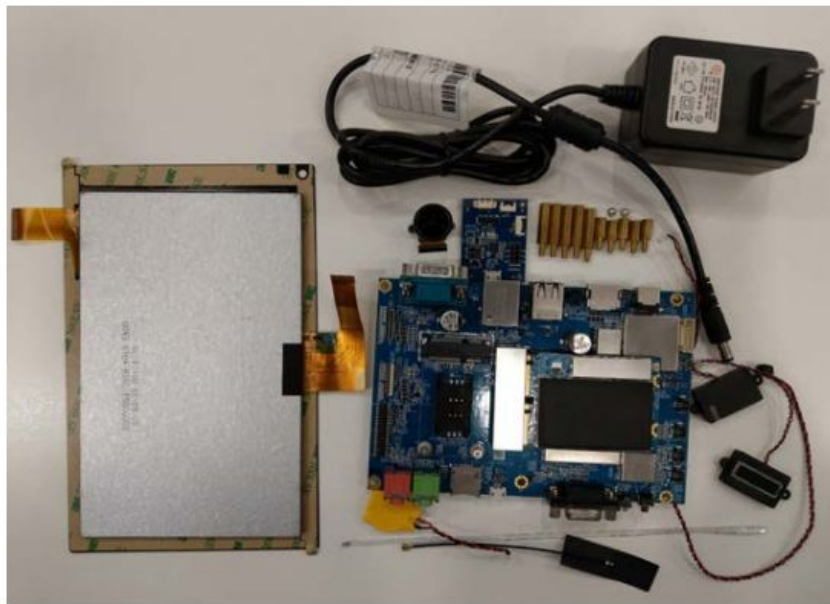


### Specifications

<b>Model Name</b>	<b>VAB-935 Carrier Board</b>
<b>USB</b>	Genesys GL852GT-MNG USB 2.0 MTT HUB
<b>LAN</b>	Realtek RTL8152BNI-VB-CG USB 2.0 to 10/100M Ethernet controller
<b>Onboard I/O</b>	<ul style="list-style-type: none"> <li>2 4-lane MIPI CSI connectors</li> <li>1 4-lane MIPI DSI connector</li> <li>1 LVDS connector (by ODM request)</li> <li>1 7" capacitive touch panel connector</li> <li>1 10.1" touch screen interface (by ODM request)</li> <li>1 RTC battery connector</li> <li>1 Battery charger connector</li> <li>1 miniPCIe slot for 4G with GNSS</li> <li>1 SIM card slot</li> <li>1 Download button</li> <li>1 MIC connector</li> <li>2 Speaker connectors</li> <li>1 MCU upgrade connector</li> <li>1 I/O expansion connector (supports GPIO x 5 from SOM-Module and GPIO x 9, I2C x1, SPI x1, PWM x2, ADC x1 from Expander IC)</li> <li>2 M.2 connectors for VIA SOM-9X35 module</li> </ul>
<b>Front Panel I/O</b>	<ul style="list-style-type: none"> <li>1 Micro USB 2.0 OTG port</li> <li>1 DIO port supporting 10 GPIO with 3.3V power</li> <li>1 Micro SD card slot</li> <li>2 Audio jacks : Line-out and MIC-in</li> <li>1 Power LED</li> <li>1 Power button</li> </ul>
<b>Rear I/O</b>	<ul style="list-style-type: none"> <li>1 HDMI port</li> <li>2 USB 2.0 ports</li> <li>1 COM port for RS232 (TX/RX)</li> <li>1 10/100Mbps Ethernet port</li> <li>1 DC-in jack</li> <li>1 Reset Button</li> <li>1 IR Receiver</li> </ul>
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>12V DC-in (support 9V~15V)</li> <li>2-cell 8.4V Lion battery (optional)</li> </ul>
<b>Operation System</b>	Android 10, Yocto 3.1
<b>Operating Temperature</b>	-40°C ~ 85°C (Under VIA's specific test environment)
<b>Operating Humidity</b>	0% ~ 95% (relative humidity ; non-condensing)
<b>Form Factor</b>	3.5" SBC, 146mm x 102mm

VIA  
**SOM-9X35**

Fanless low-power platform  
for AIoT applications with  
Quad-Core MediaTek Genio  
350 SoC



**Items for STK-SOM935-00A0**

- 1 x VIA SOM-9X35 Module
- 1 x VIA VAB-935 Carrier Board
- 1 x LCD Module + Touch screen
- 1 x Wi-Fi Antenna
- 1 x 4-pin FFC Cable
- 1 x AC Adapter
- 1 x Camera Module
- 2 x Speaker
- 1 x Microphone
- 1 x RTC Battery
- 1 x USB to UART Debug Board
- 5 x M3\*10 mm Bolts
- 5 x M3\*20 mm Bolts
- 2 x M2\*4 mm Screws





## Soluciones Inteligentes para automoción



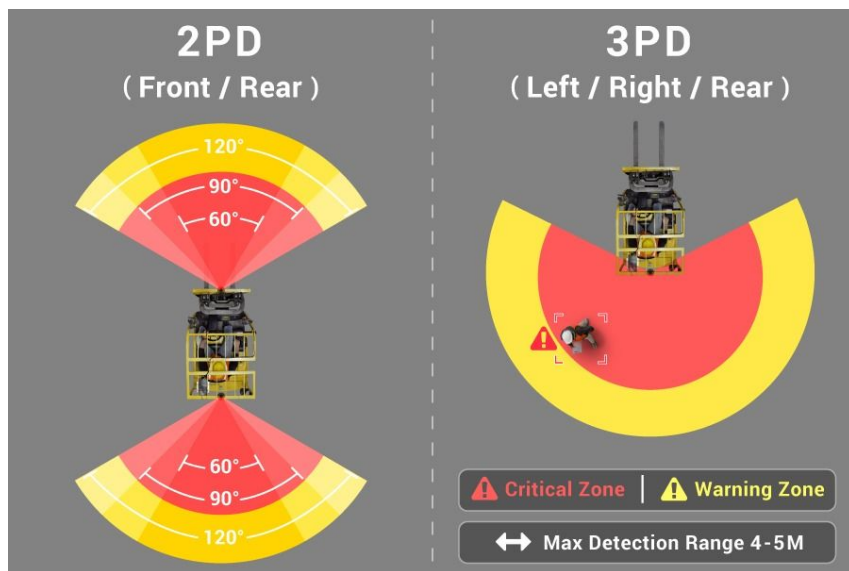
# VIA Mobile360 Forklift Safety System



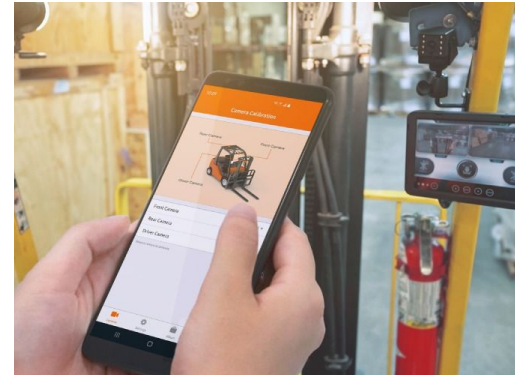
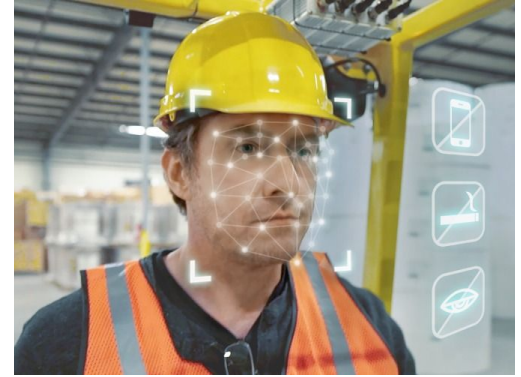
## VIA Mobile360 Forklift Safety System



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## VIA Mobile360 Forklift Safety System



## VIA Mobile360 Forklift Safety System



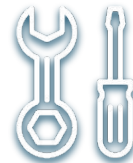
**Prevención  
de  
accidentes y  
lesiones**



**Aumenta la  
atención del  
operador**



**Refuerza el  
cumplimiento  
de las normas  
de seguridad  
y salud**



**Ofrece una  
alta fiabilidad**



**Fácil de  
instalar y  
manejar**

## VIA Mobile360 Forklift Safety System



### Specifications

<b>Model Name</b>	<b>Mobile360 M500</b>
<b>Processor</b>	1.2GHz ARM Cortex-A7 dual-core SoC with deep learning accelerator
<b>System Memory</b>	1GB DDR3 SDRAM
<b>Storage</b>	512MB SPI NAND Flash ROM 1 Micro SD Card Slot
<b>Wireless Connectivity</b>	1 GPS/Beidou module 1 Wi-Fi 802.11b/g/n/ac/BT 5.0 module
<b>Sensor</b>	1 6-Axis IMU
<b>Expansion I/O</b>	1 MiniPCIe slot for 4G module
<b>Front Panel I/O</b>	2 M12 8-pin DIO avionic connectors 1 M12 CAN/COM (supports TX/RX for RS-232) avionic connector 1 M12 speaker avionic connector 1 Micro SD card slot 1 Micro SIM card slot 1 Power LED 1 Reset button
<b>Back Panel I/O</b>	1 M12 CVBS-out avionic connector 3 M12 AHD camera avionic connectors 1 M12 9~36V, ACC/IGN & ground avionic connector 4 Antenna connectors (4G x 2, Wi-Fi/BT, GPS)
<b>Bottom Opening Covers</b>	Open window with removable plate to access MiniPCIe slot for 4G LTE module
<b>Power Supply</b>	9~36V DC-in with ACC/IGN
<b>Operating System</b>	Embedded Linux
<b>Operating Temperature</b>	-20°C ~ 70°C
<b>Storage Temperature</b>	-30°C ~ 70°C
<b>Operating Humidity</b>	0~95% (non-condensing)
<b>Vibration Loading During Operation</b>	ISO-16750-3 Test VII compliance
<b>Shock During Operation</b>	ISO-16750-3 Test VII compliance
<b>Mechanical Construction</b>	Aluminum alloy top cover Metal chassis housing
<b>Dimensions</b>	178mm(W) x 53.8mm(H) x 194.6mm(D) (7.01" x 2.12" x 7.66")
<b>Weight</b>	1.44kg (3.17lbs)
<b>Ingress Protection Rating</b>	IP67
<b>Compliance</b>	CE, FCC, NCC, Telec, SRRC, CTA, UKCA



# VIA Mobile360 M800 Video Telematics System





## VIA Mobile360 M800 Video Telematics System



VIA Mobile360 M800 System



DSS Camera



ADAS Camera



ADAS Display



2-in-1 Antenna Module

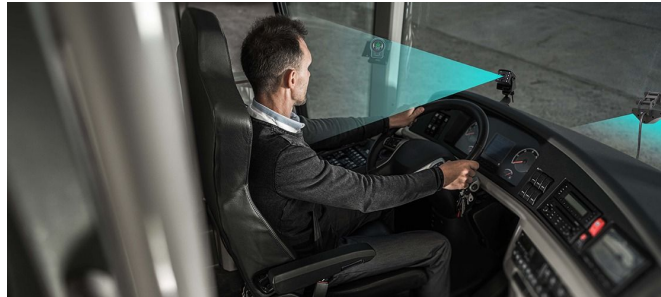


J1939 Cable

## VIA Mobile360 M800 Video Telematics System



## VIA Mobile360 M800 Video Telematics System



## VIA Mobile360 M800 Video Telematics System



**Prevención  
de  
accidentes  
impulsada  
por IA**



**Detección  
del estado  
del  
conductor**



**Ajuste flexible**



**Integración  
acelerada en  
la nube de  
AWS**



**Sistema de  
telemetría**

# VIA Mobile360 M800 Video Telematics System



VIA Mobile360 M800 System



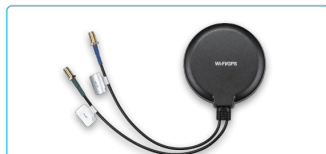
DSS Camera



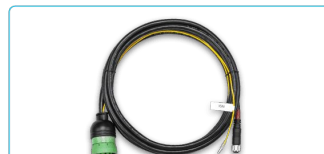
ADAS Camera



ADAS Display



2-in-1 Antenna Module



J1939 Cable

## Specifications

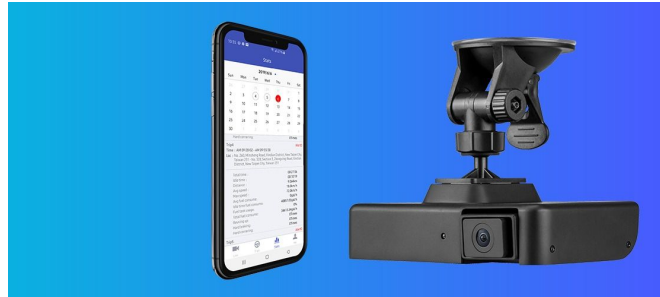
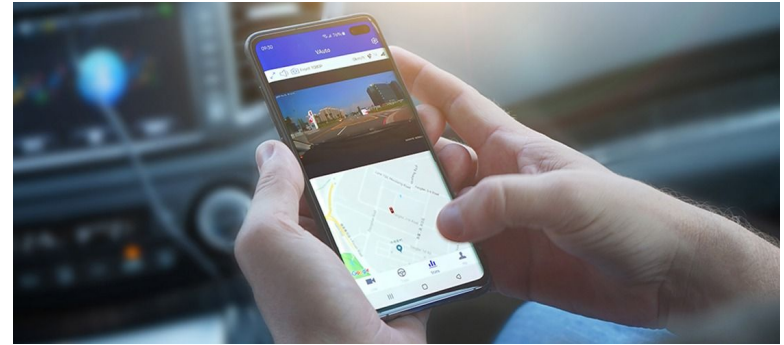
<b>Model Name</b>	<b>Mobile360 M800</b>
<b>Processor</b>	1.2GHz ARM Cortex-A7 dual-core SoC with Deep Learning Accelerator
<b>System Memory</b>	1 GB DDR3 SDRAM
<b>Storage</b>	512MB SPI NAND Flash ROM 1 MicroSD Card Slot
<b>LAN</b>	10/100Mbps Ethernet Controller
<b>Wireless Connectivity</b>	1 GPS/Beidou module 1 Wi-Fi 802.11b/g/n/ac Bluetooth 5.0 module
<b>Sensor</b>	1 6-Axis IMU
<b>Expansion I/O</b>	1 MiniPCIe slot for 4G module
<b>Front Panel I/O</b>	1 M12 Display avionic connector (for ADAS Display including microphone & speaker) 1 M12 DIO avionic connector (1 TX/RX for debugging) 1 M12 CAN/COM avionic connector (supports TX/RX for RS-232) 1 M12 LAN avionic connector (10/100Mbps Ethernet) 1 Micro SIM Card Slot 1 MicroSD Card Slot (Max 512 GB) 1 Power LED 1 Reset button
<b>Back Panel I/O</b>	3 M12 AHD camera avionic connectors 1 M12 9~36V, CAN with ACC/IGN avionic connector (supports OBDII/J1939 protocols) 4 Antenna connectors (4G x 2, Wi-Fi/ Bluetooth, GPS)
<b>Power Supply</b>	9~36V DC-in with ACC/IGN
<b>Operating System</b>	Embedded Linux
<b>Operating Temperature</b>	-20°C ~ 70°C
<b>Storage Temperature</b>	-30°C ~ 70°C
<b>Operating Humidity</b>	0~95% (non-condensing)
<b>Vibration Loading During Operation</b>	ISO-16750-3 Test VII compliance
<b>Shock During Operation</b>	ISO-16750-3 Test VII compliance
<b>Mechanical Construction</b>	Aluminum alloy top cover Metal chassis housing
<b>Dimensions</b>	178mm(W) x 53.8mm(H) x 194.6mm(D) (7.01" x 2.12" x 7.66")
<b>Weight</b>	1.43kg (3.15 lbs)
<b>Ingress Protection Rating</b>	IP67
<b>Compliance</b>	CE, FCC, BSMI, NCC, TELEC, SRRC, CTA, UKCA



**VIA Mobile360  
D700 AI  
Dash Cam**



## VIA Mobile360 D700 AI Dash Cam



## VIA Mobile360 D700 AI Dash Cam



**Prevención de  
accidentes  
impulsada por  
IA**



**Detección del  
estado del  
conductor**



**Integración  
acelerada en  
la nube de  
AWS**



**Doble cámara  
Full HD**



**Adquisición  
de Telemetría**



**Conectividad  
4G**



# VIA Mobile360 D700 AI Dash Cam



## Specifications

<b>Model Name</b>	<b>Mobile360 D700</b>
<b>Processor</b>	800MHz ARM Cortex-A53 dual-core SoC
<b>System Memory</b>	512MB DDR3L DRAM
<b>Storage</b>	256MB SPI Flash Memory 1 Micro SD Card slot
<b>Wireless Connectivity</b>	4G LTE module with antenna Wi-Fi 802.11b/g/n/ac + BT 4.2 GPS receiver
<b>Camera &amp; Video</b>	Sony IMX307 CMOS Sensor: 1080p 2 1920x1080p @ 29fps FOV: D=116°, H=100°, V=56° Adjust max angle: horizontal left=10°, right=10°, vertical down=30° H.264 encode and decode
<b>Sensors</b>	4 IR LEDs controlled by Light sensor 3-Axis G-sensor
<b>Front Panel I/O</b>	1 Front camera 1 Light sensor
<b>Rear Panel I/O</b>	1 Rear camera 4 IR LED lights 3 LEDs for power, Wi-Fi and recording status 1 Short record/Two-way call button
<b>Left Panel I/O</b>	1 Speaker
<b>Right Panel I/O</b>	1 Micro USB 2.0 port (for debugging) 1 Micro SD Card slot (512GB max) 1 Micro SIM Card slot 1 12-pin power connector for 6 GPIO (5 GPI, 1 GPO), CAN bus, ACC, power
<b>Bottom Panel I/O</b>	1 Mic
<b>Power Supply</b>	9~36V DC-in
<b>Software</b>	Device SDK including Android / iOS smartphone reference apps
<b>Cloud Certification</b>	AWS IoT Core Qualified and Kinesis Video Streams Qualified Microsoft IoT Plug and Play Certified
<b>Operating System</b>	Linux Kernel 4.1.0
<b>Operating Temperature</b>	-20°C~70°C
<b>Mechanical Construction</b>	PC chassis housing
<b>Dimensions</b>	124.52mm(W) x 41.25mm(H) x 95.60mm(D) (4.90" x 1.62" x 3.76")
<b>Weight</b>	0.322kg (0.71lbs)
<b>Compliance</b>	CE, FCC, BSMI, TELEC, NCC, CTA, PTCRB, GCF
<b>Telco Certification</b>	AT&T, T-Mobile, UScellular, Verizon



Muchas gracias