

VAC

1000



24-core Foxconn Cortex-A53 MPU with Hailo/Lightspeur AI Accelerator Card
Arm-based Edge AI computing System for Public Safety



^ AI Surveillance



- 24-core Foxconn Cortex-A53 Server-grade Computing
- Advanced AI Accelerator supports up to 26 Tera-Operations Per Second (TOPS)
- 1 DDR4 2133MHz Memory with ECC, support up to 16GB
- 9V to 55V wide range DC Power Input
- 1 GigE LAN, 1 IPMI, 2 USB 3.0, 1 Micro USB
- M.2 Key M 2280 for PCIe NVMe SSD
- Support Cross-Platform IP video management system (VMS) for real-time surveillance

v Traffic Vision



^ Factory Automation



arm



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Specifications

System

Processor	24-core Arm Cortex-A53 Processor (Foxconn FXN3102)
Memory	1 DDR4 2133MHz 16GB ECC SO-DIMM
Flash	1 SPI Flash, 512MB
EEPROM	1 SPI EEPROM, up to 512KB
OS	Ubuntu Server 18.04 LTS

AI Accelerator

Processor	- VAC-1000 : Lightspeur® 28015 Neural Accelerator, up to 5.6 TOPS - VAC-1100 : Hailo-8™ AI Processor, up to 26 TOPS
Framework	- VAC-1000 : TensorFlow, Caffe, PyTorch - VAC-1100 : TensorFlow, ONNX

I/O Interface

USB	2 USB 3.0 Type A
Micro USB	- 1 Micro USB console port for debug (External) - 1 Micro USB console port for firmware update (Internal)
LED	Power, SSD

Storage

SATA	1 SATA III (6Gbps)
M.2	1 M.2 Key M Socket (2280, PCIe)
eMMC	1 64GB eMMC, supports MMC4.41/HS200

Ethernet

LAN	10/100/1000 Base-T Ethernet GigE LAN, RJ45 connector
IPMI	10/100/1000 Base-T Ethernet IPMI, RJ45 connector

Power

Power Input	DC 9V to 55V
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground

Software

Operation System	- Ubuntu Server 18.04LTS(Linux kernel 4.14.0) - Supports bootup from Flash drive / eMMC - Supports backup from Flash drive - File System : EXT4
Toolchain	gcc-linaro-6.4.1-2017.11-x86_64_aarch64-linux-gnu
Script Language	Python

Mechanical

Dimensions	170mm x 118mm x 40mm (6.7" x 4.6" x 1.6")
Weight	0.9 kg (2.0 lb)
Mounting	- Wallmount by mounting bracket - DIN Rail Mount (Optional)

Environment

Operating Temp.	VAC-1000/1100-W16E : -40°C to 70°C (-40°F to 158°F) VAC-1000/1100-16E : 0°C to 55°C (32°F to 131°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @55°C
Shock	- IEC 60068-2-27 - SSD : 50G @wallmount, Half-sine, 11ms
Vibration	- IEC 60068-2-64 - SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN50155, EN50121-3-2

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Order Information

Model	CPU	GigE LAN	IPMI	USB 3.0	M.2	SSD Bracket	AI Accelerator	RAM
VAC-1000-W16E	FXN3102	1	1	2	1	1	Lightspeur®	16GB, IT
VAC-1000-16E	FXN3102	1	1	2	1	1	Lightspeur®	16GB, CT
VAC-1100-W16E	FXN3102	1	1	2	1	1	Hailo	16GB, IT
VAC-1100-16E	FXN3102	1	1	2	1	1	Hailo	16GB, CT

Optional Software

NX Witness VMS	Network Optix IP Video Management System (VMS) and Video Surveillance Software
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Accessories

PWA-60WP3-WT	60W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
PWA-60WP3-WT-12V	60W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
DIN-RAIL	DIN Rail Kit
M.2 Storage Module	M.2 Key M PCIe Storage Module

Dimensions & Drawing

Unit : mm (inch)

