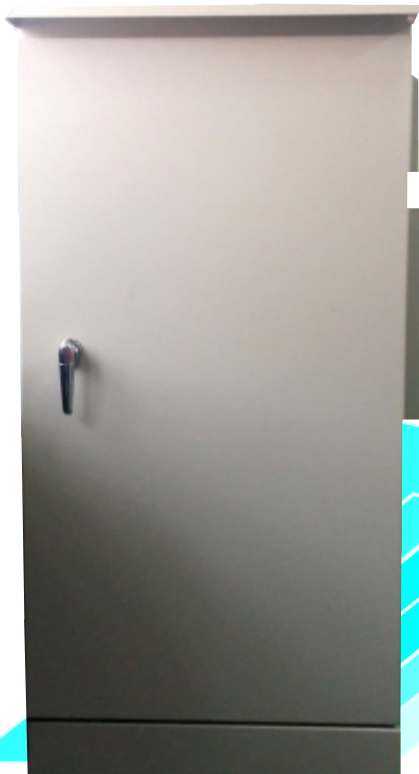


ตู้ควบคุมไฟจราจรปุ่มกดคนเดินข้าม Pedestrian Traffic Light Controller

Model : TF-CP001

คุณสมบัติทั่วไป

ตู้ไฟจราจรปุ่มกดคนเดินข้ามอัจฉริยะ เป็นตู้ควบคุมสัญญาณไฟ 3 สี สำหรับรถยนต์บนท้องถนน ซึ่งมีฟังก์ชันปุ่มกดสำหรับคนเดินข้ามถนน และสัญญาณไฟพร้อมเวลานับถอยหลังระหว่างคนเดินข้ามถนน ใช้สำหรับทางม้าลายบริเวณถนนใหญ่ หรือทางม้าลายทั่วไป



ด้านหน้า

ด้านหลัง

ด้านข้าง

ด้านข้าง

LDC Display

1.Time
2.SetProgram
3.SetManual
4.ClearProgram

Mode Auto
Green Car = 015sece
Green Walk = 030sec
02:41:04

1.Set Green Car
2.Set Yellow
3.Set All Red
4.Set Green Human

คุณสมบัติทางไฟฟ้า (Electric Specification)

กำลังไฟฟ้าสูงสุดต่อโหลด Maximum Power/Load	2,200 W/ 1 Channel
แรงดันไฟฟ้าขาเข้า / ความถี่ไฟฟ้าขาเข้า Input Voltage / Input Frequency	220 - 240 VAC / 50 Hz
กำลังไฟฟ้าขณะเริ่มใช้งาน Power while stand by	5 W
อุปกรณ์ควบคุมแรงดัน ป้องกันไฟฟ้าตก ไฟฟ้าเกิน Automatic Voltage Stabilizer	2KVA +/-1%

คุณสมบัติภายนอก (Features Outside the Traffic Light Cabinet)

ขนาดตู้ Dimension	600x400x1300 mm.
วัสดุตู้แผ่นโลหะอบสีเคลือบกันสนิม Body Material	หนา 2 มม.
มาตรฐานป้องกันน้ำ ฝุ่น IP Level	IP 55

ระบบการทำงาน (Operation Modes)

- ทำงานด้วยระบบไมโครโปรเซสเซอร์ 16 บิต (Microprocessor Chip Type Controller)
- มีจอ LCD แสดงสถานะการทำงานปัจจุบัน
- มีแป้นกดสำหรับป้อนข้อมูลการทำงานได้ในระบบอัตโนมัติ (Auto) และตั้งโปรแกรมได้
- มีอุปกรณ์ป้องกันไฟฟ้ากระชากเนื่องจากฟ้าผ่า (Surge Protection)
- มี Breaker Safety โหลด 220 VAC แยกอิสระแต่ละ Channel และป้องกัน Overload
- มี Terminal สำหรับต่อโหลด Output 220 VAC เพื่อสะดวกต่อการใช้งาน
- ทนอุณหภูมิได้ตั้งแต่ -20 ถึง 70 องศา
- สามารถต่อเอาต์พุตได้สูงสุด 2 Signal
- วงจรมีระบบป้องกันสัญญาณ Over Load and Shot Circuit
- สามารถทำงานได้ทั้งโหมด Auto Control Mode และ Flashing Mode
- กำหนดรอบเวลา(Cycle Time) สำหรับควบคุมทางแยกได้ 000-255 วินาทีต่อรอบเวลา
- มีจอแสดงผล LCD แสดงสถานะการทำงานปัจจุบัน เวลาปัจจุบัน เวลาค้นถอยหลังสำหรับรถยนต์และคนเดินข้าม
- สามารถตั้งค่าเวลานับถอยหลังไฟเขียวสำหรับรถยนต์ ได้ตั้งแต่ 000-099 วินาที
- สามารถตั้งค่าเวลานับถอยหลังไฟเขียวสำหรับคนเดินข้าม ได้ตั้งแต่ 00-99 วินาที
- สามารถตั้งค่าสัญญาณไฟกะพริบแดง หรือกะพริบเหลืองได้
- รองรับระบบตรวจจับคนรอข้ามถนน และระบบตรวจสอบสภาพจราจร

การซ่อมบำรุง (Maintenance)

- กรณีสัญญาณไฟมีปัญหาขัดข้อง ระบบจะเปลี่ยนเป็นไฟกะพริบ (Flashing Mode)
- การลงอุปกรณ์ภายในตู้ไฟจราจรถูกออกแบบให้สามารถซ่อมได้โดยไม่ต้องใช้การบัดกรี เพื่อความสะดวกในการซ่อมบำรุง
- มี Breaker ย่อยต่อวงจรแยกคอมพิวเตอร์จราจร Output ทุกตัว ทำให้สะดวกในการซ่อมบำรุง

คุณสมบัติเฉพาะทางของสัญญาณไฟ (Special features of the signal light)

- | | |
|---|----------------------|
| ขนาดกล่องสัญญาณไฟ
Dimension | 0.70 x 1.25 x 0.1 m. |
| แรงดันไฟฟ้าขาเข้า / ความถี่ไฟฟ้าขาเข้า
Input Voltage / Input Frequency | 220 VAC / 50 Hz |
| วัสดุกล่อง
Body Material | Aluminium |
- หลอดไฟในกล่องไฟรูปคนเดินข้ามถนน โดยใช้สีดังนี้ (Segment)
 - ▲ LED สีแดง 82 หลอด ▲ LED สีเหลือง 288 หลอด ▲ LED สีเขียว 144 หลอด
 - ตัวนับเวลาคนเดินข้ามถนนเป็นหลอด LED ใช้กับแรงดันไฟฟ้า 220 VAC 50 Hz โดยใช้สีดังนี้
 - ▲ LED สีแดง 58 หลอด ▲ LED สีเหลือง 58 หลอด ▲ LED สีเขียว 58 หลอด
 - มาตรฐานป้องกันน้ำ ฝุ่น IP 66

คุณสมบัติเฉพาะทางของปุ่มกด (Special features of the button)

- | | |
|------------------------------------|---------------------|
| ขนาดกล่องปุ่มกด
Dimension | 220x132x82 mm. |
| วัสดุกล่อง
Body Material | DIE -Cast Aluminium |
| วัสดุปุ่มกด
Body Material | Stainless Steel |
| อุณหภูมิในการทำงาน
Temperature | -15 ถึง +75 องศา |
| มาตรฐานป้องกันน้ำ ฝุ่น
IP Level | IP 65 |
| น้ำหนัก
Weight | 1.5 Kg |
- วัสดุปุ่มกดเป็นมาตรฐานสำหรับให้ผู้ใช้การทางสายตาโดยมีเครื่องหมายลูกศรหมุนชี้ไปทางนั้นๆ
 - ติดตั้งกล่องปุ่มกดคนเดินข้ามที่เสาสัญญาณในระดับความสูงกว่าพื้นประมาณ 1.20 เมตร
 - มีระบบการต่อสายดินเพื่อป้องกันกระแสไฟฟ้ารั่วจนอาจเป็นอันตรายแก่ผู้กดปุ่ม
 - สัญญาณเสียงข้ามถนนสำหรับผู้พิการทางสายตา ได้ยินชัดเจนในระยะ 5 เมตร
 - จะดังแตกต่างกัน 2 ระยะ ระยะแรกเสียงปกติ ระยะสองเสียงถี่ขึ้นเมื่อใกล้จะสิ้นสุดเวลาข้ามถนน



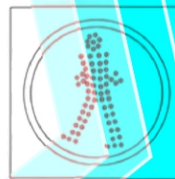
ชุดเคาท์ดาวน์โคมไฟคนเดินข้าม

PEDESTRIAN CROSSING LAMP COUNTDOWN



ข้อกำหนดและคุณสมบัติทั่วไป

- สัญญาณไฟติดตามคนเดินข้ามพร้อมตัวเลขนับถอยหลัง
- ตัวกล่องไฟทำด้วยวัสดุอลูมิเนียมแผ่นหนา 2 มม. พ่นสีกันร่อนพื้น 2 ชั้น และพ่นสีดำด้านแห้งทับ 2 ชั้น
- หลอด LED ที่ใช้เป็นหลอดคุณภาพสูง มีความยาวคลื่นแสง ที่อุณหภูมิ เท่ากับ 25°C ณ กระแสปกติ LED อยู่ในเวลานี้
 - สีแดง ไม่ต่ำกว่า 615-650 นาโนเมตร
 - สีเขียว ไม่ต่ำกว่า 500-509 นาโนเมตร
- จำนวนหลอด LED ภายในดวงโคมจราจรคนเดินข้าม มีจำนวนดังนี้
 - ตัวเลขนับเวลาคนข้ามถนน 2 หลัก 0-99 300 มม. = 140 ดวง (LED สีเขียว = 70 ดวง, LED สีแดง = 70 ดวง)
 - สัญญาณไฟสำหรับคนรอข้ามถนน 300 มม. = 82 ดวง
 - สัญญาณไฟสำหรับให้คนเดินข้ามถนน 300 มม. = 112 ดวง
- กล่องไฟผลิตจากโรงงานที่ได้มาตรฐาน
 - ใช้กับแรงดันไฟ 220 โวลต์ ที่ 50 Hz มีวงจรป้องกันการลัดวงจร กระแสไฟเกิน วงจรป้องกันไฟกระชาก
 - มีค่า PF ไม่น้อยกว่า 0.9
 - หลอด LED มีอายุการใช้งานไม่น้อยกว่า 100,000 ชั่วโมง
 - หลอด LED ในโคม สีแดงกินไฟ 18 วัตต์ สีเขียวกินไฟ 16 วัตต์
 - อุณหภูมิการใช้งาน -20 ถึง 80 °C
 - ต้องเกิด HERMONIC DISTORTION ไม่เกิน 20% ที่อุณหภูมิ 25°C



ปุ่มกดคนเดินข้าม

- ถ้าโคมสำหรับเสียงสัญญาณเตือนอยู่ภายในปุ่มกดสามารถได้ยินชัดเจนในระยะไม่ต่ำกว่า 5 เมตร
- สามารถสันนิษฐานที่ปุ่มกดในขณะที่สวิตซ์ทำงานในคนเดินข้ามถนนเพื่อให้นักที่มีปัญหาทางด้านสายตาสามารถสัมผัสและรับรู้ได้
- มีเครื่องหมายลูกศรขึ้นซึ่งจะหันไปในทิศทางที่ทางข้ามเพื่อให้นักที่มีปัญหาทางด้านสายตาสามารถรับรู้ทิศทางของทางข้ามได้
- ปุ่มกดคนข้ามถนนมีหลอด LED ไฟสีแดงแสดงในกรณีที่คนข้ามถนนกดปุ่มนั้นหมายความว่า ระบบสัญญาณไฟคนเดินข้าม กำลังทำงานทำให้คนที่ข้ามถนนคนอื่นไม่ต้องมากดซ้ำอีกครั้งในกรณีปกติจะไม่มีไฟสีแดงแสดง
- มีระบบป้องกันกระแสไฟฟ้ารั่วเป็นอย่างดี
- ตัวควบคุมเสียงเตือน มี 3 ความถี่เสียง
 - ความถี่ปกติ โทนเสียง บีบ บีบ รอข้าม (ในกรณีสัญญาณไฟคนยืนสีแดง)
 - ความถี่สูงสุด โทนเสียง บีบ บีบ ให้คนข้าม (ในกรณีสัญญาณไฟคนเดินเปลี่ยนเป็นสีเขียว)
 - ความถี่เร็ว โทนเสียง ต็อก ต็อก กำลังข้าม (ในกรณีสัญญาณไฟคนเดินสีเขียว)

DH-IPC-HFW5541E-ZE

5MP IR Vari-focal Bullet WizMind Network Camera



Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

Series Overview

With starlight solution and deep learning algorithm, Dahua WizMind 5 Series network camera has various intelligent functions, including face capture, perimeter protection and people counting, which greatly improve the accuracy of video analysis. The series camera supports dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

Functions

Face Detection

Dahua Face Detection technology can detect the face in the image. With deep learning algorithm, the technology supports detecting, tracking, capturing and selecting the best face image, and then outputs face snapshot.

Face Attributes

With deep learning algorithm, the network camera can recognize face attributes, such as gender, age, expression, glasses, mouth mask, and beard.

Perimeter Protection

With deep learning algorithm, Dahua Perimeter Protection technology can recognize human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), the false alarms of intelligent detection based on target type (such as tripwire, intrusion, fast moving, parking detection, loitering detection and gathering detection) are largely reduced.

- 1/2.7" 5Megapixel progressive scan CMOS
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
- 20 fps@2592 × 1944, 50/60 fps@1080P(1920 × 1080)
- WDR (120 dB), Day/Night (ICR), 3D DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS (DSS/PSS) & DMSS
- 2.7 mm–13.5 mm motorized lens
- 2/1 Alarm in/out, 1/1 audio in/out
- Max. IR LEDs Length 50 m
- Micro SD memory, IP67, IK10



People Counting

With deep learning algorithm, Dahua People Counting technology can track and process moving human body targets to realize the accurate statistics of enter No., leave No., and In Area No. Working with management platform, it outputs yearly/monthly/daily reports to meet your requirements.

ePoE

Dahua ePoE technology provides a new way to accomplish long distance transmission between IP camera and network switch. It allows more flexible surveillance system design, improves reliability and saves construction and wiring cost.

Protection (IP67, IK10, wide voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can work normal after soaking in 1 m deep water for 30 minutes.

IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 cm (Impact energy is 20J).

Wide voltage: The camera allows $\pm 30\%$ (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

Technical Specification

Camera

Image Sensor	1/2.7" 5Megapixel progressive scan CMOS
Max. Resolution	2592 (H) × 1944 (V)
RAM/ROM	1 GB/128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual, 1/3 s–1/100000 s
S/N Ratio	> 56 dB
Minimum Illumination	0.005 Lux@F1.5, 0Lux@F1.5(IR ON)
Illumination Distance	Distance up to 50 m (164 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	4(IR LED)

Lens

Lens Type	Motorized vari-focal				
Mount Type	Board-in				
Focal Length	2.7 mm–13.5 mm				
Max. Aperture	F1.5				
Angle of View	H: 100°–28°, V: 72°–21° (2592 × 1944) H: 104°–29°, V: 55°–16° (2688 × 1520)				
Aperture Type	Auto				
Close Focus Distance	0.8 m (2.62 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	64m(210ft)	26m(85ft)	13m(43ft)	6m(20ft)
	T	212m(696ft)	85m(279ft)	42m(138ft)	21m(69ft)

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan: 0°–360°; Tilt: 0°–90°; Rotation: 0°–360°
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Artificial Intelligence

Face Detection	Face detection; track; optimization; snapshot; report high quality picture; face enhancement; face exposure; face attribute extract, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, calm, happiness, sadness, disgust, surprise, confusion and fear), mask, beard; face matting setting: face, single inch photo;three snapshot methods: real-time snapshot, optimization snapshot, quality priority; face angle filter; optimization time setting
Perimeter Protection	Tripwire; intrusion; fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection; people gathering; parking detection
People Counting	Support the counting of enter number, leave number, and pass number, and displaying and outputting yearly/monthly/daily reports. Support the counting of number in area, and 4 rules configuration. Count number of people or stay time and link alarm. Support queue management, and 4 rules configuration. Count number of people or stay time and link alarm

General Intelligence

Event Trigger	Motion detection, Video tampering , Scene changing, Network disconnection , IP address conflict, Illegal Access, Storage anomaly
General Intelligence	Object Abandoned/Missing
Heat Map	Yes

Video

Compression	H.265,H.264,H.264B,H.264H, MJPEG (only supported by sub stream)
Smart Codec	Smart H.265+/ Smart H.264+
Streaming Capability	3 Streams
Resolution	2592 × 1944/2688 × 1520/2560 × 1440/2304 × 1296/1080P (1920 × 1080)/1.3M (1280 × 960)/720P (1280 × 720)/D1 (704 × 576/704 × 480)/VGA (640 × 480)/CIF (352 × 288/352 × 240)
Frame Rate	Main Stream: 2592 × 1944 (1 fps–20 fps) 2560 × 1440 (1 fps–25/30 fps) 1920 × 1080 (1 fps–50/60 fps)
	Sub Stream: D1 (1 fps–20/30 fps) D1 (1 fps–50 fps)
	Third Stream: 1080P (1 fps–17 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32 Kbps–8192 Kbps H.265: 19 Kbps–8192 Kbps
Day/Night	Auto(ICR)/Color/B/W
BLC Mode	BLC/HLC/WDR (120 dB)
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	Off/On (4 Zone, Rectangle)
Region of Interest	Off/On (4 Zone)
Electronic Image Stabilization (EIS)	Yes
Smart Illumination	Yes
Defog	Yes
Flip	0°/90°/180°/270°
Mirror	Off/On
Privacy Masking	Off/On (4 Area, Rectangle)

Audio

Audio Compression	G.711a, G.711Mu, AAC, G.726, G.723
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Alarm

Alarm Event	No SD card;SD card full;SD card error;network disconnection;IP conflict;illegal access;motion detection;video tampering;Defocus Detection;scene changing;intrusion;tripwire;abandoned object;missing object;fast moving;parking detection;loitering detection;people gathering;audio detection;people counting;face detection;voltage detection;People counting in area;Stay alarm;People No. exception detection;Queue Management
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Network

Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
Protocol	IPv4;IPv6;HTTP;HTTPS;TCP;UDP;ARP;RTP;RTSP;RTCP;RTMP;SMTP;FTP;SFTP;DHCP;DNS;DDNS;QoS;UPnP;NTP;Multicast;IGMP;IGMP;NFS;PPPoE;802.1x;SNMP
Interoperability	ONVIF (Profile S/Profile G/Profile T), CGI, Milestone, Genetec, P2P
User/Host	20 Users
Storage	NAS;FTP;SFTP;Dahua Cloud Micro SD card 256 GB
Browser	IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12)
Management Software	Smart PSS, DSS, DMSS
Mobile Phone	iOS, Android

Certifications

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07
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Interface

Audio Interface	1/1 channel In/Out
Alarm	2 channel In: 5mA 5V DC 1 channel Out: 300mA 12V DC

Electrical

Power Supply	DC 12V ($\pm 30\%$), PoE (802.3af)
Power Consumption	<10.9W

Environmental

Operating Conditions	-30° C to +60° C (-22° F to +140° F) /Less than 95% RH
Storage Conditions	-40° C to +60° C (-40° F to +140° F)
Protection Grade	IP67,IK10

Construction

Casing	Metal, plastic
Dimensions	273.2 mm \times 95.0 mm \times 95.0 mm (10.76" \times 3.74" \times 3.74")
Net Weight	1.11 kg (2.44 lb)
Gross Weight	1.51 kg (3.33 lb)

Ordering Information

Type	Part Number	Description
SMP camera	DH-IPC-HFW5541EP-ZE	5MP IR Vari-focal Bullet WizMind Network Camera, WDR, PAL
	DH-IPC-HFW5541EN-ZE	5MP IR Vari-focal Bullet WizMind Network Camera, WDR, NTSC
	IPC-HFW5541EP-ZE	5MP IR Vari-focal Bullet WizMind Network Camera, WDR, PAL
	IPC-HFW5541EN-ZE	5MP IR Vari-focal Bullet WizMind Network Camera, WDR, NTSC
Accessories (optional)	PFA152-E	Pole mount

Accessories

Optional:



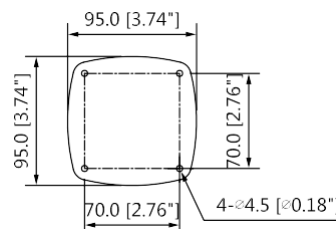
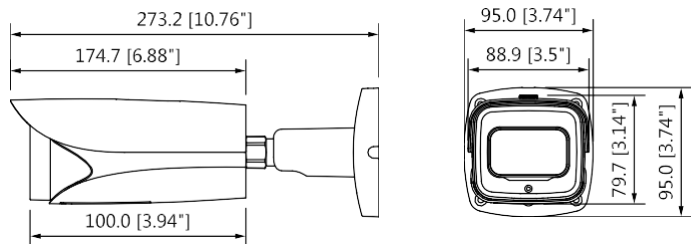
PFA152-E
Pole Mount



LR1002
ePoE Over Coax Converter

Ceiling Mount	Wall Mount	Pole Mount

Dimensions (mm[inch])



DHI-NVR4108HS-8P-EI

8CH Compact 1U 8PoE 1HDD WizSense Network Video Recorder



WizSense

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

Series Overview

NVR4000-EI series is a new generation of network recorders that offers powerful decoding capabilities, and strong bandwidth. It features high-precision face recognition, perimeter protection, and SMD (Smart Motion Detection), which can distinguish target vehicles and humans from other types in real time. When connected with select IPC cameras, Quick Pick technology becomes available, allowing human and vehicle targets to be easily searched for and picked out. This network recorder is not only cost-effective, but also compatible with a wide variety of third-party devices, making it a great choice for small and medium-sized businesses.

Functions

Face Detection

Face detection is to detect if there is any human face appearing in the video. This technology adopts a deep learning algorithm to support face detection, tracking, optimization and capturing, and then output the best face snapshot.

Face Recognition

Dahua Face Recognition technology extracts the features of captured faces and compares them with those in face database to recognize the person identity.

Perimeter Protection

Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to perform secondary recognition for the targets. Improving alarm accuracy.

- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG decoding format.
- Access, storage or forwarding at 256 Mbps (180 Mbps when AI function enabled).
- Max. decoding capability: 16 × 1080p@30 fps. Supports adaptive decoding.
- AI by NVR: 1-channel face detection and recognition; 2-channel perimeter protection; up to 10 face databases and 20,000 face images; 4-channel SMD Plus.
- AI by Camera: Face detection and recognition, perimeter protection; SMD Plus; people counting; stereo analysis; heat map.
- Connected to the third-party network cameras.
- Security baseline 2.3.



SMD Plus

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

AI Search

Support AI search by metadata of different targets or uploading face pictures to device and comparing them with recorded faces by similarity. Enable operators to quickly and easily search through multi channels and long duration, efficiently find out when and where a person of interest appeared.

Heat Map by Camera

Dahua heat map technology is used to display the crowd density and people appearance probability. Export and display the crowd status by different colors. Generally, the crowd status is the statistics of people quantity in space and time dimensions.

Quick Pick

Dahua Quick Pick technology can enable users to quickly pick up the human/vehicle targets that they are interested in, which facilitates retrieval from SMD events.

Technical Specification

System

Main Processor	Industrial-grade processor
Operating System	Embedded Linux
Operating Interface	Web; Local GUI

AI

AI by Recorder	Face detection, face recognition, perimeter protection, and SMD Plus;
AI by Camera	Face detection; face recognition; perimeter protection; SMD Plus; people counting; stereo analysis; heat map

Perimeter Protection

Perimeter Performance AI by Recorder (Number of Channels)	2 channels, 10 IVS rules for each channel
Perimeter Performance of AI by Camera (Number of Channels)	8 channels

Face Detection

Face Attributes	Gender; age group; glasses; expressions; face mask; beard
Face Detection Performance of AI by Recorder (Number of Channels)	1 channel (up to 12 face images/s each channel)
Face Detection Performance of AI by Camera (Number of Channels)	8 channels

Face Recognition

Face Database Capacity	Up to 10 face databases with 20,000 images, with a total capacity of 2.5 G. Name, gender, birthday, address, credential type, credential No., countries & regions and state can be added to each face image.
Face Recognition Performance of AI by Recorder (Number of Channels)	8-channel FD (by camera) + FR (by recorder), image stream: 12 face images/s 1-channel FD (by recorder) + FR (by recorder), video stream: 12 face images/s
Face Recognition Performance of AI by Camera (Number of Channels)	8 channels

SMD Plus

SMD Plus by Recorder	4 channels: Secondary filtering for human and motor vehicle, reducing false alarms caused by leaves, rain and lighting condition change
SMD Plus by Camera	8 channels

Audio and Video

Access Channel	8 channels
Network Bandwidth	AI disabled: 256 Mbps incoming, 256 Mbps recording and 256 Mbps outgoing AI enabled: 180 Mbps incoming, 180 Mbps recording and 180 Mbps outgoing
Resolution	16 MP; 12 MP; 8 MP; 6 MP; 5 MP; 4 MP; 3 MP; 1080p; 960p; 720p; D1; CIF

Decoding Capability

AI disabled: 2-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 4-channel 8 MP@30 fps; 6-channel 5 MP@30 fps; 8-channel 4 MP@30 fps
AI enabled: 1-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 3-channel 8 MP@30 fps; 4-channel 5 MP@30 fps; 6-channel 4 MP@30 fps; 8-channel 1080p@30 fps

Video Output

1 HDMI, 1 VGA
HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720
VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
*Simultaneous/heterogeneous video sources output for VGA and HDMI is configurable.

Multi-screen Display

1st Screen: 1/4/8/9
2nd Screen: 1/4/8/9

Third-party Camera Access

Panasonic, Sony, Samsung, Axis, Pelco, Arecont, ONVIF, Canon

Compression Standard

Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG
Audio Compression	G.711a; G.711u; PCM; G726

Network

Network Protocol	HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; UDP; SMTP; NTP; DHCP; DNS; IP Filter; PPPoE; DDNS; FTP; Alarm Server; IP Search (Support Dahua IP camera; DVR; NVS; etc.); P2P; auto register
Mobile Phone Access	iOS; Android
Interoperability	ONVIF 22.06(Profile T; Profile S; Profile G); CGI; SDK
Browser	Chrome; IE9 and later; Firefox

Recording Playback

Multi-channel Playback	Up to 8 channels
Record Mode	General, motion detection; intelligent; alarm
Backup Method	USB device and network
Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback

Alarm

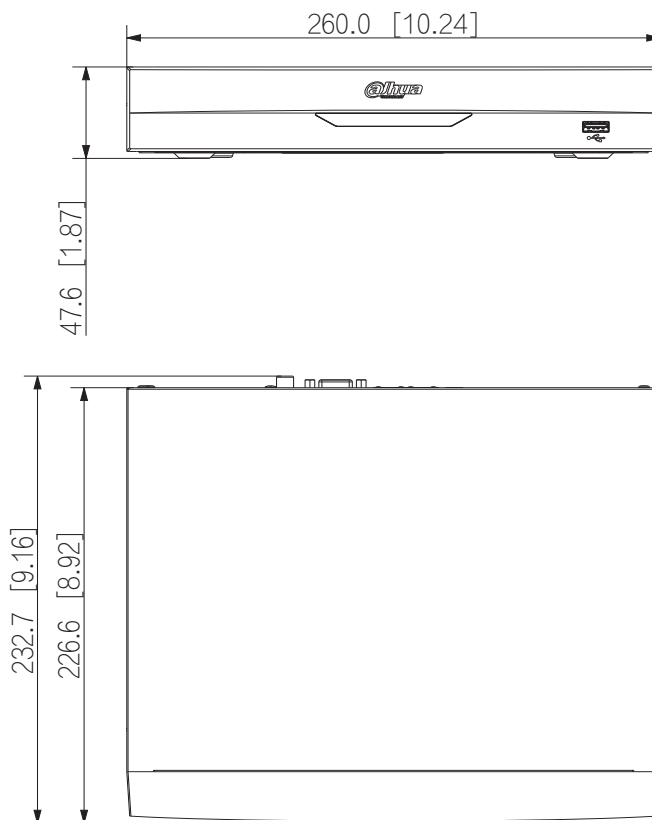
General Alarm	Motion detection; privacy masking; video loss; scene changing; PIR alarm; IPC external alarm
Anomaly Alarm	Camera disconnection; storage error; disk full; IP conflict; MAC conflict; login locked; and cybersecurity exception
Intelligent Alarm	Face detection; face recognition; perimeter protection; SMD Plus; people counting; stereo analysis; heat map
Alarm Linkage	Record; snapshot; IPC external alarm output; audio; buzzer; log; preset; email

Port

Audio Input	1-channel RCA
Audio Output	1-channel RCA
HDD Interface	1 SATA port, up to 16 TB.The maximum HDD capacity varies with environment temperature.
USB	2 (1 front USB 2.0 port, 1 rear USB 2.0 port)
HDMI	1
VGA	1

Network Port	1 (10/100/1000 Mbps Ethernet port, RJ-45)
PoE Port	8 ports, 10/100 Mbps, IEEE 802.3 af/at
General	
Power Supply	53 VDC, 1.812 A
Power Consumption	Total output of NVR is <10 W(without HDD) Total output power of PoE is 72W,the maximum output power of asingle port is 25.5W
Net Weight	0.92 kg (2.03 lb)
Gross Weight	2.05 kg (4.52 lb)
Product Dimensions	260 mm × 232.7 mm × 47.6 mm (10.24" × 9.16" × 1.87") (W × L × H)
Packaging Dimensions	372 mm × 117 mm × 308 mm (14.65" × 4.61" × 12.13") (W × L × H)
Operating Temperature	−10 °C to +55 °C (14 °F to +131 °F)
Storage Temperature	−20 °C to +60 °C (−4 °F to +140 °F)
Operating Humidity	10%–93% (RH)
Installation	Rack or desktop
Certifications	FCC: 47 CFR FCC Part15, SubpartB, Class A CE-EMC: EN 55032:2015+A1:2020; EN IEC 61000-3-2:2019+A1:2021; EN 61000-3-3:2013+A1:2019+A2:2021; EN 55035:2017+A11:2020; EN 50130-4:2011+A1:2014 CE-LVD: EN 62368-1:2014

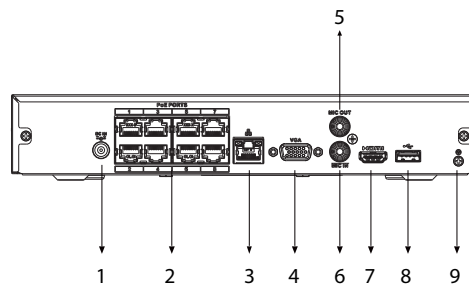
Dimensions (mm[inch])



Ordering Information

Type	Model	Description
8 Channels WizSense NVR	DHI-NVR4108HS-8P-EI	8CH Compact 1U 8PoE 1HDD WizSense Network Video Recorder

Panels



- | | |
|----------------------------|------------------------|
| 1 Power Input | 2 PoE Ports |
| 3 Network Port | 4 VGA Port |
| 5 AUDIO OUT, RCA Connector | 6 AUDIO IN, RCA Connec |
| 7 HDMI Port | 8 USB Port |
| 9 Ground | |

CHUPHOTIC VENUS UPS

Performance Power Solutions

Venus Ultimate Plus VNU 1-10K



DSP True Online Double Conversion UPS
Rack and Tower Convertible



มอก.1291
เล่ม 1-2553
เล่ม 2-2553
เล่ม 3-2555



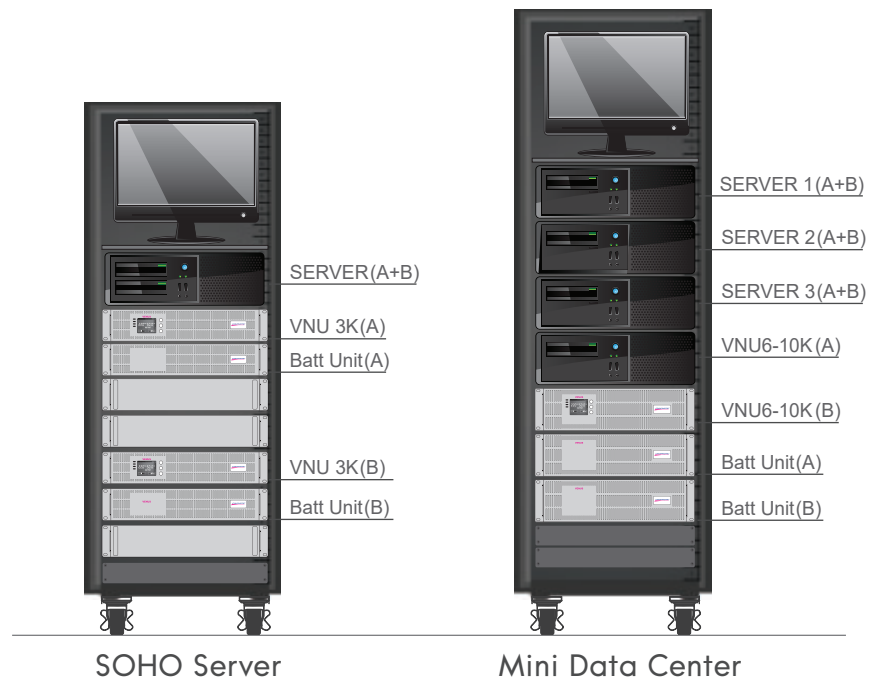
IEC-62040



www.chuphotic.com

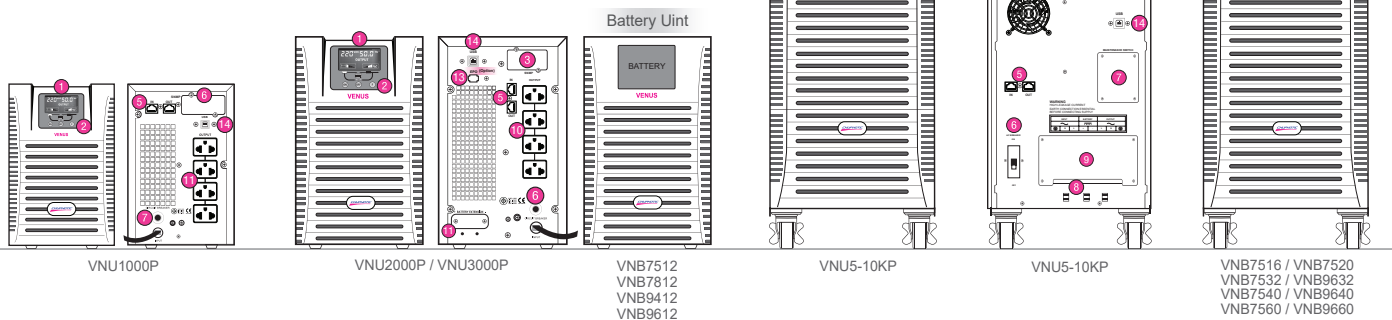
Features

- True Online Double Conversion Pure Sine Wave UPS
- Advanced DSP digital control technology
- 2/3 Level IGBT Inverter Technology
- High Input Power Factor Correction (PFC>0.99)
- Rackmount 19" 2U, 3U for UPS, Battery Unit
- Output Pure Sine Wave less than 2%(THDv)
- Output Voltage 220Vac +/-1% (200, 208, 220, 230, 240V)
- High Inverter Efficiency(approx.≥92%)
- Self Diagnosis at UPS start up / Manual Self Test
- Advanced Battery Management (ABM)
- Battery Capacity & Remaining Backup Time
- EMI/RFI and Power Line Noise protection
- AC/DC Cold Start Function
- Surge, Lightning, Spike, Blackout, Brownout
- Overload and Short Circuit Protection
- USB Port with UPSilon 2000 Monitoring
- External Battery Unit (Option: Battery Charger 3.5A)
- SNMP/HTTP Internet Network / AS400 (Option)
- Parallel Redundancy N+X 5-10kVA (Option)
- Maintenance Bypass Switch 5-10kVA
- EPO : Emergency Power Off / ECO : Economy (option)
- Output Isolation Transformer (option)
- Compatible with Generator
- TIS1291 Part1-2553, Part2-2553, Part3-2555 : C1
- CE : IEC / EN62040-1,-2,-3 IEC / EN55022, IEC61000
- ISO9001 / ISO14001 : 2015 Certificate MFG



CHUPHOTIC
อุปกรณ์ ชุมพอ

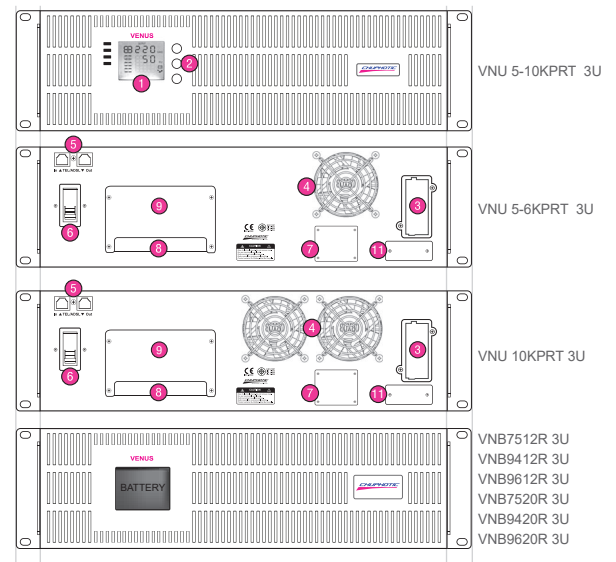
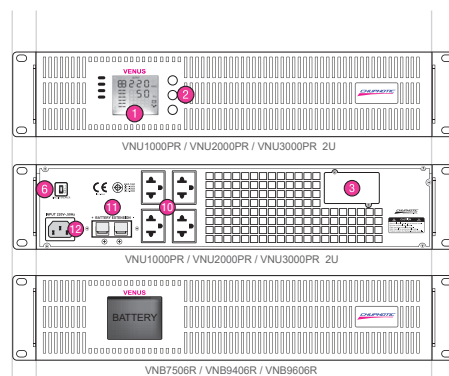
Tower UPS



Rackmount UPS

Rack & Tower UPS

- 1 LCD Panel (Auto Turn)
- 2 Function Switch : LED Mimic
- 3 SNMP Card Slot
- 4 Fan
- 5 RJ45 Tel / ADSL SPD
- 6 AC Input Breaker
- 7 Maintenance Bypass Switch
- 8 Input/Output Terminal
- 9 Terminal Cover
- 10 Outlet 4 National
- 11 Battery Extension Anderson
- 12 Inlet IEC320 C14
- 13 EPO : Emergency Power off (Option)
- 14 USB Port + UPSilon2000



VENUS ULTIMATE PLUS

DSP True Online Double Conversion UPS



SPECIFICATION

Model	Tower UPS	VNU1000P	VNU2000P	VNU3000P	VNU5KP	VNU6KP	VNU10KP
	Rackmount UPS	VNU1000PRT	VNU2000PRT	VNU3000PRT	VNU5KPRT	VNU6KPRT	VNU10KPRT
CAPACITY	For Computer Load (VA/W)	1000/900	2000V/1800	3000/2700	5000/4500	6000/5400	10000/8000
SYSTEM	Controller	Intelligent UPS with DSP control 2level IGBT Technology			Intelligent UPS with DSP control 3level IGBT Technology		
	Technology	High Frequency Double Conversion Pure Sine Wave UPS, Power Factor Correction(PFC) with IGBT Technology					
INPUT	Voltage	220Vac : 200 / 208 / 220 / 230 / 240Vac Single Phase					
	Voltage Range	110-290Vac at Half Load, 160-290Vac at Full Load			120-286Vac at Half Load, 160-286 Vac at Full Load		
	Frequency	50/60Hz ±6% (Auto Detect) at Nominal voltage (±10% Option)					
	Power Factor	PF >0.99 at Full Load, THDi <5%					
OUTPUT	Voltage	220Vac ±1%/(200, 208, 230, 240 selecting on LCD panel and software)					
	Phase	Single Phase L-N+PE					
	Frequency	Normally locked to line frequency, Free Running 50Hz ±0.1%/(60 Hz selecting on LCD panel and software)					
	Wave Form	Pure Sine Wave					
	Harmonic Distortion	THDv <3% at Linear Load /<5% at Non Linear Load					
	Transient Condition	±5% for 100% Instantaneous Load Variation(Step Load)					
	Overload Capability	120% for 60sec, 150% for 30 sec, >150% for 300ms, then Automatic Switch to Bypass			120% for 60sec, 150% for 30 sec, >150% for 1sec, then Automatic Switch to Bypass		
	Crest Factor	3 : 1					
	Protection	Under/Over voltage, Overload, Shot Circuit, Over Temperature and Low Battery Shutdown					
EFFICIENCY	DC to AC	Approximate ≥ 87%			Approximate ≥ 92%		
	AC to AC	≥ 87% at Full Linear Load			≥ 92% at Full Linear Load		
BATTERY	Type	Sealed Lead Acid (Maintenance-free) Rechargeable Battery (High Rate/UL 94-V0 option)					
	Capacity	3x12V 7.5Ah	8x12V 7.5Ah		20x12V 7.5Ah		20x12V 9.4Ah
	Voltage	36Vdc	96Vdc		240Vdc		
	Standard Backup Time	15-30 min(Depend on Load)					
	Extend Backup Time	15-120min Depend on Battery Unit Cap.					
	Recharge Time	3-6hours to 90% after Load Backup					
	Charger Current(A)	Standard 1.5A / Long backup 3.5A (option)			Standard 1.5A / Long backup 3.5A (option)		
TRANSFER TIME	Main to Battery Mode Battery Mode to Main	Zero Transfer Time with Static Transfer Switch (ATS-SCR)					
INDICATOR	Front Panel LED	Line, Inverter, Bypass and Battery (Mimic)					
	Front Panel LCD	Operate UPS Status, Input Voltage, Output Voltage, Frequency, Bypass, Battery Voltage, % Battery, Remaining Backup Time, %Load, VA, Watt, Temperature, Fan and UPS Fault					
PROTECTION	EMI/RFI Attenuation	>40dB					
	Surge Protection	Indoor: UL1449 Cat A, B / IEC 61643 LPZ3, 2 In 3kA at 8/20µsec					
	Surge Energy Dissipation	SPD 300Vac : 220Joules in 2msec at Power 30kW Imax 6kA					
AUDIBLE ALARM	Multiple Tones with Reset for Silence	Mains Failure, Low Battery, Overload and UPS Fault					
INLET	Tower UPS	Power cord 1.5 meter NEMA 5-15P			Terminal		
	Rackmount UPS	Power cord 1.5 meter NEMA 5-15P - IEC320 C13			Terminal		
OUTLET	Tower UPS	4 x National	4 x National + Terminal		Terminal		
	Rackmount UPS	4 x National or IEC320-C13			Terminal		
COMMUNICATION INTERFACE	USB Port	USB port can be connected to PC, Workstation or Servers for automatic unattended shutdown / RS485 / AS400 Dry Contact (option)					
	Software	UPSilon2000 supported for windows 95, 98, NT, 2000, Me, XP, Novell Netware, Linux, FreeBSD (IBM, Sun, Solaris option)					
	SNMP/HTTP	Option : SNMP Card / AS400 Dry Contact / RS485 / NB IoT, 3G/4G-IoT					
ACOUSTIC NOISE	At 1 meter	< 45 dBA			< 50 dBA		
ENVIRONMENT	Temperature	0-40°C					
	Humidity	RH 0-95 % (Non-Condensing)					
DIMENSIONS (WxDxH) mm	Tower UPS/Long Backup	145x350x230	190x425x330		260x560x720		
	Rackmount UPS	483x450x88-2U			483x650x132-3U		
	Battery Unit Extension (option)	Separate (UPS and Battery Unit Extension)					
WEIGHT (approximate in Kg.)	Tower UPS	13	28	29	70	80	
	Rackmount UPS + Battery Unit	18(included)	14+23	14+23	26+59	28+69	
	Battery Unit Rack (option)	Depending on Battery Capacity					
CONFORMANCE	Design Regulation	TIS.1291 Part1-2553 : Safety, TIS.1291 Part2-2553 : EMC, TIS.1291 Part3-2555 : Performance Cat, C1 CE : IEC / EN62040-1, IEC / EN 62040-2, IEC / EN 62040-3, IEC / EN 50091-1,-2, IEC / EN 55022, IEC / EN 61000					

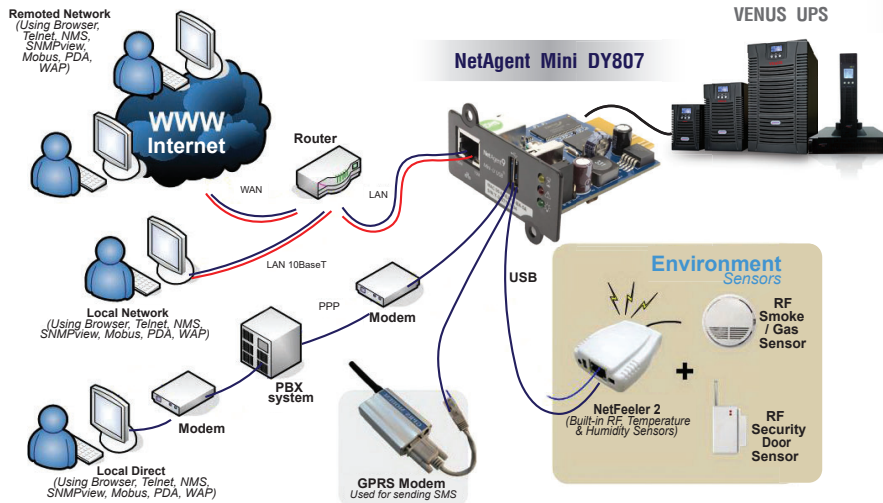
*R = Rack Mount UPS

*Long backup Please call chuphotic

*All above specification may be change without prior notice.

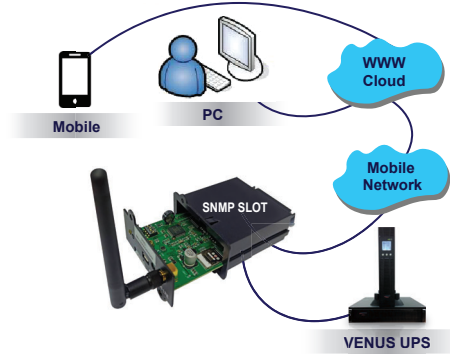
CHU-EN.BRO-39.UPS.VNU-P.Rev1.00/2022

Communication and Power Management Solutions



Advanced, multi-platform communication, for all operating systems and network environments

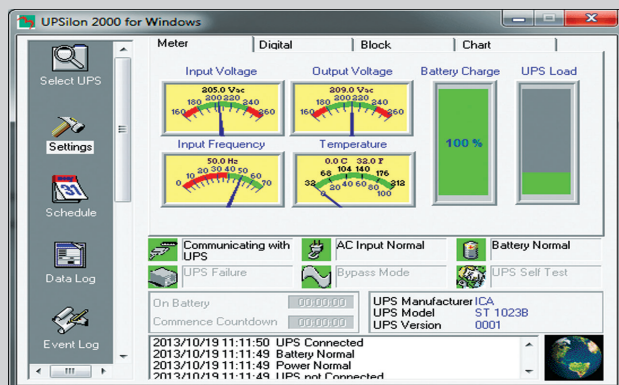
Internet of Think : NB IoT, 3G/4G-IoT



- Mobile Network for Uninfrastructure Area
- EASY to install standalone UPS
- Support Mobile : NB IoT, 3G/4G-IoT
- Low cost Service & Monitoring
- Monitoring in AC Input / Output, Battery, Temp.
- Event log / Data log in Days, Weeks, Months, Years

ADVANCED COMMUNICATION

- Comprehensive UPS management with flexible configuration via Web Browser, NMS, Telnet or SNMP.
- Support Advance Encryption: HTTPS, SSL, SSH, SNMPv3
- Centralized Authentication by Radius
- Event notification via E-mail, SMS or Trap
- Support NetFeeler II (Environment Monitoring) with Temperature, Humidity, Water presence, Smoke and Door sensors
- Support USB Wifi 802.11b/g, USB flash disk / external USB HDD, compatible USB camera & more
- Support UPS MIB, RFC1628, PPC MIB
- Support GPRS modem
- Multi-language user interface
- Real-time UPS Monitoring
- Schedule periodic UPS self-test
- Record Event log / Data log
- Can also provide shut-down software for: IBM AIX; Free BSD; BSDI UNIX; BSD / OS; SCO Unixware; SCO Openserver; Sun Solaris; Compaq True64; HP UNIX; HP OpenVMS; HP Openview; SGI Irix MIPS; NCR UNIX
- Battery test log

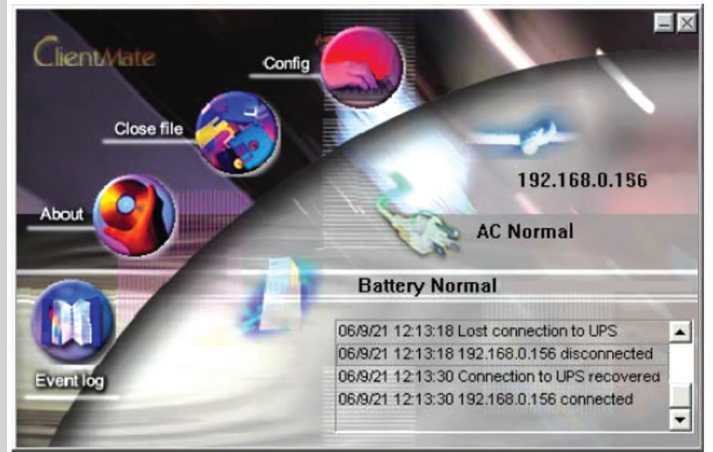


UPSilon 2000 UPS Monitoring software

USB Port For Microsoft Windows 2000 /
Microsoft Windows Me / Microsoft Windows XP /
Vista, Microsoft Windows 8, Microsoft Windows 2010
Platform : Novell NetWare, Linux, FreeBSD

Applications;

- Auto sending warning messages by e-mail.
- Auto detecting AC power failure and UPS battery low.
- Providing the UPS expected time setting of power supply.
- History data recording.
- Auto shutting down the system and turning off the UPS when AC power failed.
- Broadcasting the warning messages to all the workstations.
- Display the system shutdown countdown.
- Able to operate on server and workstation.
- Schedule on / off in a week
- Programmable UPS auto-testing period.
- UPS status reporting on server screen, including the input / output voltage, load, line frequency, temperature and so on.
- Local Network UPS monitoring through an Net Agent or SNMP Agent.



AS-400 Card (Dry Contact)

The AS400 communication card provides contact closures for remote monitoring your UPS. To meet different application requirement, the AS400 card is capable of selection the status of the dry-contact signal (active close or active open) by setting jumper. This suitable applications are listed below:

- IBM Server, Personal PC & Workstations equipments
- Auto-controlled industrial equipment & communication applications

Internet of Think : NB IoT, 3G/4G-IoT (Mobile Network)

- Mobile Network for LAN-Uninfrastructure Area
- Easy to Install Standalone UPS or Independent Network
- Economic Low cost Service & Monitoring
- Mobile Network & Data log Cloud for Computer & mobile
- Monitoring in AC Input/Output, Battery, Temperature
- Event log / Data log in Days, Weeks, Months, Years

CHUPHOTIC Co.,Ltd.

949 Moo 9, Sumrong-Nue, Muang Samutprakarn, Samutprakarn 10270
Tel. : 02 186 3010 (Auto) Fax : 02 186 3018-19
www.chuphotic.com E-mail: ups@chuphotic.com

Authorized Dealer :

9-Port 10/100Mbps Desktop Switch with 8-Port PoE+

MODEL: TL-SF1009P Datasheet



Highlights

- With eight PoE+ ports, transfers data and power on one single cable
- Working with IEEE 802.3af/at compliant PDs, expands your network
- Supports PoE power up to 30 W for each PoE port
- Supports PoE power up to 65 W* for all PoE ports
- Up to 250 m data and power transmission under Extend Mode** specially designed for surveillance system
- Priority Mode ensures high priority of port 1-2 to guarantee the quality of sensitive application
- Isolation Mode allows one-click client traffic separation for higher security and performance
- PoE Auto Recovery guarantees stable operation of PoE devices by automatically rebooting the dropped or unresponsive PD devices
- Requires no configuration and installation

Overview

TL-SF1009P is an unmanaged switch with 9 10/100Mbps ports that requires no configuration and provides 8 PoE (Power over Ethernet) ports. It can automatically detect and supply power with all IEEE 802.3af/at compliant Powered Devices (PDs). In this situation, the electrical power is transmitted along with data in one single cable allowing you to expand your network to where there are no power lines or outlets, where you wish to fix devices such as APs, IP Cameras or IP Phones, etc.

Power Over Ethernet

8 of the 9 Auto-Negotiation RJ45 ports (port 1 to port 8) of the switch support Power over Ethernet (PoE) function. These PoE ports can automatically detect and supply power with those IEEE 802.3af/at compliant Powered Devices (PDs).

Overload Arrangement

TL-SF1009P has the priority function which will help protect the system when the system power is overloaded. If all PoE PDs power consumption is $\geq 65\text{ W}^*$, a priority will be arranged among the PoE ports, then the system will cut off the power of the lowest-priority port.

Intelligent Power Management

Priority (port 1 = port 2 = port 3 > port 4): This function will help protect the system when the system power is overloaded. For example, port 1, 2 and 4 is using 20 W (maximum power per port is 30 W); the system power is 60 W in total. If there is an additional PD inserted to port 3 with 20 W, and then the system will cut off the power of port 4 because of the overloaded power, this means port 1, 2, and 3 will use 20 W, no power will be supplied to port 4.

Highlight Performance


- Up to 250 m PoE power supply and data transmission under Extend Mode**.
- Priority Mode ensures high priority of port 1–2 to guarantee the quality of sensitive application.
- Isolation Mode easily divides traffic for port 1–8 to avoid snooping and tampering, which improves LAN security and performance.
- PoE Auto Recovery guarantees stable operation of PoE devices by automatically rebooting the dropped or unresponsive PD devices.

Easy to Use

TL-SF1009P is easy to install and use. It requires no configuration and installation. With desktop and wall mountable design, outstanding performance and quality, the TP-Link 9-Port 10/100Mbps Desktop Switch with 8-Port PoE+ TL-SF1009P is a great selection for expanding your network.

Specifications

Hardware Features & Performance

Product Picture	
Model	TL-SF1009P
Standards	IEEE 802.3i, IEEE 802.3u, IEEE 802.3x, IEEE 802.3af, IEEE 802.3at
Network Ports	9 * 10/100 Mbps RJ45 ports with 8 PoE+ ports (port 1 to port 8)
Network Media (Cable)	10Base-T: UTP category 3, 4, 5 cable (maximum 100 m) EIA/TIA-568 100 Ω STP (maximum 100 m) 100Base-TX: UTP category 5, 5e cable (maximum 100 m) EIA/TIA-568 100 Ω STP (maximum 100 m)
PoE	PoE Standard: IEEE 802.3af, IEEE 802.3at PoE Port 1–8, up to 30 W per port PoE Power Budget 65 W*
Auto-Negotiation	YES
Auto MDI/MDIX	YES
PoE Power on RJ45	Power+: pin 3 & pin 6 Power -: pin 1 & pin 2
Max Power Consumption	3.28 W (220 V/50 Hz no PD connected) 74.33 W (220 V/50 Hz with 65 W* PD connected)
Max Heat Dissipation	11.18 BTU/h (no PD connected) 253.47 BTU/h (with 65 W* PD connected)
Forwarding Mode	Store and Forward
Switch Capacity	1.8 Gbps
MAC Address Table	2k, Auto-learning, Auto-aging
Extend Mode	YES
Priority Mode	YES (Ports 1-2)
Isolation Mode	YES
PoE Auto Recovery	YES
Flow Control	YES
Fanless	YES
LED	Power, Link/Act, PoE Status, PoE MAX
Dimensions	6.7 x 3.9 x 1.1 in. (171 x 98 x 27 mm)
Certification	CE, FCC
Environment	Operating Temperature: 0°C to 40°C (32°F to 104°F) Storage Temperature: -40°C to 70°C (-40°F to 158°F) Operating Humidity: 10% to 90% RH, non-condensing Storage Humidity: 5% to 90% RH, non-condensing

Note:

* PoE budget calculations are based on laboratory testing. Actual PoE power budget is not guaranteed and will vary as a result of client limitations and environmental factors.

**The speed of the ports which are under extend mode will be downgraded to 10Mbps. Actual transmission distance may vary from the quality of the cables.

www.tp-link.com

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