

ATEN Control System

Simply Intelligent



WHAT is ATEN Control System?

When it comes to creating the perfect environment for the perfect meeting, training program or video conference, you don't want to settle for anything but the comfort of control - without complication. You might have a modern environment with all sorts of high-tech equipment, but what makes it worthwhile is how you bring together the presentation with audio, video and lighting in a seamless collaboration. This is where a control system comes into the picture to provide integrated control and system automation.

The ATEN Control System, incorporating the VK2100/VK1100 (Control Box), the VK6000 (ATEN Configurator) and the ATEN Control System App is a standard Ethernet-based management system that connects all hardware devices in a room or large facility to provide centralized control of devices directly and effortlessly from any mobile device.

- The VK2100 / VK1100 works as the main control box to provide connectivity to all types of hardware devices commonly seen in a room.
- The VK6000 Configurator software features quick setup with the configuration of hardware and device controls.
- The ATEN Control System App empowers you with the mobility to control different hardware devices in different rooms whenever and however you like.

No more pre-meeting or post-meeting setup and break down, and no more redundant remote controls, everything is easily accessible from your mobile device as you tap and go. The ATEN Control System is a perfect fit in the hardware consolidation plan for any working environment, educational facility, conference hall or any other room that needs complete control.

WHY Choose the ATEN Control System?

Have you ever wanted to give your existing environment a makeover, but you've been afraid it might go beyond your budget, or you're not sure how it'll turn out? Rest assured, the ATEN Control System is just the solution to dispel your doubts by making it a SIMPLE and ADAPTABLE process. The solution has been developed to facilitate your workspace with six major focuses amongst many other advantages:



Intelligent Control

The ATEN Control System makes the interactions between your devices smarter. Pre-programmed actions/triggers can provide a fully automated series of advanced operations, so your devices respond to each other intelligently, making your whole solution smarter and smoother.



Optimized Performance

The ATEN Control System has optimized the communication protocols that not only maintain near-zero response times but also feature encryption for extra protection.



Simplified Setup

No matter how large the room or how complicated the hardware, the ATEN Control System can be deployed in 3 easy steps: Connect all hardware, Configure system settings and Control via mobile app. Through an intuitive and straightforward GUI, the process for setting up the control pattern for every room is simple and customizable, via straight-forward pre-defined commands and macros, and does not require any previous programming knowledge.



Effortless Expandability

With a range of expansion boxes available, the ATEN Control System installation can grow to accommodate additional Serial, Relay and IR devices. Furthermore, the ATEN library comprises 10,000+ device drivers and can also grow by adding new devices to the existing database, making it expandable and easily manageable, whatever the size or scope of the installation.



User-centered Convenience

An advanced, single-software solution creates an intuitive control interface for any mobile device, while specific needs are conveniently tailorable by selecting from an extensive library of action options and design elements to customize the control panel. In addition, the ATEN Control System provides various support services, including driver downloads, database generation and upgrade tools, to help system integrators build-up easy-to-control environments with less effort.



On-the-Go Control

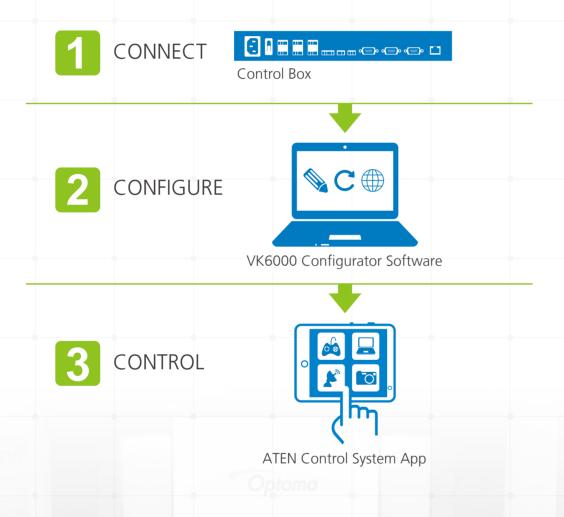
Intuitive system control can start with one room and scale up to multiple rooms in the same area or across regions. Toggling between profiles on an iOS, Android or Windows mobile devices facilitates control of different rooms with simple point-ntap operations. In addition, multiple mobile devices can be authorized with access to control the same room or multiple rooms, providing you with flexible enhanced mobility and complete security.



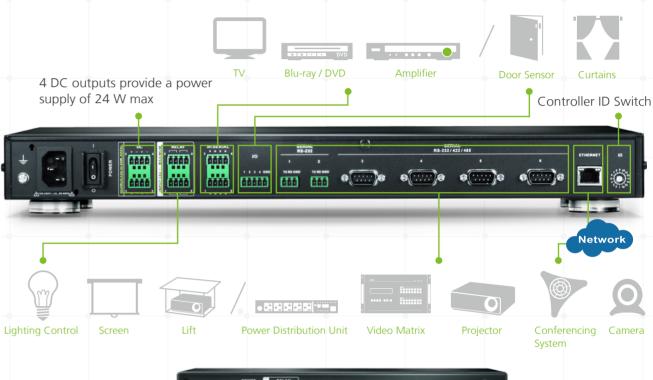
HOW to deploy the ATEN Control System?

The ATEN Control System is perfectly applicable in any room that requires integration of different hardware devices with a customizable interface and controls. No matter how large the room or how complicated the hardware, deploying the ATEN Control System can be completed in 3 easy steps:

- CONNECT all hardware to the Control Box.
- CONFIGURE system settings with the VK6000 software.
- CONTROL the hardware from a mobile device via the ATEN Control System App.



IR Learning function for adding IR device drivers • USB port for easy profile upload



VK1100 >



CONNECT

The VK2100 / VK1100 is a **hardware control box** that can integrate seamlessly with any hardware device installed in a room and with ATEN VanCryst[™] pro-A/V products. It serves as a centralized platform where hardware devices are converged to be monitored, managed and controlled directly via a tailored-made GUI available on any mobile device.

1

Create Project

• Simple room setup in 4 easy steps via VK6000 software

2

Select Device

- Built-in Database & Generator for device driver setup and overall device management
- Built-in ATEN Library comprising 10,000+ device drivers and all ATEN device drivers



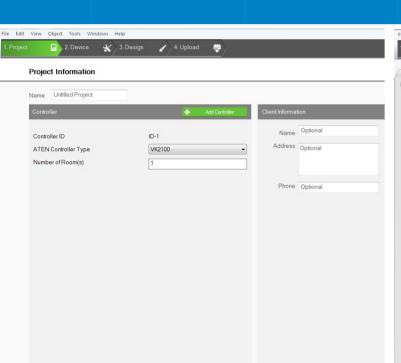
Configure Viewer

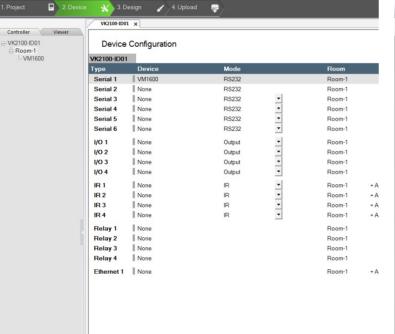
- Customizable GUI design and device controls for use on any mobile device
- Test tool to verify commands in action before uploading the Viewer to the VK2100/VK1100
- Simulator to simulate and review the customized GUI before uploading the Viewer

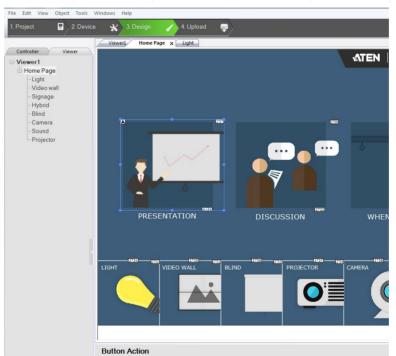


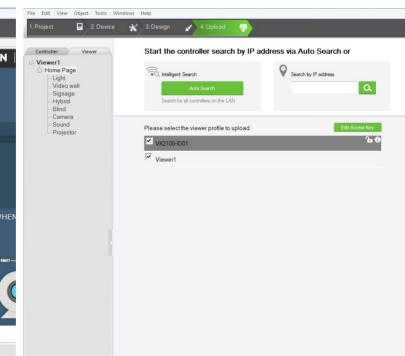
Upload Profile

 Automatically search for controllers and upload / update Viewer profiles









CONFIGURE

The **VK6000 Configurator software** is used to streamline and simplify the complicated hardware setup in 4 easy steps: Create Project > Select Device > Configure Viewer > Upload Profile. Operation for any room and control of all devices can be customized in a viewer that includes a personally designed GUI that fits perfectly in the tablet or mobile device's screen, signifying "what you see is what you get" as you design the interface, actions and commands that correspond to the control buttons and custom icons added to your GUI.



Viewer Design Tips:

Choose design elements, including button interactions, new themes, color palette and slider bar control, from the ATEN library to create an intuitive control panel

Single-Room Control / Multiple Functions

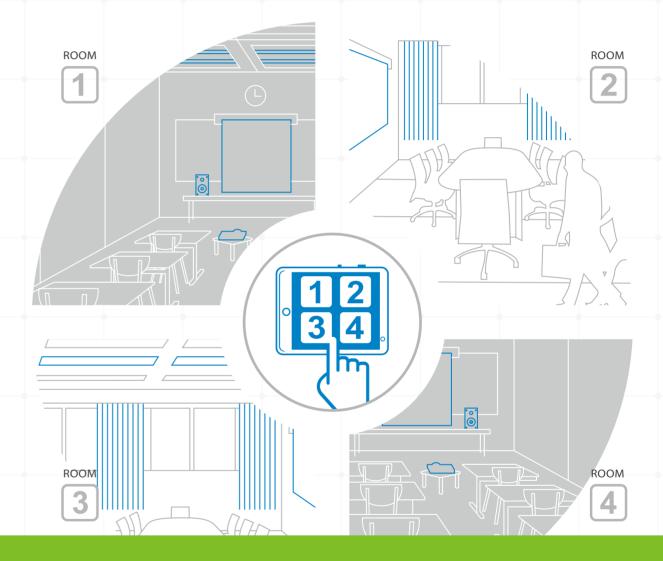
With the ATEN Control System, a room can quickly change functions to suit the needs of the user. By toggling between different profiles on any mobile device, the room can be instantly transformed to serve different purposes. For example, a meeting room can turn into a party room with the press of a button. The switch is simple, just a quick tap on your mobile device brings to life the hardware suitable for the occasion.



Through an Ethernet connection, the **ATEN Control System App** imports and updates viewer profiles from the controller to a tablet computer or mobile device, allowing you to control the hardware devices in different rooms via simple point-n-tap operations from a customized GUI. Multiple tablet computers and mobile devices can be authorized with control over the same room simultaneously, depending on your software license. Meanwhile, user access to any viewer profile can be restricted with password authentication to reinforce system security.

Multi-Room Control / Central Administration

Taking control of a room is simple but the administration of multiple rooms can be challenging. By installing the ATEN Control System, administrators can control how devices are used in each room. By importing profiles for each room onto a mobile device, administrators can quickly view how each room is being operated at any time and monitor the status of particular hardware for maintenance and technical assistance. This efficient approach simplifies management and makes it much more effective regardless of the installation's scope.



ATEN Control System App





Features

- Multiple rooms can be controlled via a single mobile device
- Authority management: Restricted user access via password authentication
- Supports multiple mobile devices
- Custom interface resolutions match device screen size

Expansion

VK224, VK236, and VK248 Expansion Boxes provide additional Serial, IR, Relay ports for a flexible expansion of the ATEN Control System. This allows users to control additional devices in an environment where more devices are required. With the advantage of an Ethernet-based connection, the expansion box can be easily connected to VK2100/VK1100 control box and added to the Control System installation via a LAN connection in a variety of locations across a network.

VK224 :

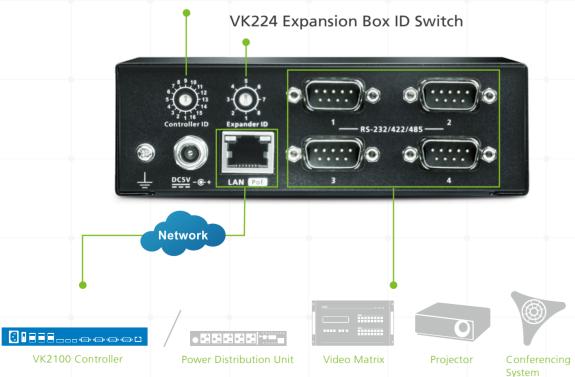
4-Port Serial Expansion Box

LED indication for hardware status and active messages



USB port for easy firmware upgrade





VK236 :

6-Port IR / Serial Expansion Box





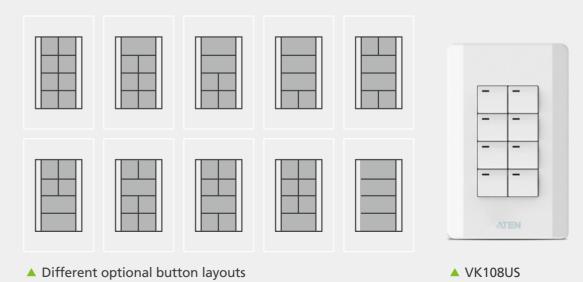
VK248 >

8-Channel Relay Expansion Box



Control Interface

The wall-mount keypad, VK108US, is another simple control interface that allows you to interact with your meeting room. The configurable buttons offer maximum flexibility. Each button can be programmed with multiple functions, and various button layouts are available for your convenience.



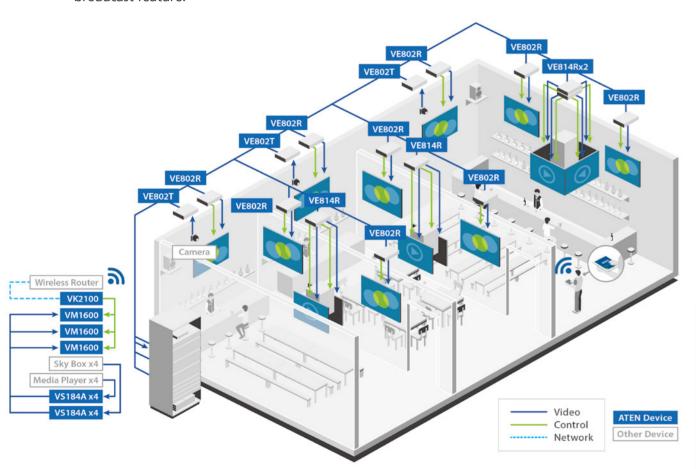
Success Stories | The Bierkeller

Hospitality / Digital Signage

(Control System + Modular Matrix Switch + Extender + Splitter)

Three jointly-owned pubs located in an entertainment complex were looking for a solution that allowed them to easily and effectively control the 60 televisions located across their three venues. The pubs incorporate the ATEN Control System and ATEN's professional A/V solutions to create centralized control of all multimedia devices via an Ethernet network. This allows staff to:

- Instantly switch profiles for any of the three locations
- Remotely power on and off all displays with a single tap from an iPad using the VM1600's broadcast feature.



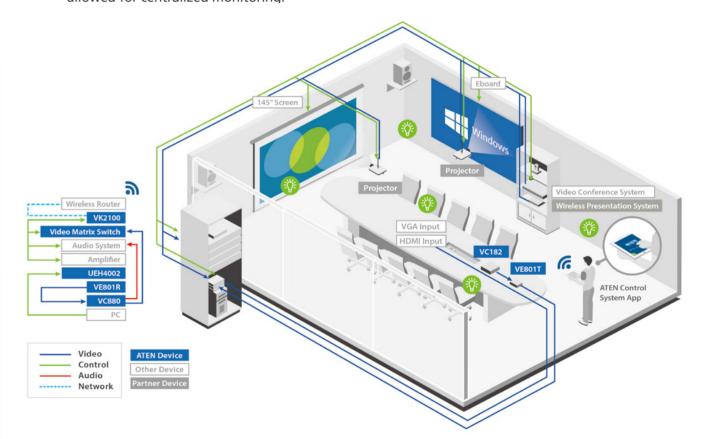
Optoma

Corporate / Meeting Room

(Control System + Video Matrix Switch + Extender + HDMI Repeater)

Optoma wanted to integrate lighting, the Avaya conferencing system, the projectors, audio system, wireless presentation system, and local HDMI and VGA inputs so that each attendee within the conference room could quickly take full control over the meeting room, as needed.

To fulfill Optoma's requirements ATEN provided a solution built around a VK2100 control system paired with the VM5404H video matrix. The VK2100 easily integrates lighting, audio and video feeds, and on-off switches as well as HVAC systems, alarms, motion sensors, and much more, providing Optoma with the ideal way to build a wireless control system that allowed for centralized monitoring.





VK2100 Specifications

Interface	
Serial	 4 x Programmable Bi-directional RS-232/422/485 Port (4 x DB9 Male Connector, configurable via pin assignments); Baud Rate: 300 to 115200 (default: 9600); Data Bit: 8 (default) or 7; Stop Bit: 1 (default) or 2 Parity: None (default), Even or Odd; Flow Control: None (default), RTS / CTS
	 2 x Bi-directional RS-232 Port (2 x 3-Pole Terminal Block Connector); Baud Rate: 300 to 115200 (default: 9600); Data Bit: 8 (default) or 7; Stop Bit: 1 (default) or 2; Parity: None (default), Even or Odd
IR / Serial	 4 x Programmable IR / Uni-directional RS-232 Port (2 x 4-Pole Terminal Block Connector); IR: TTL level (0 to 5 V) Carrier Frequency: 10KHz~455KHz; Serial: Uni-directional RS-232 (+ - 5 V) Baud Rate: 300 to 115200 (default: 9600); Date Bit: 8 (default) or 7; Stop Bit: 1 (default) or 2; Parity: None (default), Even or Odd
VO	• 4 x Programmable Digital Input / Output Channel (1 x 5-Pole Terminal Block Connector); • Digital Output: 250 mA sink from 12 VDC • Digital Input: VDC Mode - Input Voltage Range: 0 to 24 VDC; - Programmable Range: 1 to 24 VDC; Dry Contact Mode - Pull-up 2k ohms to + 12 VDC
Relay	 4 x Relay Channel (2 x 4-Pole Terminal Block Connector) Normally open, isolated Relays Contact Rating: Max 24 VDC, 2A
VDC	 4 x 12 VDC Output Port (2 x 4-Pole Terminal Block Connector) Power Supply: 12 VDC, 2A Max (shared by 4 ports)
Ethernet	 1 x RJ-45 Female, 10/100Base-T Supported Protocol: ICMP, TCP/IP, DHCP, HTTPS, SSH DHCP-enabled. The following default IP settings will be used if no IP is assigned within 30 seconds: IP:192.168.0.60 Subnet Mask: 255.255.255.0
Switch	
Controller ID	1 x 16-Segment Switch
Power	1 x On / Off Switch
IR Learning	1 x IR Receiver LED
Reset Button	1 x Semi-recessed Pushbutton
USB	1 x USB Type A
Power	
Consumption	40 Watt
IP Rating	Internal Power: 100 – 240 VAC, 50-60 Hz
Environmental	
Operating Temperature	0 – 50°C
Storage Temperature	-20 − 60°C
Humidity	0 – 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	2.64 kg
Dimension (L x W x H)	43.72 x 16.32 x 4.40 cm

VK1100 Specifications

Interface	
Serial	 2 x Programmable Bi-directional RS-232/422/485 Port (2 x DB9 Male Connector, configurable via pin assignments); Baud Rate: 300 to 115200 (default: 9600); Data Bit: 8 (default) or 7; Parity: None (default), Even or Odd; Stop Bit: 1 (default) or 2; Flow Control: None (default), RTS / CTS
IR / Serial	 2 x Programmable IR / Uni-directional RS-232 Port (1 x 3-Pole Terminal Block Connector); IR: Carrier Frequency: 10KHz~455KHz; Serial: Baud Rate: 300 to 115200 (default: 9600); Date Bit: 8 (default) or 7; Stop Bit: 1 (default) or 2; Parity: None (default), Even or Odd
Relay	 4 x Relay Channel (2 x 4-Pole Terminal Block Connector) Normally open, isolated Relays Contact Rating: Max 24 VDC, 2A
VDC	• 1 x 12 VDC Output Port (1 x 2-Pole Terminal Block Connector) • Power Supply: 12 VDC, 1A Max
Ethernet	 1 x RJ-45 Female, 10/100Base-T Supported Protocol: ICMP, TCP/IP, DHCP, HTTPS, SSH DHCP-enabled. The following default IP settings will be used if no IP is assigned within 30 seconds: IP:192.168.0.60 Subnet Mask: 255.255.255.0
Switch	
Controller ID	1 x 16-Segment Switch
Power	1 x On / Off Switch
IR Learning	1 x IR Receiver LED
Reset Button	1 x Semi-recessed Pushbutton
USB	1 x USB Type A
Power	
IP Rating	Internal Power: 100 – 240 VAC, 50-60 Hz
Environment	
Operating Temperature	0 – 50°C
Storage Temperature	-20 − 60°C
Humidity	0 – 80% RH, Non-Condensing
Physical Properties	
Housing	Metal

VK224 Specifications

Interface	
Serial	 4 x Programmable Bi-directional RS-232/422/485 Port (4 x DB9 Male Connector, configurable via pin assignments); Baud Rate: 300 to 115200 (default: 9600); Data Bit: 8 (default) or 7; Stop Bit: 1 (default) or 2; Parity: None (default) or Even, Odd Flow Control: None (default) or RTS/CTS
Ethernet	 1 x RJ-45 Female, 10/100Base-T Supported Protocol: ICMP, TCP/IP, DHCP, HTTPS, SSH DHCP-enabled. The following default IP settings will be used if no IP is assigned within 30 seconds: IP :192.168.0.60 Subnet Mask: 255.255.255.0
Switch	
Controller ID	1 x 16-Segment Switch
Expansion Box	1 x 8-Segment Switch
Reset Button	1 x Semi-recessed Pushbutton
USB	1 x USB Type A
Power	
Connectors	1 x DC Jack
Consumption	5 VDC, 7.5 W (Adapter) ; 48VDC, 9.5 W (PoE, PoE 802.3 AF/AT compatibility)
Environment	
Operating Temperature	0 – 50°C
Storage Temperature	-20 – 60°C
Humidity	0 – 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	0.46 kg
Dimension (L x W x H)	13.00 x 7.61 x 4.40 cm

VK236 Specifications

-	
Interface	
Serial	 6 x Programmable IR / Uni-directional RS-232 Port (6 x 2-Pole Terminal Block Connector) IR: TTL level (0 to 5 V) Carrier Frequency: 10KHz~455KHz; Serial: Uni-directional RS-232 (+ - 5 V) Baud Rate: 300 to 115200 (default: 9600); Data Bit: 8 (default) or 7; Stop Bit: 1 (default) or 2; Parity: None (default), Even or Odd
Ethernet	 1 x RJ-45 Female, 10/100Base-T Supported Protocol: ICMP, TCP/IP, DHCP, HTTPS, SSH DHCP-enabled. The following default IP settings will be used if no IP is assigned within 30 seconds: IP:192.168.0.60 Subnet Mask: 255.255.255.0
Switch	
Controller ID	1 x 16-Segment Switch
Expansion Box	1 x 8-Segment Switch
Reset Button	1 x Semi-recessed Pushbutton
USB	1 x USB Type A
Power	
Consumption	5VDC, 8W (Adapter); 48V, 10.5W (PoE, PoE 802.3 AF/AT compatibility)
Environment	
Operating Temperature	0 – 50°C
Storage Temperature	-20 – 60°C
Humidity	0 – 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	0.45 kg
Dimension (L x W x H)	13.00 x 7.58 x 4.20 cm

VK248 Specifications

Interface	
Relay	8 normally open relays (8 x 2-pole terminal block) Contact Rating: Max 24 VDC, 2A
Ethernet	 1 x RJ-45 Female, 10/100Base-T Supported Protocol: ICMP, TCP/IP, DHCP, HTTPS, SSH DHCP-enabled. The following default IP settings will be used if no IP is assigned within 30 seconds: IP:192.168.0.60 Subnet Mask: 255.255.255.0
Switch	
Controller ID	1 x 16-Segment Switch
Expansion Box	1 x 8-Segment Switch
Reset Button	1 x Semi-recessed Pushbutton
USB	1 x USB Type A
Power	
Consumption	5 VDC, 10 W (Adapter); 48 VDC, 13 W (PoE, PoE 802.3 AF/AT compatibility)
Output	12 VDC, 300 mA Max
Environment	
Operating Temperature	0 – 50°C
Storage Temperature	-20 – 60°C
Humidity	0 – 80% RH, Non-Condensing
Physical Properties	
Housing	Metal
Weight	0.65 kg
Dimension (L x W x H)	20.00 x 7.58 x 4.20 cm

VK108US Specifications

Interface	
Button Layout	• 4~8 buttons
LED indicator	Normal: Orange Active: White
Ethernet	 1x RJ-45 Female, 10/100 Base-T; Support Protocols: ICMP, TCP / IP, DHCP, HTTPS DHCP-enabled. The following default IP settings will be used if no IP is assigned within 30 seconds: IP:192.168.0.60 Subnet Mask: 255.255.255.0
Power	5VDC (Adapter) and PoE (802.3 AF/AT compatibility)
Switch	
Number of Controller	16 Segment Switch
Number of Keypad Panel	8 Segment Switch
Environment	
Operating Temperature	0 – 50°C
Storage Temperature	-20 – 60°C
Humidity	0 – 80% RH, Non-Condensing
Physical Properties	
Housing	Plastic
Faceplate	
Color	White

Memo	



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About ATEN

ATEN International Co., Ltd., established in 1979, is the leading provider of IT connectivity and management solutions. Offering integrated KVM, Professional Audiovisual, and Intelligent Power solutions, ATEN products connect, manage, and optimize electronics in corporate, government, industrial, educational, and retail environments. ATEN has 500+ issued international patents and a global R&D team that produces a constant stream of innovative solutions, resulting in a comprehensive portfolio of products available worldwide.