

## ACEMAGICIAN S3A

# ACEMAGICIAN S3A Mini PC Gaming User Manual

## 1. PRODUCT OVERVIEW

The ACEMAGICIAN S3A Mini PC is a compact and powerful computing solution designed for gaming, video editing, multimedia, and general productivity. It features an AMD Ryzen 7 8745HS processor, AMD Radeon 780M integrated graphics, high-speed DDR5 memory, and NVMe SSD storage, all within a small form factor.

### 1.1 Package Contents

- ACEMAGICIAN S3A Mini PC
- Power Adapter
- HDMI Cable
- User Manual
- RGB Lighting Control Software (downloadable)



Image 1.1: Front view of the ACEMAGICIAN S3A Mini PC, showcasing its compact design, RGB lighting, and accessible front ports.

## 2. INITIAL SETUP

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Follow these steps to set up your ACEMAGICIAN S3A Mini PC for the first time.

## 2.1 Connecting Peripherals

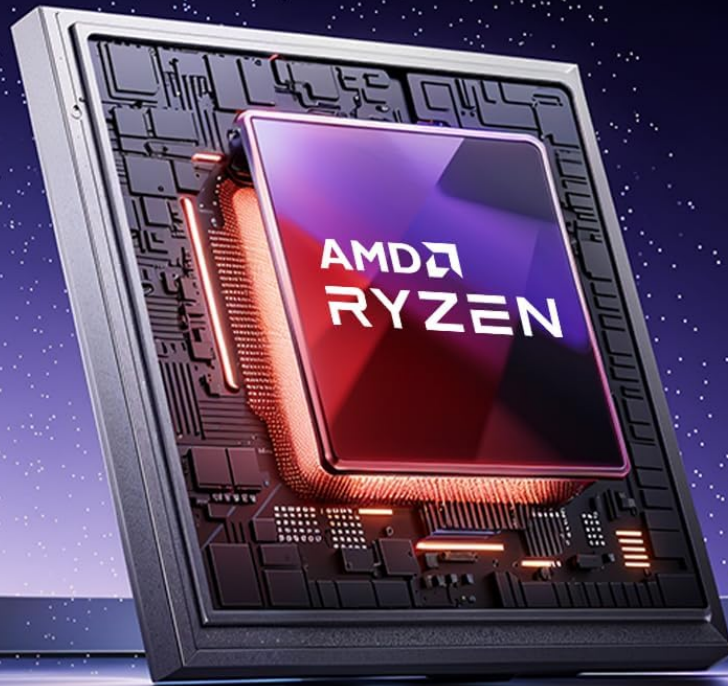
1. **Connect Display:** Use an HDMI, DisplayPort (DP), or USB4 Type-C cable to connect your monitor(s) to the corresponding ports on the Mini PC. The device supports triple display output at 4K@60Hz (HDMI) or 4K@120Hz (DP, USB4 Type-C).
2. **Connect Keyboard and Mouse:** Plug your USB keyboard and mouse into any available USB-A ports.
3. **Connect Network (Optional):** For a wired internet connection, connect an Ethernet cable to the 2.5Gbps LAN port. For wireless, ensure your Wi-Fi network is available.
4. **Connect Audio (Optional):** If using external speakers or headphones, connect them to the 3.5mm audio jack.

## 2.2 Powering On

1. **Connect Power Adapter:** Plug the power adapter into the DC IN port on the Mini PC, then connect it to a power outlet.
2. **Power On:** Press the power button located on the top of the device. The power indicator light will illuminate.
3. **Initial Boot:** The system will boot into Windows 11 Pro. Follow the on-screen instructions to complete the initial operating system setup.

# AMD Ryzen 7 8745HS

effortlessly handling high-load multitasking



**54W TDP**

TSMC 4nm FinFET

**4.9 GHz**

Turbo Boost

**8 Cores**

16 Threads

**16 MB**

L3 Cache

Cinebench R23 (Single-Core)

1731

1565

1546

↑  
**12%**

**R7 8745HS**

R9 6900HX

R7 7735HS

Cinebench R23 (Multi-Core)

15899

14136

13598

**17%** ↑

Image 2.1: Detailed view of the ACEMAGICIAN S3A Mini PC's front and rear ports, including USB, HDMI, DisplayPort, Type-C, LAN, and audio connections.

## 3. OPERATING INSTRUCTIONS

### 3.1 Operating Modes

The ACEMAGICIAN S3A Mini PC features a rotary knob on the top that allows you to select between three performance modes:

- **Silent Mode (25-35W):** Designed for quiet operation and light tasks such as web browsing, video streaming, and office applications. Fan noise is minimized to approximately 35dB.



- **Auto Mode (35-45W):** A balanced mode suitable for daily work, moderate multitasking, and entertainment. Fan noise is around 38dB.
- **Performance Mode (45-54W):** Maximizes performance for demanding applications, gaming, and intensive tasks. The fan operates at a higher speed to ensure optimal cooling, with noise levels up to 42dB.

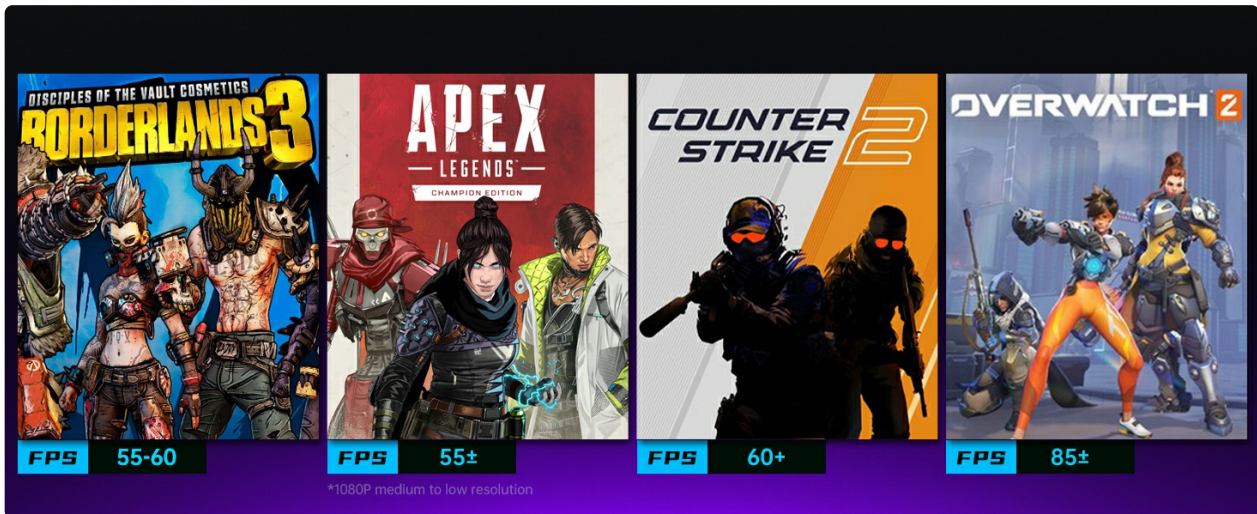


Image 3.1: Illustration of the Silent Mode, indicating low power consumption and minimal fan noise for quiet computing.



Image 3.2: Illustration of the Automatic Mode, showing moderate power usage suitable for daily tasks and improved efficiency.



Image 3.3: Illustration of the Performance Mode, highlighting maximum power output for gaming and high-demand applications.

## 3.2 Operating System

The Mini PC comes pre-installed with Windows 11 Pro. It also supports other operating systems such as Windows 10 Pro, Ubuntu, and various Linux distributions.



Image 3.4: The Mini PC supports multiple operating systems, including Windows 11 Pro, Windows 10 Pro, Ubuntu, and other Linux distributions.

## 4. HARDWARE OVERVIEW

### 4.1 Front and Rear Ports

The ACEMAGICIAN S3A Mini PC offers a comprehensive set of ports for connectivity and expansion:

- **Front Ports:**

- 2 x USB 3.2 Gen2 Type-A (10 Gbps)
- 1 x USB4 Type-C (DP1.4 support, 4K@120Hz, 10 Gbps data transfer, PD output)
- 1 x 3.5mm Audio Jack

- **Rear Ports:**

- 4 x USB 3.2 Gen1 Type-A (5 Gbps)
- 1 x 2.5Gbps LAN (10/100/1000/2500 Mbps Adaptive)
- 1 x HDMI 2.0 (4K@60Hz)
- 1 x DisplayPort 2.0 (4K@120Hz)
- 1 x DC IN (Power)





Image 4.1: Overview of the rich interfaces available on the ACEMAGICIAN S3A Mini PC, facilitating easy expansion and connectivity.

## 4.2 Memory and Storage Expansion

The Mini PC is designed for easy upgrades:

- **RAM:** Equipped with 32GB DDR5 dual-channel RAM, expandable up to 64GB (2x SO-DIMM slots, up to 5600MHz).
- **SSD:** Includes a 1TB M.2 2280 NVMe PCIe3.0x4 SSD. Storage can be expanded up to 4TB by adding additional SSDs (supports PCIe3.0/4.0).

The magnetic top cover allows for tool-free access to the internal components for upgrades.

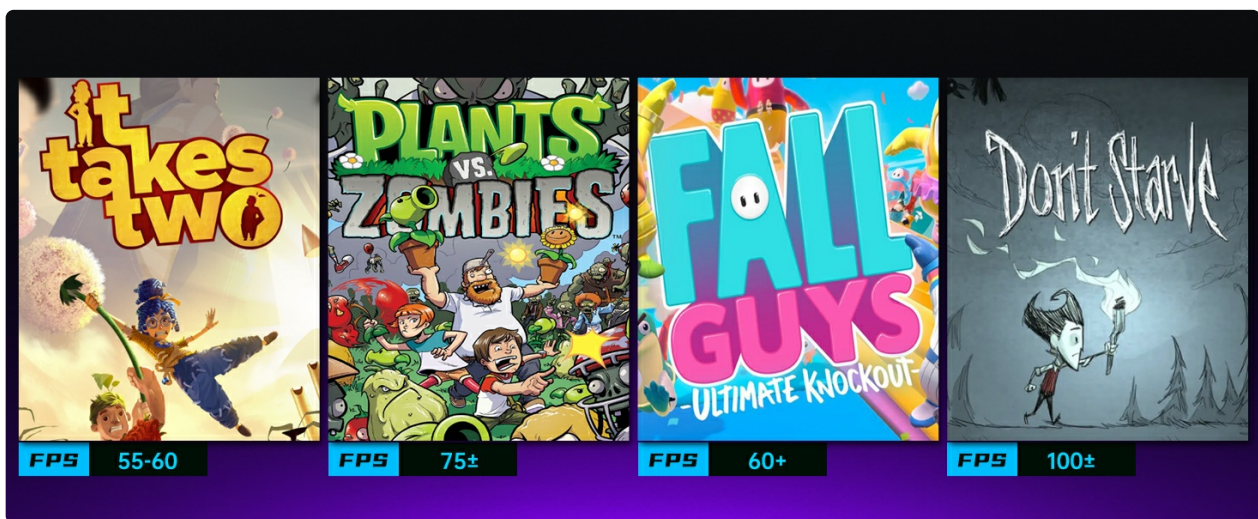


Image 4.2: The magnetic design of the top cover allows for single-step disassembly, providing easy access for RAM and SSD upgrades.

## 5. PERFORMANCE FEATURES

### 5.1 Processor (CPU)

The ACEMAGICIAN S3A is powered by the AMD Ryzen 7 8745HS processor. This advanced Zen 4 architecture CPU features 8 cores and 16 threads, with a base frequency of 3.8 GHz and a dynamic boost frequency up to 4.9 GHz. It includes 16 MB of L3 cache, providing robust performance for multitasking, demanding applications, and gaming.



Image 5.1: Details of the AMD Ryzen 7 8745HS processor, highlighting its core count, clock speed, and performance capabilities for high-load multitasking.

5.2 Graphics (GPU)

Integrated with the AMD Radeon 780M graphics, based on the RDNA 3 architecture, this Mini PC delivers strong visual performance. With 12 compute units and frequencies up to 2600 MHz, it supports DirectX 12 Ultimate, enabling smooth gaming and high-resolution media playback without the need for a dedicated graphics card.



Image 5.2: Information on the AMD Radeon 780M integrated graphics, detailing its architecture, clock speed, and support for DirectX 12 Ultimate for enhanced gaming and visuals.

6. NETWORK AND WIRELESS CONNECTIVITY

The ACEMAGICIAN S3A Mini PC offers robust connectivity options:

- **Wi-Fi 6:** Provides faster wireless speeds, lower latency, and increased network efficiency compared to previous Wi-Fi standards.
- **Bluetooth 5.2:** Ensures stable and efficient connections with wireless peripherals such as keyboards, mice, and headphones.
- **2.5Gbps LAN:** A high-speed Ethernet port for reliable and fast wired network connections, ideal for online gaming and large file transfers.



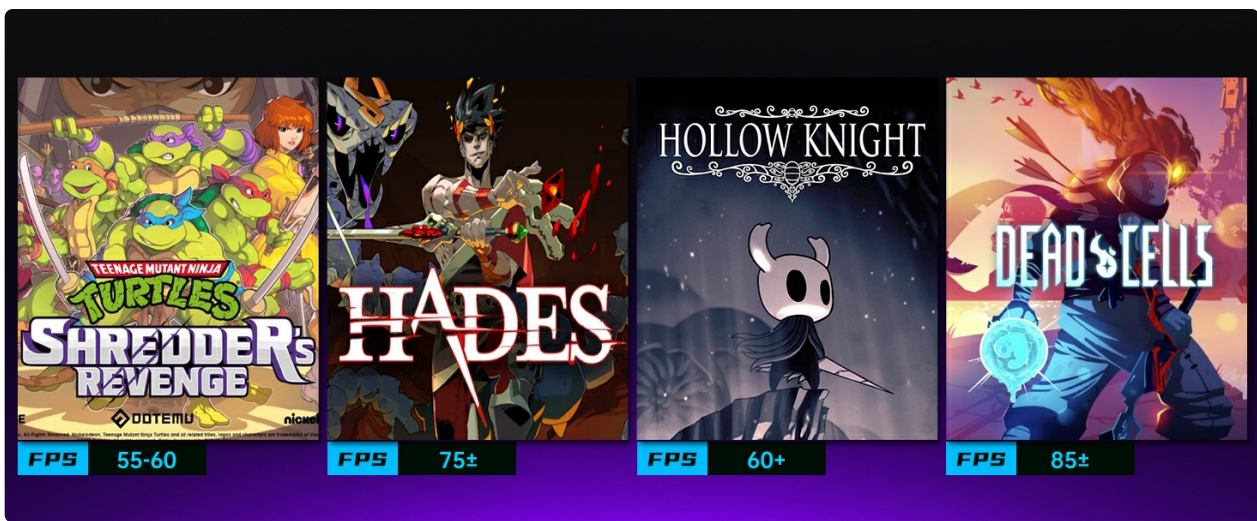


Image 6.1: The Mini PC features ultra-fast wireless and wired connections, including WiFi 6, Bluetooth 5.2, and a 2.5Gbps LAN port.

## 7. ADVANCED COOLING SYSTEM

The S3A Mini PC incorporates an advanced cooling system to maintain optimal performance and stability, especially during high-load operations:

- **High-Speed Centrifugal Fan:** A quiet, high-speed centrifugal fan reduces noise while increasing the cooling area.
- **All-Copper Internal Structure:** Features copper sheets, plates, and fins to enhance thermal conductivity.
- **Dual Air Outlet Design:** Ensures more efficient heat dissipation.
- **SSD Cooling:** Large aluminum fins are used to cool the SSD, maintaining its temperature and read/write speeds.

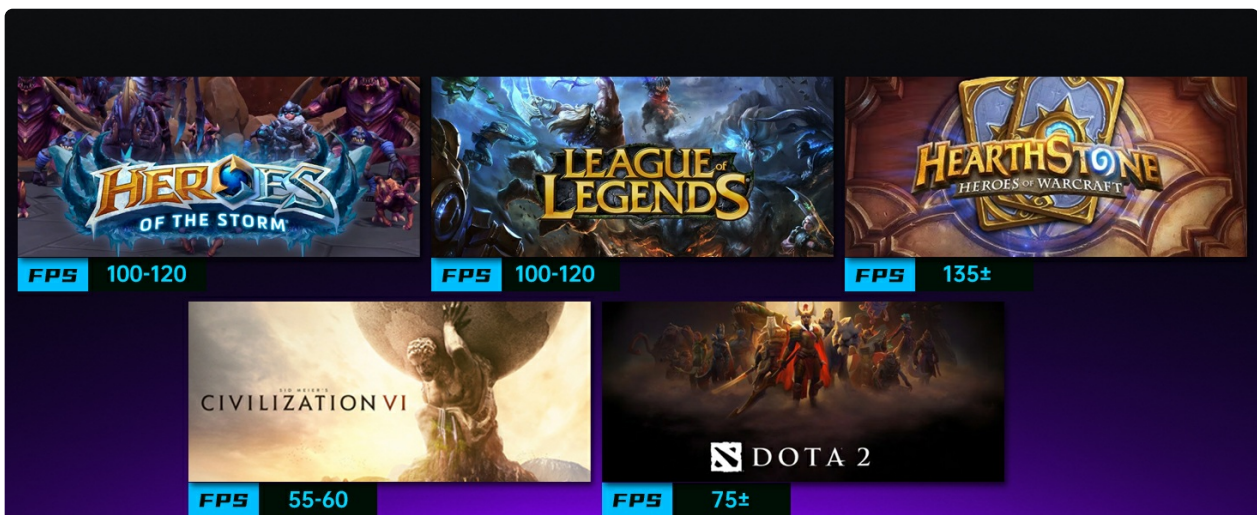


Image 7.1: Diagram illustrating the advanced cooling system components, including the centrifugal fan, copper heat pipes, and dual exhaust design.

## 8. RGB LIGHTING EFFECTS

The ACEMAGICIAN S3A Mini PC features customizable RGB lighting to enhance its aesthetic appeal. To control the lighting effects:

1. Visit the official ACEMAGICIAN website: [acemagic.com](https://acemagic.com)
2. Navigate to the 'Download' section.
3. Download the S3A RGB control software.
4. Install and use the software to customize lighting modes (e.g., ON, breathing, cycle, rainbow) and colors.

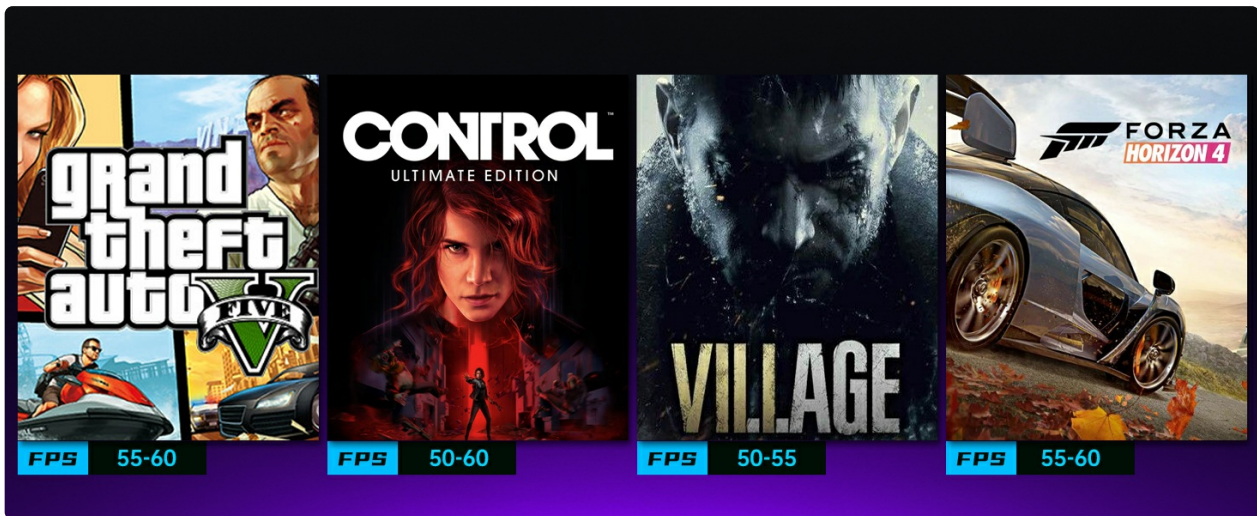


Image 8.1: The Mini PC features dynamic RGB lighting. Instructions for downloading the control software are provided to customize light effects.

## 9. TROUBLESHOOTING COMMON ISSUES

This section provides solutions to common problems you might encounter.

- **No Power:**

- Ensure the power adapter is securely connected to both the Mini PC and a working power outlet.
- Verify the power outlet is functional by plugging in another device.
- Check if the power button is fully pressed.

- **No Display:**

- Confirm that the monitor is powered on and set to the correct input source (HDMI, DP, or Type-C).
- Check the display cable connections at both the Mini PC and the monitor. Try a different cable or port if available.
- If using multiple displays, try connecting only one display at a time.

- **No Internet Connection:**

- For wired connections, ensure the Ethernet cable is properly connected and your router/modem is working.
- For Wi-Fi, check if Wi-Fi is enabled in Windows settings and if you are connected to the correct network with the correct password.
- Restart your router/modem and the Mini PC.

- **System Slowdown:**

- Ensure the Mini PC is in an appropriate operating mode (e.g., Auto or Performance for demanding tasks).
- Check for background applications consuming resources.
- Ensure adequate ventilation around the Mini PC to prevent overheating.

## 10. TECHNICAL SPECIFICATIONS

| Feature                | Specification                            |
|------------------------|--|
| Brand                  | ACEMAGICIAN                              |
| Model Number           | S3A                                      |
| Operating System       | Windows 11 Pro                           |
| Processor Brand        | AMD                                      |
| Processor Type         | AMD Ryzen 7 8745HS                       |
| Processor Speed        | 3.8 GHz (up to 4.9 GHz boost)            |
| Number of Cores        | 8  |
| L3 Cache               | 16 MB                                    |
| RAM Size               | 32 GB DDR5                               |
| Maximum RAM            | 64 GB                                    |
| Hard Drive Size        | 1 TB NVMe SSD                            |
| Hard Drive Technology  | SSD (PCIe x4)                            |
| Graphics Processor     | AMD Radeon 780M                          |
| Graphics Description   | Integrated                               |
| Display Resolution     | 3840 x 2160 (4K)                         |
| Wireless Type          | 802.11a/b/g/n/ac, WiFi 6, Bluetooth 5.2  |
| Hardware Interface     | Ethernet, HDMI, DisplayPort, USB, Type-C |
| USB 3.0 Ports          | 6 (2x Gen2 front, 4x Gen1 rear)          |
| HDMI Ports             | 1  |
| Dimensions (L x W x H) | 12.8 x 12.8 x 4.1 cm                     |
| Special Features       | 3 Adjustable Modes, RGB Lighting         |

## 11. WARRANTY AND CUSTOMER SUPPORT

ACEMAGICIAN is committed to providing high-quality products and customer satisfaction.

### 11.1 Warranty Information

This product typically comes with a 12-month warranty. For specific warranty terms and conditions, please refer to the documentation included with your purchase or contact ACEMAGICIAN customer support.

### 11.2 Customer Support


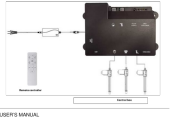
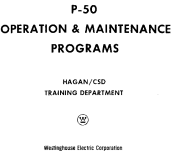


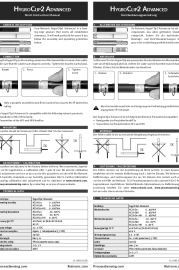
For technical assistance, troubleshooting, or any product-related inquiries, please contact ACEMAGICIAN



customer support. Contact details can usually be found on the official ACEMAGICIAN website or in your product packaging.

ACEMAGICIAN aims to provide lifetime technical support and responsive customer service.

## Related Documents - S3A

|   |  |
|---|--|
|  <p>3Shape TRIOS<br/>Safety and Setup Guide</p> <p>04-2021</p>   | <p><a href="#">3Shape TRIOS 4 Safety and Setup Guide</a></p> <p>A comprehensive guide to the safety precautions, setup, operation, cleaning, and disposal of the 3Shape TRIOS 4 intraoral scanner system, including variants like S3P-2, S3P-8, S3A-10, S3A-14, S3A-18, and S3A-22.</p>  |
|  <p>USER MANUAL</p>  | <p><a href="#">User Manual for TRIMIX-S3A Control Box and TRIMIX-RF06A Remote Controller</a></p> <p>Detailed user manual for the TRIMIX-S3A control box and TRIMIX-RF06A remote controller, covering electronics overview, wireless remote pairing, functional operations, and FCC compliance.</p>                               |
|  <p>P-50<br/>OPERATION &amp; MAINTENANCE<br/>PROGRAMS</p> <p>HAGAN/CSD<br/>TRAINING DEPARTMENT</p> <p>Westinghouse Electric Corporation</p> | <p><a href="#">Westinghouse P-50 Computer Operation and Maintenance Programs</a></p> <p>This document details the operation and maintenance programs for the Westinghouse P-50 computer, including bootstrap procedures and binary loader functions. It covers loading binary tapes, error checking, and program parameters.</p> |
|  <p>TECMEN</p> <p>ProQuiet™ Headsets<br/>User Instructions</p>   | <p><a href="#">TECMEN ProQuiet™ Headsets User Instructions and Guide</a></p> <p>Comprehensive user manual for TECMEN ProQuiet™ AMB Series headsets, covering features, operation, safety, specifications, and maintenance for optimal hearing protection and communication.</p>  |
|  <p>VAST</p> <p>Best Practices Guide for<br/>Migrating HDFS Data &amp;<br/>Hive Tables to VAST S3</p>                                      | <p><a href="#">VAST S3 Migration: Best Practices for HDFS and Hive Data</a></p> <p>This guide details best practices for migrating HDFS data and Hive tables to VAST S3 storage using the S3A adapter. It covers various migration strategies, prerequisites, and optimization techniques for efficient data transfer.</p>       |
|  <p>HygroClip2 Advanced<br/>Short Instruction Manual</p>   | <p><a href="#">HygroClip2 Advanced Short Instruction Manual</a></p> <p>Concise instructions for the Rotronic HygroClip2 Advanced sensor, covering general description, connection, mounting, adjustment, calibration, and technical specifications in English, German, French, and Italian.</p>                                  |

