Novastar A5S Plus

Novastar A5S Plus LED Display Receiving Card

Model: A5S Plus

1. Introduction

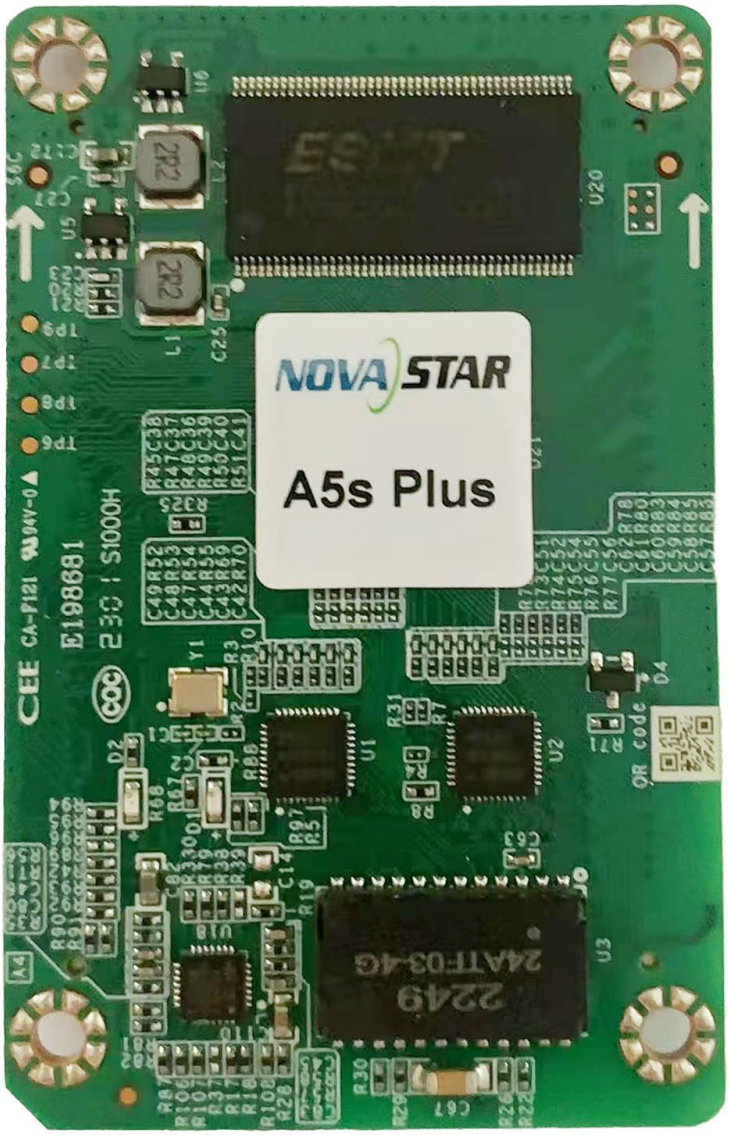
This manual provides essential information for the proper installation, operation, and maintenance of the Novastar A5S Plus LED Display Receiving Card. Please read this manual thoroughly before using the product to ensure optimal performance and longevity. The Novastar A5S Plus is an advanced receiving card designed to enhance the display effects of LED screens.

2. Product Overview and Features

The Novastar A5S Plus Receiving Card offers significant improvements in display quality and control capabilities for LED screens. Key features include:

- **Color Management:** Supports standard color gamuts (Rec.709 / DCI-P3 / Rec.2020) and custom color profiles for precise color reproduction.
- **18bit+ Grayscale Enhancement:** Improves LED display grayscale by up to 4 times, preventing grayscale loss at low brightness levels and ensuring smoother image transitions.
- **Pixel-Level Brightness and Chroma Calibration:** Integrates with NovaStar's calibration system to adjust brightness and chroma for each pixel, achieving high consistency across the display.
- **Quick Adjustment of Dark or Bright Lines:** Corrects brightness discrepancies at module or cabinet seams for a uniform visual experience.
- **Multi-batch Adjustment:** Allows brightness adjustment of cabinets or modules to minimize display variations caused by different production batches.
- **Low Latency:** Reduces video source latency to 1 frame for PWM driver ICs. Custom firmware may be required for DCLK continuous PWM driver ICs.
- **3D Functionality:** Compatible with controllers that support 3D output.
- **Individual Gamma Adjustment for RGB:** Works with NovaLCT to allow separate adjustment of red, green, and blue gamma, improving image uniformity at low grayscale and correcting white balance offset.

- **90° Image Rotation:** Supports image rotation in multiples of 90° (0°/90°/180°/270°).



An overhead view of the Novastar A5S Plus LED Display Receiving Card, showcasing its green circuit board with various electronic components, connectors, and integrated circuits. Two prominent multi-pin connectors are visible on the left and right edges, designed for connecting to LED modules. Key components include resistors, capacitors, and a large integrated circuit labeled '2249 24ATF-03-4G' at the bottom.

3. Package Contents

Upon opening the package, please verify that all items are present and undamaged:

- Novastar A5S Plus Receiving Card
- High-density connector
- Assembly network transformer
- User Manual (this document)

4. Setup Instructions

Follow these general steps for installing the Novastar A5S Plus Receiving Card into your LED display system:

1. **Power Off:** Ensure all power to the LED display and control system is disconnected before installation.
2. **Locate Slot:** Identify the designated receiving card slot within your LED display module or cabinet.
3. **Insert Card:** Carefully insert the Novastar A5S Plus card into the slot, ensuring it is seated firmly and correctly. Avoid applying excessive force.
4. **Connect Data Cables:** Connect the data cables from the LED modules to the multi-pin connectors on the receiving card (e.g., JH1, JH2).
5. **Connect Network Cables:** Connect the network cables from the sending card or control system to the appropriate network ports on the receiving card.
6. **Power On:** Once all connections are secure, restore power to the LED display and control system.
7. **Software Configuration:** Use Novastar's control software (e.g., NovaLCT) to configure the receiving card parameters, including screen resolution, module type, and display settings. Refer to the software's user guide for detailed configuration steps.

5. Operating Instructions

The Novastar A5S Plus operates in conjunction with a Novastar sending card and control software. Basic operation involves:

- **System Power-Up:** Power on the sending card, then the LED display modules.
- **Software Control:** Launch the Novastar control software (e.g., NovaLCT) on your computer.
- **Display Configuration:** Load the saved configuration file for your LED screen. If necessary, perform initial setup or adjustments.
- **Content Playback:** Use the software to send video or image content to the LED display.
- **Feature Utilization:** Access advanced features like color management, pixel-level calibration, and image rotation through the control software interface to optimize display quality.
- **System Shutdown:** Power off the LED display modules first, then the sending card.

6. Maintenance

Proper maintenance ensures the longevity and reliable performance of your Novastar A5S Plus Receiving Card:

- **Regular Cleaning:** Keep the card and its connectors free from dust and debris. Use a soft, dry brush or compressed air for cleaning. Ensure power is off before cleaning.
- **Environmental Control:** Operate the card within recommended temperature and humidity ranges to prevent damage.
- **Firmware Updates:** Periodically check the Novastar official website for firmware updates. Apply updates as recommended to benefit from new features and bug fixes.
- **Secure Connections:** Regularly inspect all cable connections to ensure they are secure and free from wear or damage.
- **Proper Handling:** When handling the card, always use anti-static precautions to prevent electrostatic discharge (ESD) damage.

7. Troubleshooting

If you encounter issues with your Novastar A5S Plus Receiving Card, consider the following:

- **No Display/Partial Display:**
  - Check power supply to the LED modules and receiving card.
  - Verify all data and network cables are securely connected.
  - Ensure the receiving card configuration in the control software matches the physical display setup.
  - Test with a known working receiving card if available.
- **Flickering/Unstable Display:**
  - Check for loose cable connections.
  - Ensure the network cable quality is sufficient and within recommended lengths.
  - Verify refresh rate settings in the control software.
- **Incorrect Colors/Image Distortion:**
  - Perform color calibration using NovaStar's calibration system.
  - Check gamma and color management settings in the control software.
  - Ensure the correct module type is selected in the software configuration.
- **Card Not Detected by Software:**
  - Verify network connectivity between the sending card and the receiving card.
  - Ensure the control software is up-to-date.
  - Check the status indicators (LEDs) on the receiving card for error codes.

For persistent issues, contact Novastar technical support.

8. Specifications

Feature	Specification
Model Name	A5S Plus
Loading Capacity	512 × 384 pixels
Parallel RGB Data Groups	32
Serial Data Groups	64
Graphics Coprocessor	[Integrated]
Video Output Interface	HDMI, DVI (via sending card)
Compatible Devices	Desktop (as part of LED display system)
Display Resolution Maximum	320 x 256 (per card, typical)
Graphics Card Interface	PCI-Express x16 (for sending card connection)
Built-In Media	High-density connector, Assembly network transformer
Manufacturer	Novastar

9. Warranty and Support

Novastar products typically come with a limited warranty. Please refer to the warranty card included with your product or visit the official Novastar website for detailed warranty terms and conditions. For technical assistance, troubleshooting, or product inquiries, please contact Novastar customer support through their official channels.