Vunit 3000

Professional Control Processor

Specifications

Introduction

The Vunit3000 professional control processor is a programmable central control system with a plug-in design. It can be controlled via phones, tablets, computers or professional control panels.

This control processor integrates multiple channels of programmable serial communication, multiple programmable I/O channels, multiple programmable relay function modules, and multiple self-learning infrared control modules. The powerful self-learning function can effectively learn all infrared codes, making the remote control highly sensitive. Furthermore, it is equipped with a video card that can function as a small matrix with 4 inputs and 3 outputs. Additionally, the Vunit3000 supports independent audio output for enhanced user experience.

The Vunit 3000 has complete functions and stable performance, providing an intelligent control experience. It is a winning choice for intelligent video conferences and multimedia conferences in exhibition centers, press conference rooms, monitoring and command centers, firefighting and more.

Certifications

CCC

If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact NovaStar to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or NovaStar has the right to claim compensation.

Features

- 32-bit ARM Cortex ® industrial-grade CPU
- A comprehensive range of control connectors
  - Programmable COM connectors

    Supports RS422 / RS485 / RS232 / modbus to control different serial communication devices.
  - Programmable I/O connectors

    Allows for the execution of various required functions through programmable triggers.
  - Programmable weak-current relay connectors
  - Supports IR learning and is capable of saving and transmitting the learned IR commands.
  - IR emission connectors
  - HDMI 2.0 connectors

A single card can function as a small matrix with 4 inputs and 3 outputs.

- Audio connector

  Independent audio output supported

- Multiple control options

  The system allows for flexible control options by utilizing wireless or host network communication platforms such as iOS, Android, HarmonyOS, and Windows.

- Support the execution of multiple control tasks within a predetermined timeline.
- Open programmable system

  The Vunit 3000 offers an open and programmable control platform, intuitive user interface, and interactive control structure. You can even customize images, icons and fonts according to your preferences.

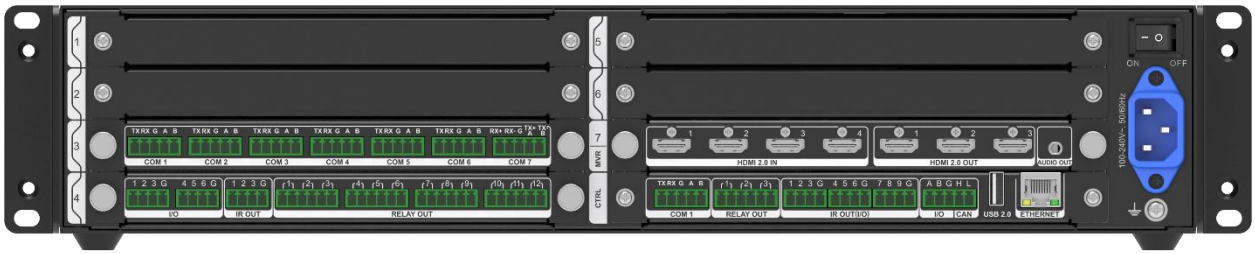
- Edit and refine the control interface using a visualization UI design tool.
- This control processor is designed with fault-tolerant technologies and communication circuits with high anti-interference capabilities, ensuring high stability and reliability.

Appearance

Front Panel

No.	Name	Description
①	LCD screen	• Operation interface • Display the connector status.
②	IR-RX	IR receiving connector for IR learning
③	Knob	• Rotate the knob to select a menu item or adjust the parameter value. • Press the knob to confirm the setting or operation.
④	ESC	Exit the current menu or cancel an operation.
⑤	USB 3.0	• Update the firmware via a USB drive. • Import and export project files.

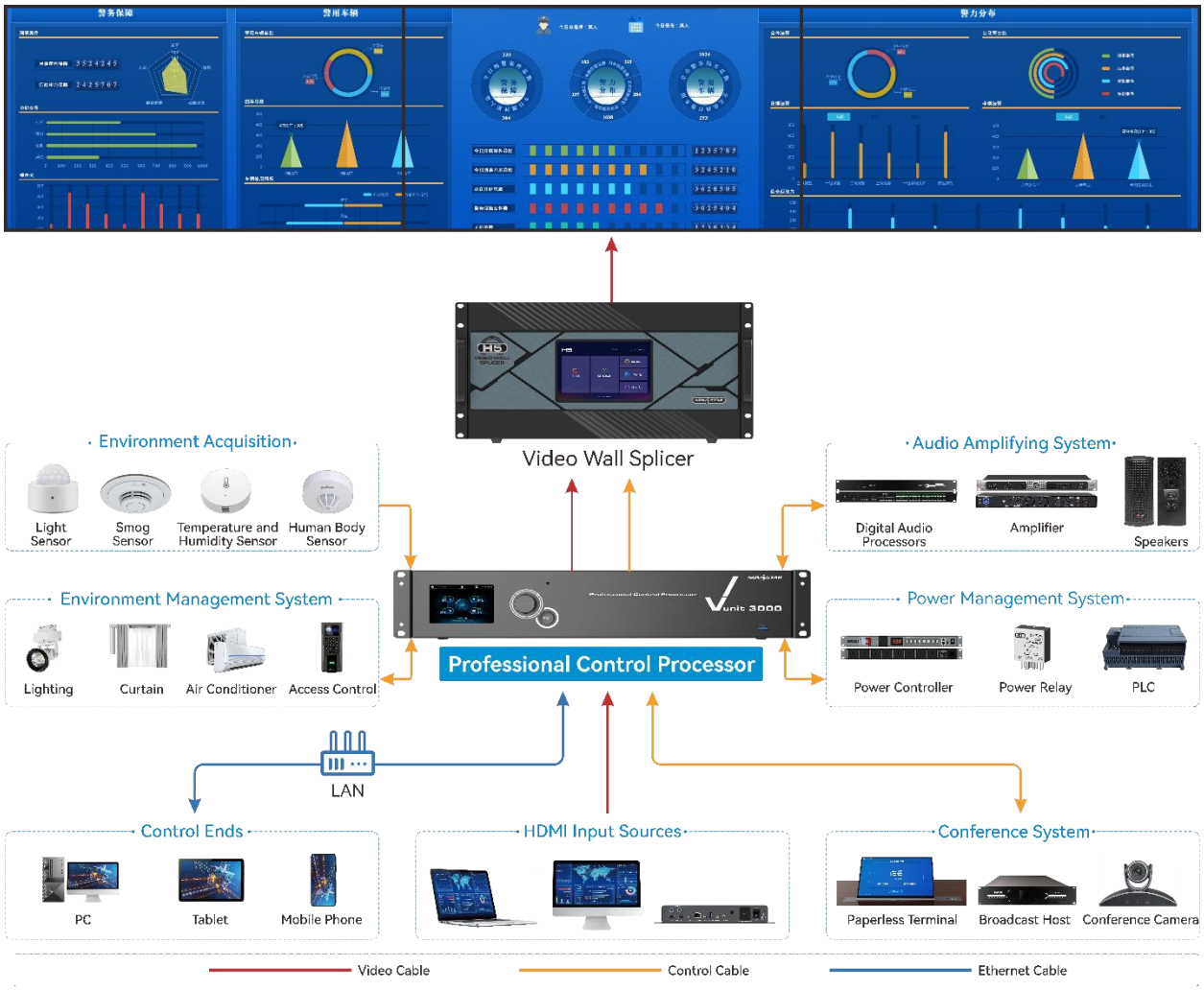
Rear Panel



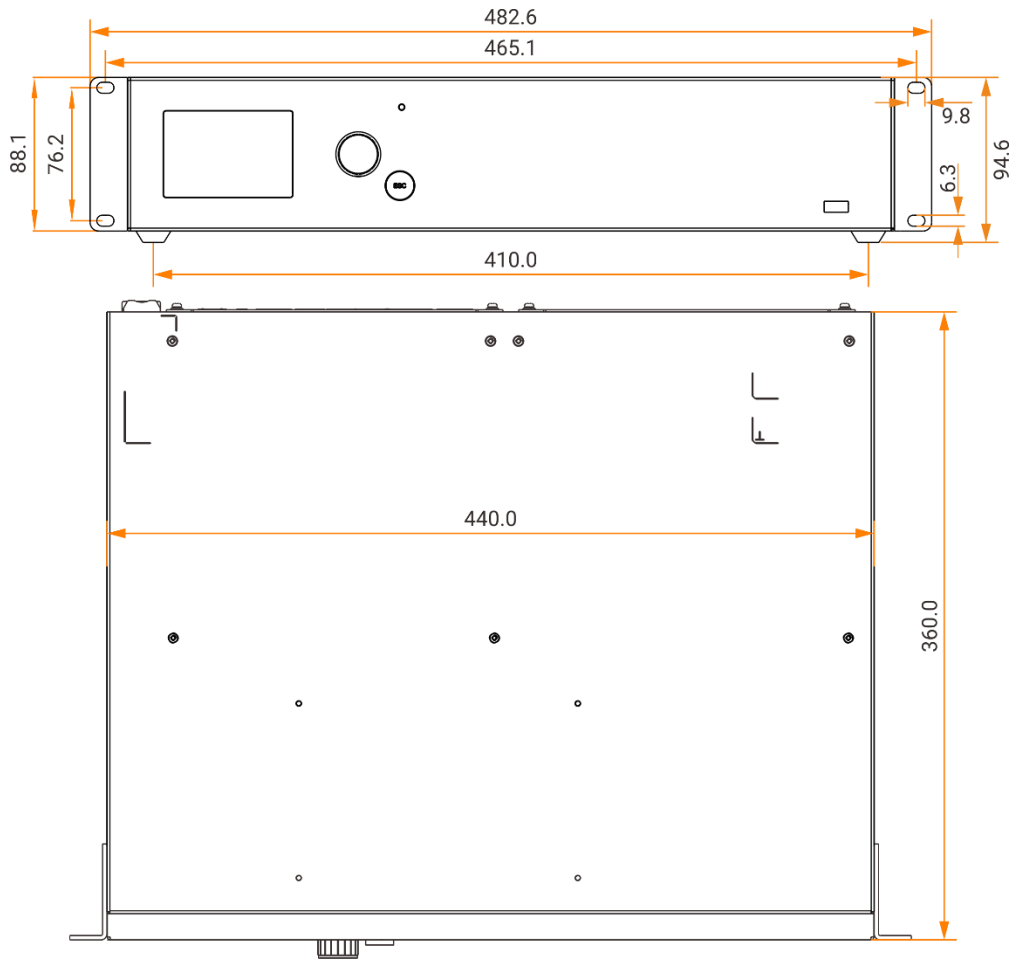
Connector	Description
COM	Phoenix connector • Supports RS232 / RS422 / RS485 ports for input or output. • Supports three modes of the modbus protocol, including RTU, ASCII, TCP. **Note:** The voltage conforms to the standard serial communication protocols.
I/O	I/O connector • Allows for the execution of various required functions through programmable triggers. • Input and output modes supported • Output voltage: 5V, input voltage: 5V, max
RELAY OUT	Light-current relay connectors Voltage: DC 30V, current: 3A
IR OUT	IR emission connectors Connect the IR emitter with the voltage below 5V.
IR OUT (I/O)	IR emission connector, which can be used as an I/O connector • IR OUT – Infrared control supported – Trigger and send commands in base16 encoding. – Supports output only. • I/O connector – Supports programmable triggers.

Connector	Description
	– Supports input and output. – Input voltage: 5V, output voltage: 5V
ETHERNET	• Connect to the control PC for device control and update. • Work with BCTools and other visual control software to manage and operate central control devices, as well as the devices connected to the central control system.
HDMI IN	4x HDMI 2.0 input connectors • Input resolutions up to 3840×2160@60Hz • Backward compatible with HDMI 1.4a and HDMI 1.3 • Accompanied audio input supported • 8-bit and 10-bit processing supported • Video matrix switching via video card supported • EDID adjustment supported
HDMI OUT	3x HDMI 2.0 output connectors • Output resolutions up to 3840×2160@60Hz • Supports 8-bit/10-bit RGB4:4:4 / YCbCr4:4:4 / YCbCr2:2:2 output. • Accompanied audio output supported • The output resolution is the same as the input resolution.
Audio Out	3.5 mm independent audio output Supports independent audio switching by switching between different input sources.

Applications



Dimensions



Tolerance: ±0.3 Unit: mm

Specifications

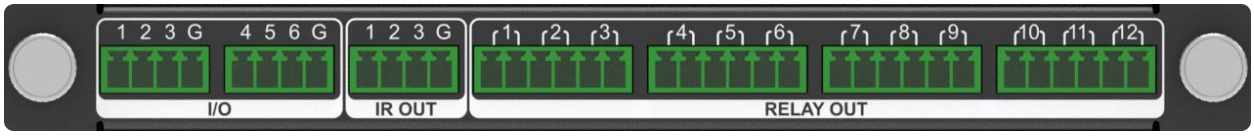
Electrical Specifications	Input voltage	100-240V~, 50/60Hz
	Max power consumption	60W
Operating Environment	Temperature	0°C to 45°C
	Humidity	0% RH to 80% RH, non-condensing
Storage Environment	Temperature	-10°C to +60°C
	Humidity	0% RH to 95% RH, non-condensing

Physical Specifications	Dimensions	482.6 mm × 360 mm × 94.6 mm
	Net weight	11 kg (Full configuration)
	Gross weight	12 kg (Full configuration)
Packing Information	Packing box	660.0 mm × 570.0 mm × 210.0 mm
	Accessories	1x Power cable, 1x Ethernet cable, 1x DC Power cable, 3x IR emitters, 1x Safety Manual, 1x Certificate of Approval
Noise Level (Typical at 25°C /77°F)		45 dB (A)

Card Description

VIT_12xRELAY + 6xI/O + 3xIR Card

Appearance



Connectors

- 6x I/O
- 3x IR OUT
- 12x RELAY

I/O

- Allows for the execution of various required functions through programmable triggers.
- Input and output modes supported
- Input voltage: 5V, output voltage: 5V
- Pins 1, 2, 3, 4, 5 and 6 can be configured as input or output as desired, and pin G is the common grounding pin.

IR OUT

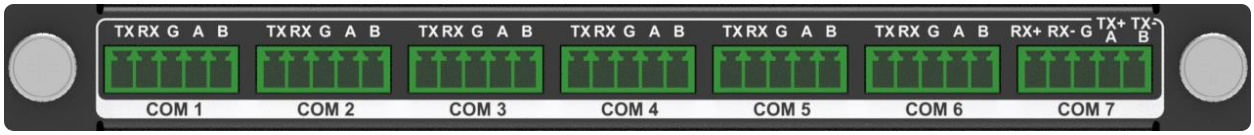
- Infrared control supported
- Output only
- Pins 1, 2 and 3 are used for infrared emission, and pin G is the common grounding pin for pins 1, 2 and 3.

RELAY

- Voltage: 30V DC; maximum current: 3A
- Output only
- Each group has two pins, which can be connected or disconnected programmatically.

VIT_7xCOM Card

Appearance

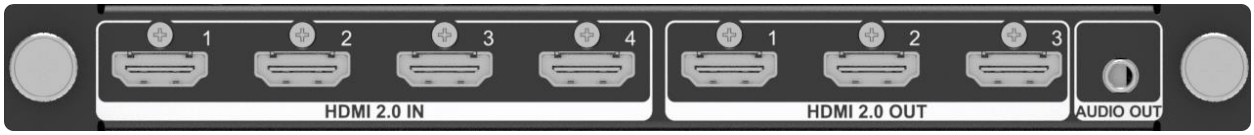


Connectors

- 7x COM
- COM1 to COM6 are compatible with RS232 / RS485 protocols for input and output.
- COM7 is compatible with RS422 / RS485 protocols for input and output.
- All RS485 ports are compatible with DMX512 protocol for DMX512 output.
- Supports three modes of the modbus protocol, including RTU, ASCII, TCP.
- Programmable full-duplex communication connectors

VIT_4xHDMI2.0 IN + 3x HDMI2.0 OUT Card

Appearance



Connectors

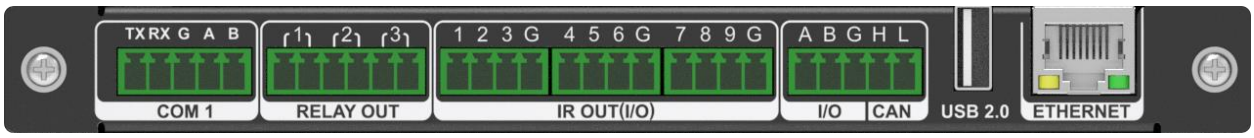
- 4x HDMI 2.0 inputs
- 3x HDMI 2.0 outputs
- 1x 3.5 mm audio output

Specifications

- Supports input and output switching and a single card can function as the video matrix.
- Input and output resolutions up to 3840×2160@60Hz
- Backward compatible with HDMI 1.4a and HDMI 1.3
- Accompanied audio input supported
- 8-bit and 10-bit processing supported
- Video matrix switching via video card supported
- Input EDID adjustment supported
- Supports 8-bit/10-bit RGB4:4:4 / YCbCr4:4:4 / YCbCr2:2:2 output.
- The output resolution is the same as the selected input resolution.
- When the card is installed into the slot with the silkscreen marking "MVR", it can be used for monitoring inputs and outputs.

VIT_ Control Card

Appearance



Connectors

- 1x COM
- 3x RELAY OUT
- 2x I/O
- 9x IR OUT (I/O)
- 1x CAN
- 1x USB 2.0
- 1x ETHERNET

COM

- Compatible with RS232 / RS485 protocols for input and output
- All RS485 ports are compatible with DMX512 protocol for DMX512 output.
- Supports three modes of the modbus protocol, including RTU, ASCII, TCP.
- Programmable full-duplex communication connectors

RELAY OUT

- Voltage: DC 30V, current: 3A
- Six pins are divided into three groups, which can be connected or disconnected programmatically.

I/O

- Allows for the execution of various required functions through programmable triggers.
- Input and output modes supported
- Output voltage: 5V, input voltage: 5V, max
- Pins A and B can be configured as input or output as desired, and pin G is the common grounding pin for pins A and B.

IR OUT (I/O)

IR emission connector, which can be used as an I/O connector

- IR OUT
  - Connect the IR emitter with the voltage below 5V.
  - Infrared control supported
  - Trigger and send commands in base16 encoding.
  - Supports output only.
  - Pins 1 to 9 are used for infrared emission, and pin G is the common grounding pin for pins 1, 2 and 3.
- I/O connector
  - Supports programmable triggers.
  - Supports input and output.
  - Input voltage: 5V, output voltage: 5V

CAN

- Supports access and control of the device adopting CAN protocol.
- Programmable full-duplex communication connectors
- Update the firmware via USB drive.
- Import and export the project file.

ETHERNET

- Gigabit Ethernet port
  - 10/100/1000Mbps supported
  - Supports both TCP and UDP.
- Connect to the control PC for firmware update and configure the device via the control PC.
- Send central control project files using a visualization UI design tool.

Trademark

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Statement

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