



# MBOX600

## Industrial Controller



User Manual

## Change History

Document Version	Release Date	Description
V1.3.5	2021-11-05	<ul style="list-style-type: none"><li>• Updated the "About this Document" chapter.</li><li>• Changed the back cover page.</li></ul>

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# 1 About this Document

The MBOX600 is an LED display controller created by NovaStar. It integrates an industrial PC and sending capability. This controller is installed outdoors and applies to the scenarios where no PC is required for controlling LED displays, for example, fixed outdoor displays.

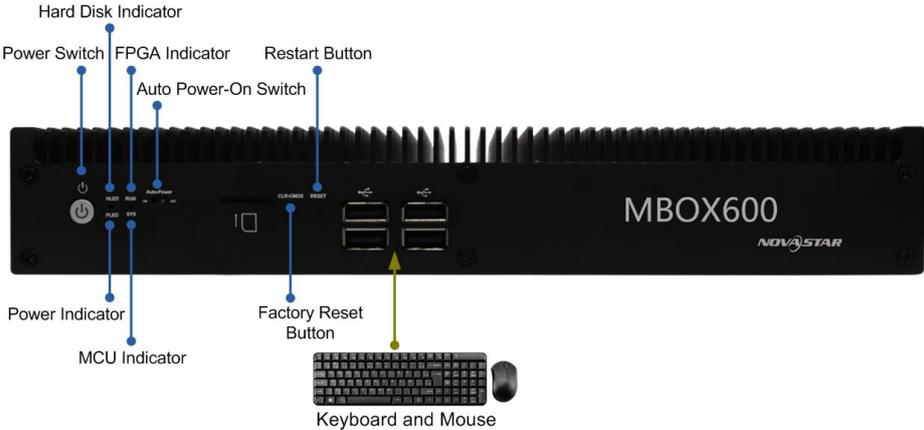
The MBOX600 can be connected to a mouse, keyboard and monitor, allowing for software installation, screen configuration, content playback, etc. Working with software applications, the MBOX600 can enable remote publishing, local playback, playback preview, and many other content playback methods.

This document introduces the main operations of the MBOX600, including hardware connection, software installation, screen configuration and content playback, to help users get started with the MBOX600.

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# 2 Hardware Connection

## Front Panel



## Rear Panel



**Note:**  
COM1 is a reserved connector.

## 3 Software Installation

### 3.1 Preinstalled with Linux

For the MBOX600 preinstalled with Linux, if necessary, install Windows and required applications according to the description in this section.

#### 3.1.1 Installing Windows

Please buy Windows from official channels and install it.

#### 3.1.2 Installing Applications

#### Required Software Applications

Table 3-1 Applications

Name	Description	Where to Get
.NET Framework 4.6.x	Software operating environment	<a href="http://www.novastar.tech">www.novastar.tech</a>
VPlayer	Playback software, used to play content from VNNOX and preview and play content from ViPlex Express	<a href="https://www.vnnox.com/syn/download">https://www.vnnox.com/syn/download</a>
ViPlex Express	LAN-based screen management software, mainly used for screen management, content editing and publishing	<a href="https://www.vnnox.com/download">https://www.vnnox.com/download</a>
NovaLCT	Screen configuration software, used to adjust the screen to the optimal display condition	<a href="http://www.novastar.tech">www.novastar.tech</a>
NovaStudio	Playback software, mainly used for multi-screen, multi-program and multi-window playback	<a href="http://www.novastar.tech">www.novastar.tech</a>
GosuncnWelink/SIMCom Drivers	GosuncnWelink or SIMCom 4G module drivers Please choose the corresponding model according to your region.	Please contact the technical engineers.

#### Installation

Please note that ".NET Framework 4.6.x" must be installed first.

#### 3.1.3 Checking Configuration Options

To ensure stable playback of MBOX600, please check the Windows configuration options according to the description in this section.

#### Configuration Options

The configuration options to be checked are shown in [Table 3-2](#). If a configuration option does not conform to the target status, please change it.

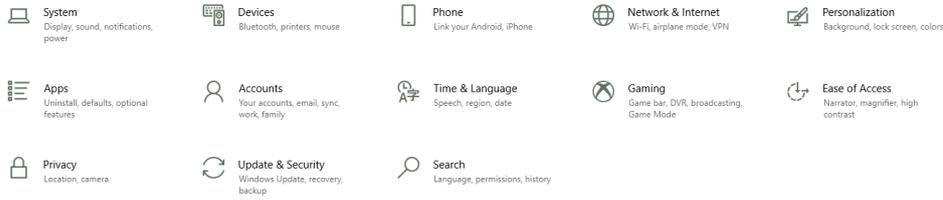
Table 3-2 Configuration options

Configuration Options	Target Status
Windows automatic update	Off
Firewall	Off
Turn off screen	Never
Sleep	Never
Scaling size	100%
Multiple displays	Duplicate these displays

## Operation Access

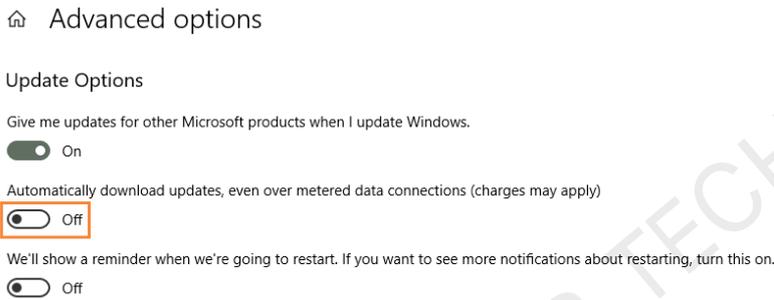
Click  in Windows Start menu to enter the menu page as shown in Figure 3-1.

Figure 3-1 Windows settings



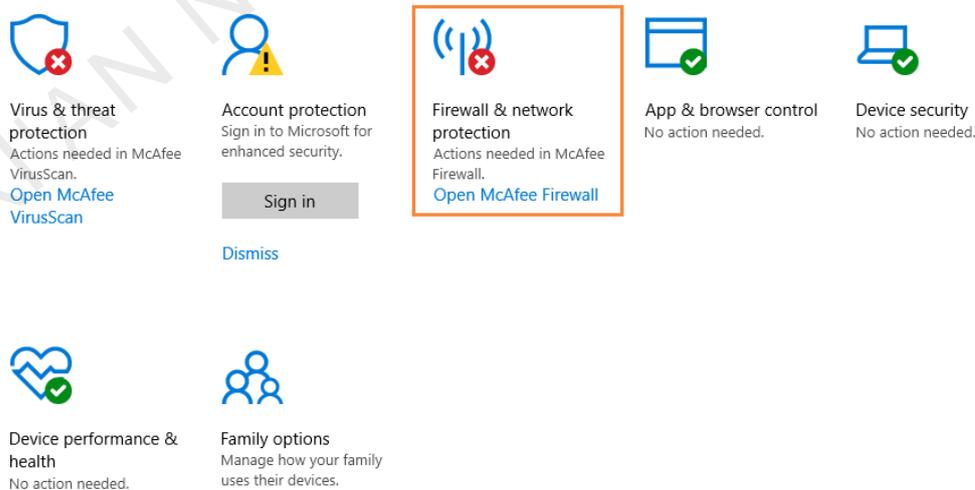
## Checking Windows Automatic Update

- Step 1 Choose **Update & Security**.
- Step 2 On the **Windows Update** page, click **Advanced options**.
- Step 3 Check whether Windows automatic update is turned off.



## Check the Firewall

- Step 1 Choose **Update & Security**.
- Step 2 Choose **Windows Security**.
- Step 3 Click **Open Windows Defender Security Center**.
- Step 4 Check whether the firewall is turned off.



## Checking Screen Off and Sleep

- Step 1 Choose **System**.
- Step 2 Choose **Power & sleep**.

Step 3 Check whether all the four configuration options are set to **Never**.

## Power & sleep

### Screen

On battery power, turn off after

When plugged in, turn off after

### Sleep

On battery power, PC goes to sleep after

When plugged in, PC goes to sleep after

## Checking Scaling Size and Multiple Displays

Step 1 Choose **System**.

Step 2 Check whether the scaling size is 100% and the option of multiple displays is set to **Duplicate these displays**.

Note: When multiple monitors are connected, the configuration option for multiple displays will appear.

### Scale and layout

Change the size of text, apps, and other items

Advanced scaling settings

Resolution

Orientation

### Multiple displays

Multiple displays

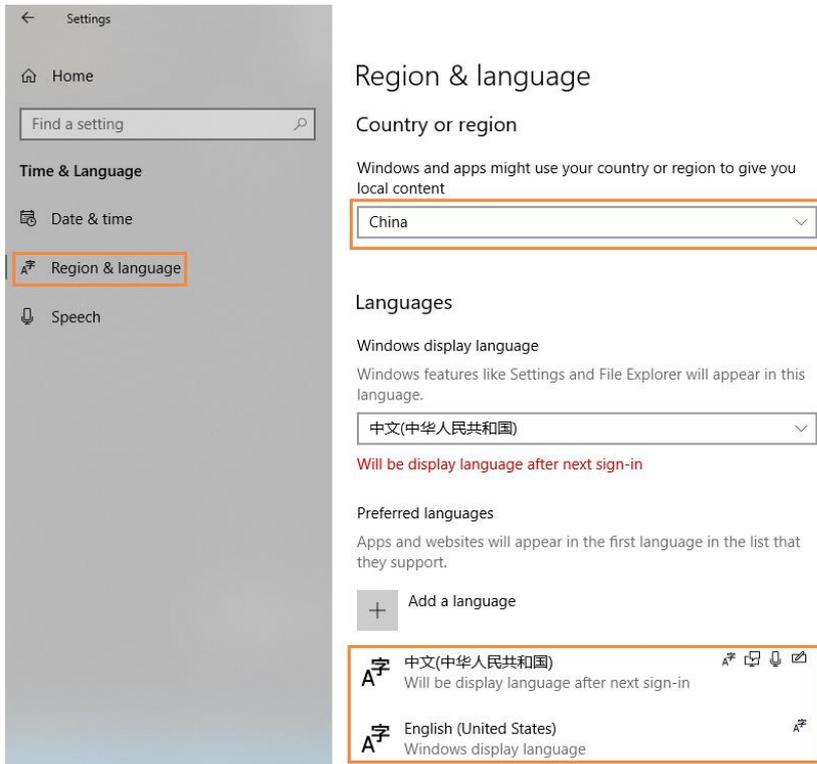
## 3.1.4 Changing Display Language

If necessary, users can change the system language.

Step 1 Click  in Windows Start menu.

Step 2 Choose **Time & Language**.

Step 3 Choose **Region & language** and choose a language to set it as the system language.



## 3.2 Preinstalled with Windows

For MBOX600 preinstalled with Windows 10 IOT Enterprise, please activate Windows and install required applications according to the description in this section.

### 3.2.1 Activating Windows

View the registration code on the enclosure and activate Windows.

### 3.2.2 Installing Applications

MBOX600 is preinstalled with Windows and the applications shown in [Table 3-3](#). NovaStudio is not preinstalled. If necessary, users can visit [www.novastar.tech](http://www.novastar.tech) to get and install NovaStudio.

Table 3-3 Applications

Name	Description	Where to Get
.NET Framework 4.6.x	Software operating environment	<a href="http://www.novastar.tech">www.novastar.tech</a>
VPlayer	Playback software, used to play content from VNNOX and preview and play content from ViPlex Express	<a href="https://www.vnnox.com/syndownload">https://www.vnnox.com/syndownload</a>
ViPlex Express	LAN-based screen management software, mainly used for screen management, content editing and publishing	<a href="https://www.vnnox.com/download">https://www.vnnox.com/download</a>
NovaLCT	Screen configuration software, used to adjust the screen to the optimal display condition	<a href="http://www.novastar.tech">www.novastar.tech</a>
GosuncnWelink/SIMCom Drivers	GosuncnWelink or SIMCom 4G module drivers Please choose the corresponding model according to your region.	Please contact the technical engineers.

### 3.2.3 Checking Configuration Options

For more information, see [3.1.3 Checking Configuration Options](#).

### 3.2.4 Changing Display Language

For more information, see [3.1.4 Changing Display Language](#).

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## 4 Screen Configuration

NovaLCT is used to configure receiving card parameters. You can configure parameters manually or by loading configuration files. For more information, see *NovaLCT LED Configuration Tool for Synchronous Control System User Manual* attached to the software.

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## 5 Content Playback

When the MBOX600 is installed with VPlayer and NovaStudio, the following three playback methods are supported.

- Remote publishing

Publish content to VPlayer using VNNOX Standard or VNNOX AD remotely. VPlayer downloads and plays the content.

- Local playback

Create and play content with NovaStudio.

- Preview playback

View content created in ViPlex Express on the preview window

### 5.1 Remote Publishing (VPlayer+VNNOX)

For details, click the link below to see the online documentation of VNNOX.

<http://docs.vnnox.com:8090/display/VNNOXEN/5+Cloud+Platform+Service+Introduction>

### 5.2 Local Playback (NovaStudio)

For more information, see *NovaStudio User Manual* attached in the software.

### 5.3 Preview Playback (VPlayer+ViPlex Express)

For more information, see the *Getting Started* chapter in *ViPlex Express Display Content Publishing Management System for PC Studio Mode User Manual* attached to ViPlex Express.

## 6 FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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