# KBDTVINVR Keyboard

# User Manual

# Regulatory information
# FCC information

**FCC compliance:** This equipment has been tested and found to comply with the limits for 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.

## FCC conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

# EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

# ⚠ Preventive and Cautionary Tips

Before connecting and operating your keyboard, please be advised of the following tips:

- Ensure unit is placed in a well-ventilated, dust-free environment.
- Keep all liquids away from the keyboard.
- Please check the power supply to avoid the damage caused by voltage mismatch.
- Please make sure the keyboard work in the allowed range of temperature and humidity.
- Please keep the device horizontal and avoid the installation under severe vibration environment.
- The dust board will cause a short circuit after damping. Please dedust regularly for the board, connector, and chassis fan with brush.

# Table of Contents

# Chapter 1 Product Overview

## 1.1 Device Introduction

KBDTVINR keyboard is a kind of USB interface controlling keyboard which supports USB HID protocol; it can be applied with USB joystick mode and supports various programmable keys for users to set custom functions. It is equipped with simple interfaces and the operation is simple. This keyboard can be widely used in public security and transportation as other fields.

## 1.2 Typical Application



![NOTE]
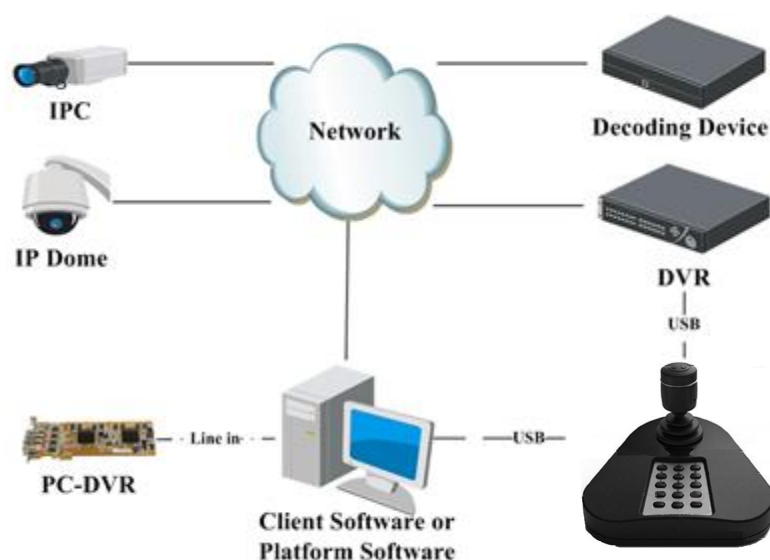
Make sure the DVR and PC-DVR connected support the KBDTVINVR keyboard access. KBDTVINVR is a USB keyboard independently developed by our company and it can be accessed directly by the client software, platform software of iVMS series, DVR and PC-NVR, and can realize functions such as windows switch, PTZ control, capture, recording, etc.

## 1.3 Controlling Mode

The KBDTVINVR keyboard connects with PC via keyboard USB interface and supports two ways of controlling: USB keyboard mode and USB joystick mode.
KBDTVINVR is compatible with the USB joystick via USB HID protocol, and can access to the third-party platform software. It can be applied with USB joystick mode and supports capture,

PTZ control and window switch. The default mode is set as USB joystick mode when it is powered on for the first time; there is no need to install the drive.

USB keyboard mode supports private SDK accessing and functions such as quick switch, PTZ control, capture and recording.



It is required to install a drive before setting the KBDTVINVR to USB keyboard mode. Two types of drives can be selected, depending on 32 BIT system or 64 BIT system.

# Chapter 2 Device Appearance

## 2.1 KBDTVINVR Keyboard



Refer to the following table for the description of the keyboard:

| NO. | Key Name | Function Description |
|---|---|---|
| 1 | Number Key | USB Keyboard Mode: For selecting window or channel; USB Joystick Mode: For custom shortcuts; |
| 2 | OK | USB Keyboard Mode: For confirming the input number; |
| 3 | Window/Channel | Press and hold it for 5s to switch between keyboard mode and joystick mode; USB Keyboard Mode: For selecting window switching mode or channel switching mode; (The window indicator lights while in window switching mode; and the channel indicator lights while in channel switching mode.) |
| 4 | Capturing | USB Keyboard Mode: Capture; USB Joystick Mode: Custom shortcut as number 12; |
| 5 | Recording | USB Keyboard Mode: For recording; USB Joystick Mode: Custom shortcut as number 11; |
| 6 | F1, F2, F3 | USB Keyboard Mode: Custom Shortcut; |
| 7 | Indicator | Single Indicator: The keyboard is in USB keyboard mode; Double Indicator: The keyboard is in USB joystick mode; |
| 8 | Digital Tube | Display the input number. |

## 2.2 KBDTVINVR Keyboard Joystick

| Graphic | Operation | Function |
|---|---|---|
| | Up | PTZ control mode: Move the PTZ up. |
| | Down | PTZ control mode: Move the PTZ down. |
| | Left | PTZ control mode: Move the PTZ left. |
| | Right | PTZ control mode: Move the PTZ right. |
| | Contrarotate | Zoom Out(ZOOM-) |
| | Clockwise Rotate | Zoom In(ZOOM+) |

NOTE

With the joystick moving in different ranges, the PTZ moves with different speeds that can divide in 7 levels of speed.

# Chapter 3   Keyboard Application

## 3.1   USB Keyboard Mode

### 3.1.1   Setting Keyboard Mode

Press and hold the key **Window/Channel** for 5s, and the keyboard will auto switch its mode. If the single indicator is on, it implies that it is in USB keyboard mode.

### 3.1.2   Keyboard Control

USB keyboard mode supports window switch between client live view interface and video wall interface, focusing window channel switch and PTZ control functions. The buttons F1, F2 and F3 can be set as functions like previous, next, preset, etc. according to certain needs and it supports capturing and recording functions in the live view interface.

1.   **Shortcut Switch:**
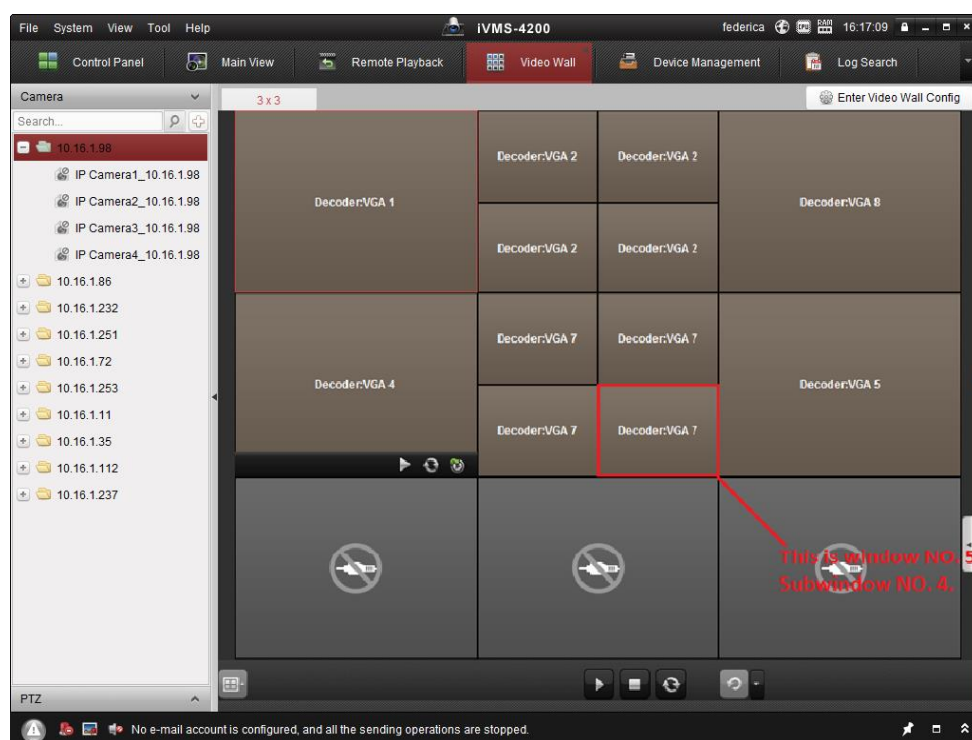


Click the button **Window/Channel** in the main live view interface or video wall interface, and the window indicator will light. Click the number *I* and the **OK** button, and it will switch to the corresponding window. If the client supports camera switch function, you can click the button **Window/Channel** and the indicator will light; then you click the number *J* and the **OK** button to switch the channel *J* to window *I*.

Example: You can input number 504 or 0504 with the **OK** button as the figure above to switch to the sub window 4 of window 5.

- The input number *I* can be at most 4-digit number;

- When the input number *I* is 1-99, it implies the number of the selected window. It can be at most 99 windows;

- When the input number *I* is 1112, it implies the sub window 12 of window 11. When the input number is 3-digit or 4-digit, the last two numbers implies sub window number, and the first one or two numbers implies the window number. If the input number is 101, the selected window is sub window 1 of window 1; if the input number is 0016, the selected window is window 16.

- When the input number *I* is hundreds (e.g., 100,200), the input number is invalid and the client will not respond.

- The window number and sub window number are counted from left to right and from top to bottom.

2. **Joystick:** After selecting window in live view or video wall interface, move the joystick to control the direction and zoom in or zoom out the channel of window. The moving speed of dome is related to the movement of the joystick.

3. **F1, F2, F3**：
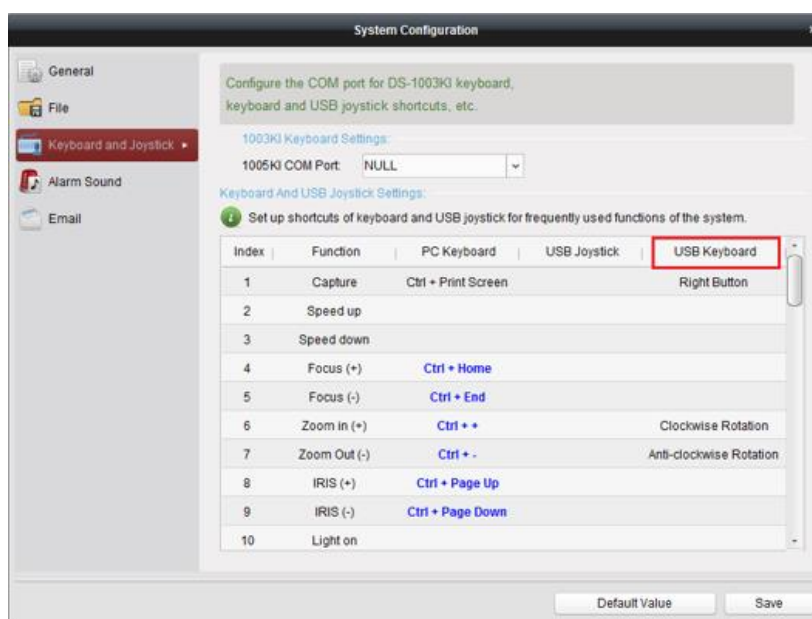


Click **Tool**-> **System Configuration**-> **Keyboard and Joystick**-> **USB Keyboard** on client and then configure the corresponding shortcut keys of **F1**, **F2**, and **F3**. Select the window in live view mode or video wall interface and operate according to each shortcut.



- It supports shortcut settings as **Speed Up, Speed Down, Focus, IRIS, Turn on the light, Turn on the windshield wiper, Auto-Scanning, Auxiliary Focus, Lens Initialization, Previous, Next, Preset, Patrol, Pattern;**

- **Speed up, Speed down**: Reserved;

- **Previous, Next**: Select the previous window or the next window during the window switch; switch to the previous or next window of channel during the channel switch.

4. **Capture, Recording:**
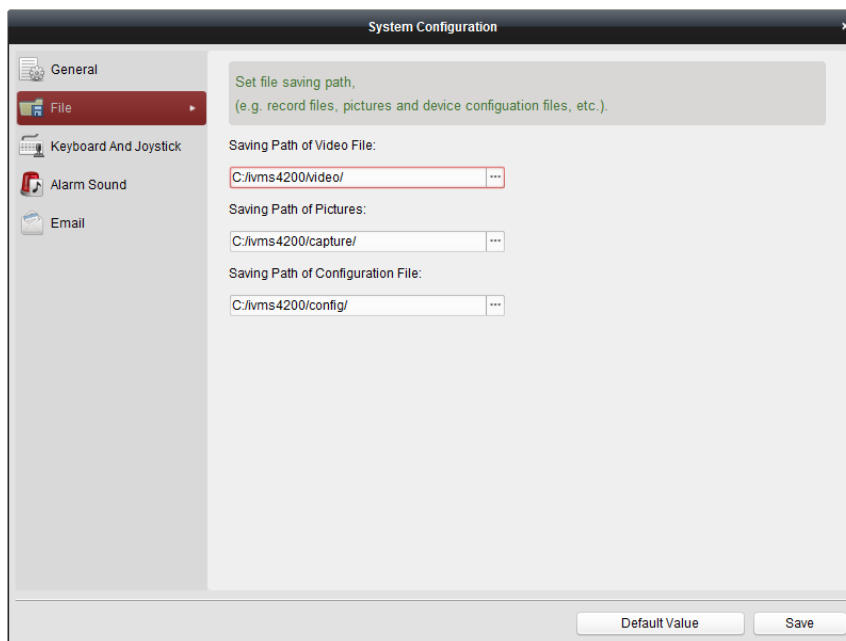


Click **Tool**-> **System Configuration**-> **File**; configure the corresponding saving path of pictures and video files. Select the window in the live view interface and press the button on the right side of the joystick to capture or press the button on the left side to record. The pictures and videos will be saved to the configured saving path.
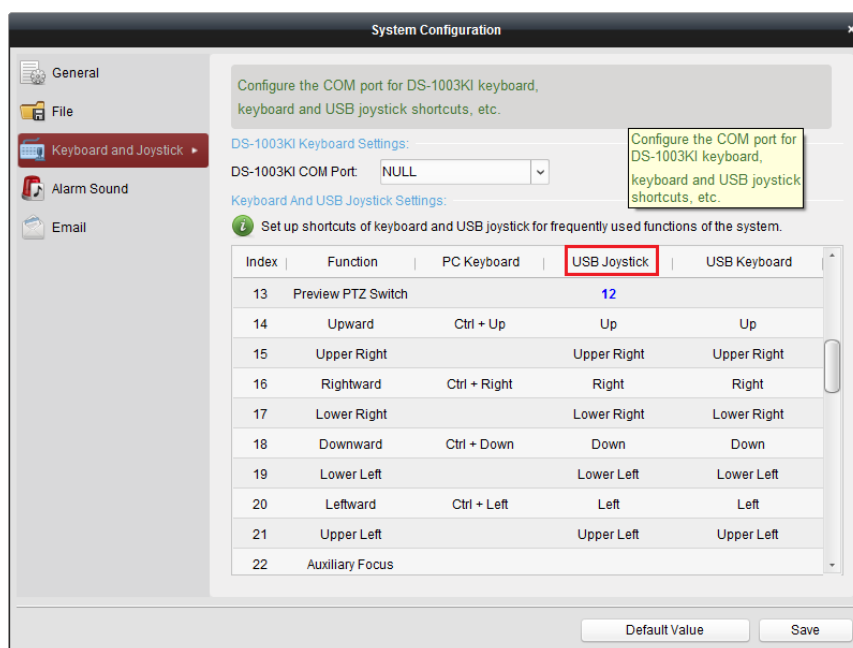
## 3.2　USB Joystick Mode

### 3.2.1　Keyboard Parameter Settings

Press and hold the button **Window/Channel** for 5s, and the keyboard automatically switches its mode. When the indicators both light, it shows that the device is in USB joystick mode.

### 3.2.2　Keyboard Control

It supports PTZ controlling, calling preset, patrol and pattern of client live view interface under USB joystick mode. It supports capturing and customizing key from key 1 to key 12.

Click the **Tool**-> **System Configuration**-> **Keyboard and Joystick**-> **USB Joystick** on client and then configure the corresponding shortcut keys of number **1~12**. Select the window in live view mode interface and operate according to each shortcut.

It supports shortcut settings as **Speed Up, Speed Down, Focus, IRIS, Preset, Patrol, Pattern, etc.**;

Live view PTZ switch: It indicates that the joystick is for operating the window's corresponding channel PTZ control or is for different window switch. Click the shortcut key in client live view mode; it will prompt in the lower right corner in the desktop that the current USB joystick is set to be PTZ control mode, indicating that the joystick is for controlling PTZ currently. Click the shortcut key again and it will prompt that the current USB joystick is set to be window switch mode, indicating that the joystick is for selecting different windows live view.



- Number 10: Represents button 0 of USB keyboard;
- Number 11: Represents button **Record** in the left of the top of USB keyboard;
- Number 12: Represents button **Capture** in the right of the top of USB keyboard;
- Under USB joystick mode, custom keys only support number **1**-**12**, as corresponding to number **0**-**9**, left button and right button on the joystick. The buttons **F1**, **F2**, **F3**, **Enter** and **Switch** are not available.

# Appendix1: Specification

| Model | KBDTVINVR |
|---|---|
| Compatible System | Window XP/7/8/8.1 |
| Interface Type | USB 2.0, DirectX |
| Control | Joystick (3-axis control, rotating zoom) |
| Dimensions | 167*177.5*116(mm) |
| Operating Temperature | -10 ℃ ~+55 ℃ |
| Operating Humidity | 10% ~ 90% (Non-condensing) |
| Power Supply | 5V DC via USB |
| Consumption | ≤ 5W |

# Appendix2: Device Upgrade

*Steps:*

1. **Upgrade Preparation:**

   When the drive is installed, access the keyboard USB with the PC, it will prompt that device is discovered and auto load the corresponding drive.

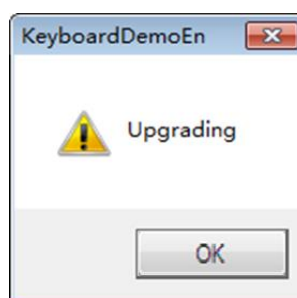It only supports device upgrade under USB keyboard mode.

2. **Search Device:**

   Open DEMO and click refresh device, the device list will display the current accessed keyboard. (The client should be closed).
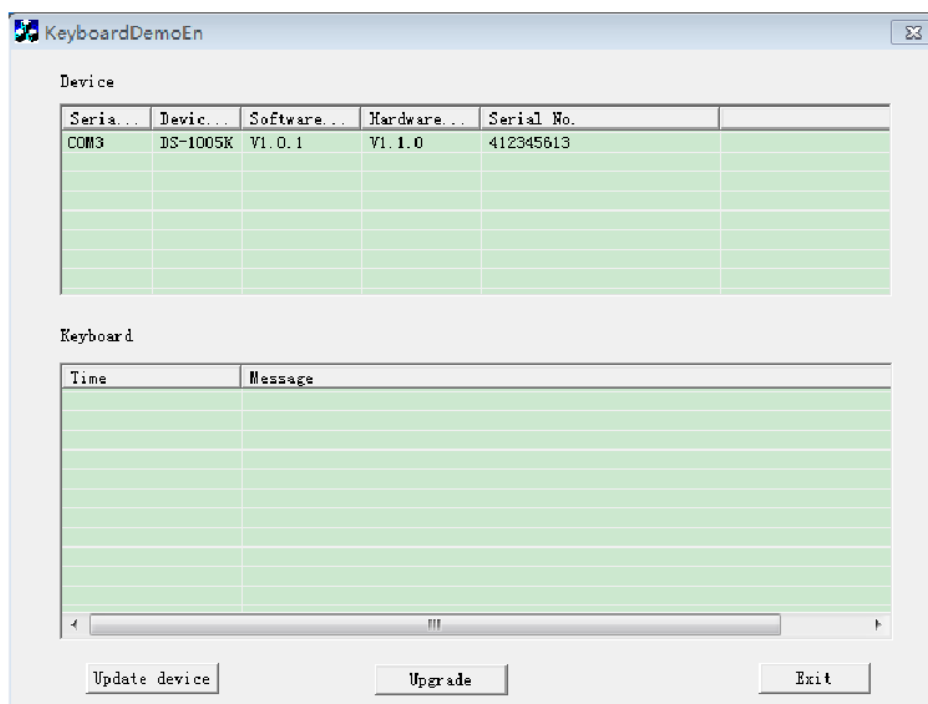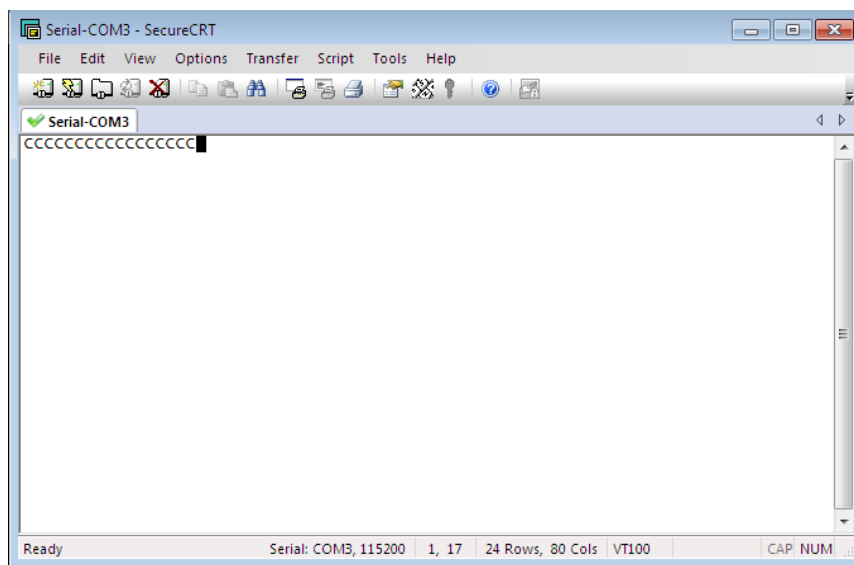
3. **Upgrade**

   Select one device and click to upgrade it. It will prompt the window as below after the upgrade order is sent from the DEMO. Click **YES**.
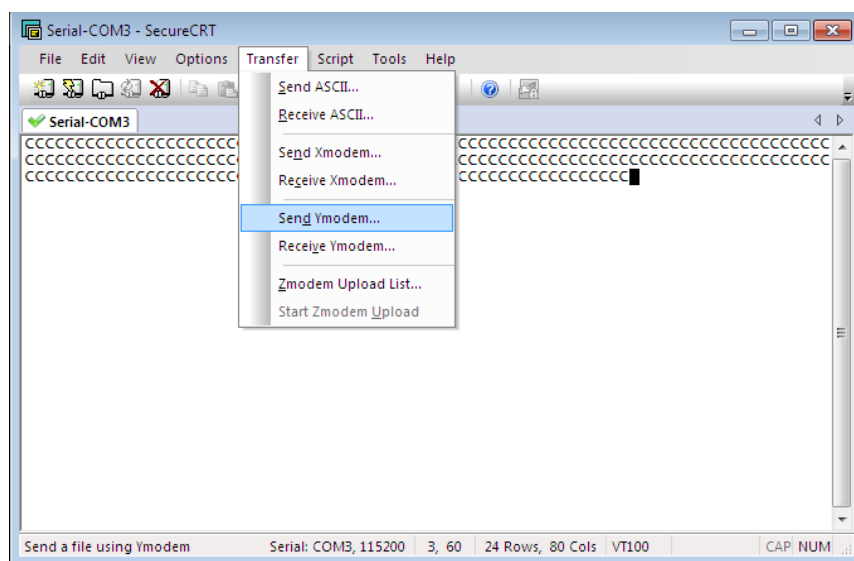
**4.** **Send Upgrade File:**

Open serial port tool SecureCRT, select the corresponding serial port of the device and open the window. It will print C continuously and the upgrade file can be sent directly:
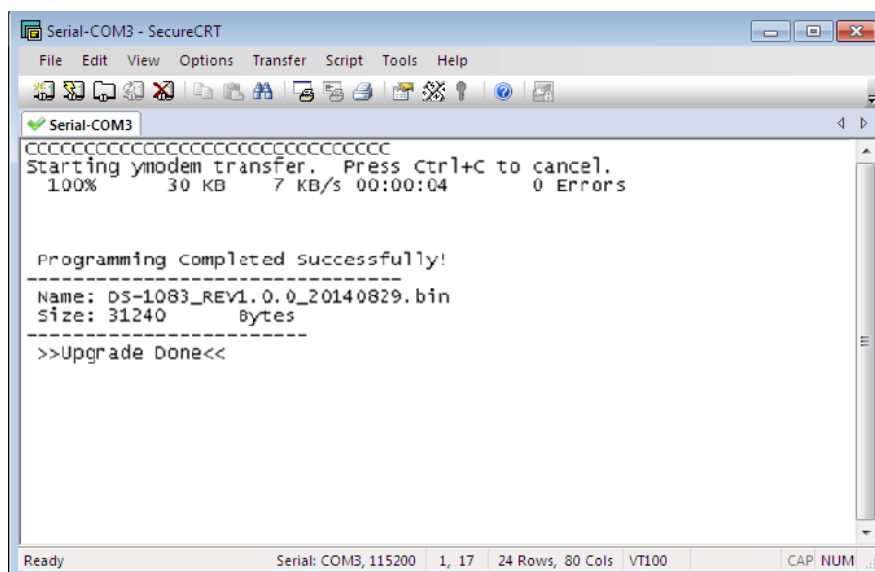


Click **Send Ymodem** under the menu **Transfer** to enter the path choosing page of upgrade patch as shown below:



Select the upgrade patch in the path choosing page and double click it to add it to the red box as shown in the picture below, click **OK** to start upgrading it:
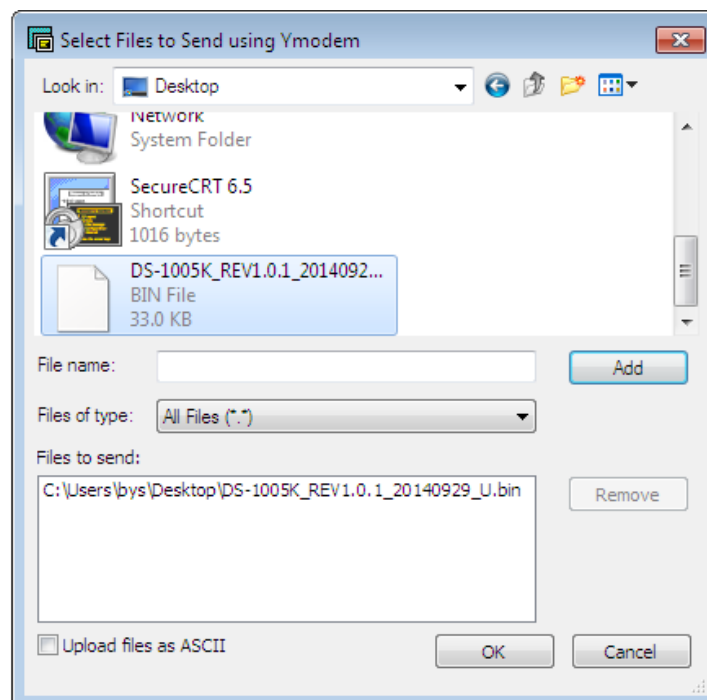
It will pop up the words as shown in the picture below after the upgrade is processed successfully.





When the upgrade is accomplished, please close the current serial port and reboot the keyboard.