

December 7, 2020Product: Ishida Uni-9, WM-Ai, IP-Ai, and IP-Ai-PContents: Remote VNC Connection with SSH Security

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Background

The Ishida Uni-9, WM-Ai, IP-Ai, and IP-Ai-P machines support a remote VNC connection. The default VNC connection, however, is "open" and not secure. A secure connection option using SSH can be added by updating the operating system and firmware as needed.

Procedure

The steps to update the OS and firmware are listed below. Additionally, installation and configuration of two Windows programs used for the secure connection is also provided.

Firmware

The VNC+SSH feature was added from the following firmware versions. Firmware prior to this supports only the standard VNC connection. Update the firmware as needed following the standard procedure.

- Uni-9: **C2249T**
- WM-Ai / IP-Ai: **C2150**
- IP-Ai-P: **C2194F**

Operating System Update

The OS must be updated to support the secure connection. Patch Z1760A is installed in the same manner as a standard firmware update. These are the steps to load the OS patch.

1. Unzip the **Z1760A** file.
2. Save the "patch" folder to USB drive and insert in the machine.
3. At the machine, install the patch following the same procedure as installing firmware:
 - a. Enter the menus and log in with the service password.
 - b. Go to the Adjust menu > Download.
 - c. Select the "patch" (Z1760A) folder.
 - d. Press **Exec, Exec**.
4. After the machine reboots or prompts for a reboot, power the machine off and on.

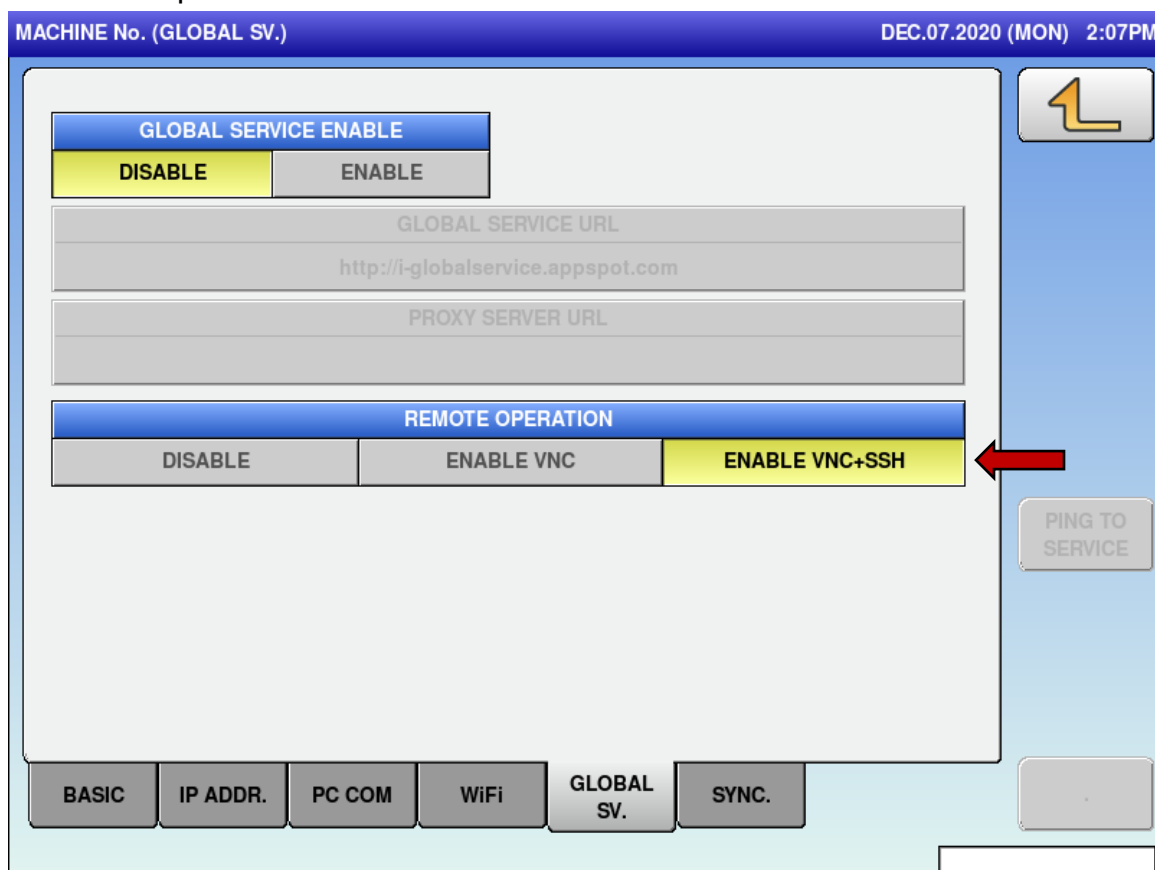
Enable VNC+SSH

After the OS and firmware have been updated the machine must be configured to support the VNC+SSH remote connection.

1. Enter the menus and log in with the service password.
2. Go to the Setup menu > Machine No.> Global Sv. tab.
3. Set Remote Operation as **ENABLE VNC+SSH**.

Note: The screen below may look slightly different depending on the model.

4. Exit to the operation mode and reboot the machine.



Windows Software

Two software programs are used to configure the connection and then connect to the machine: *Tera Term* and *UltraVNC*.

The versions listed below have been verified to work. Other similar programs may also work but cannot be guaranteed. Use the links to download and install both programs.

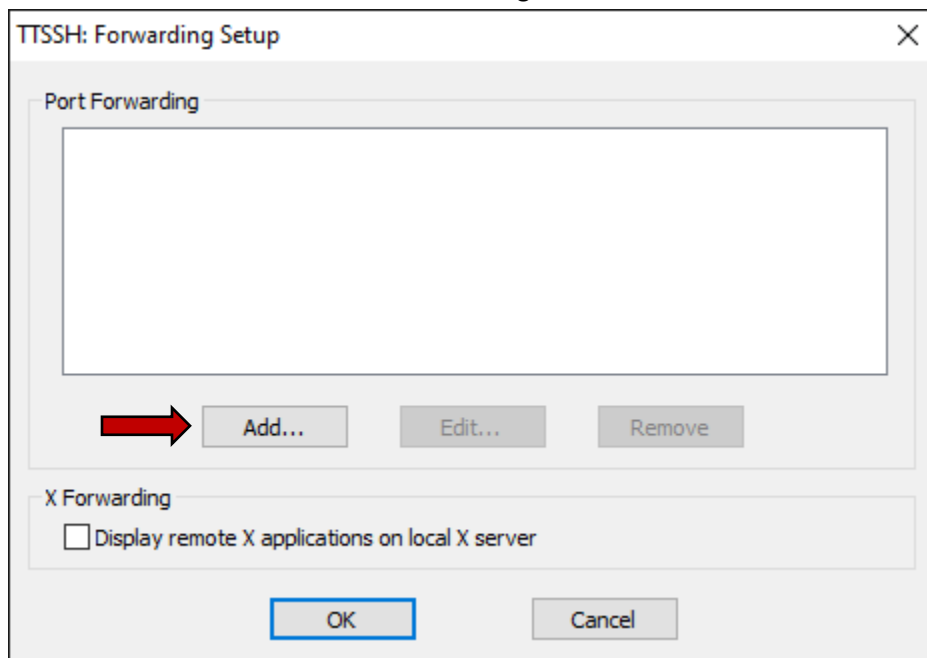
- [Tera Term 4.97](#)
- [UltraVNC 1.2.0.6](#)

Tera Term

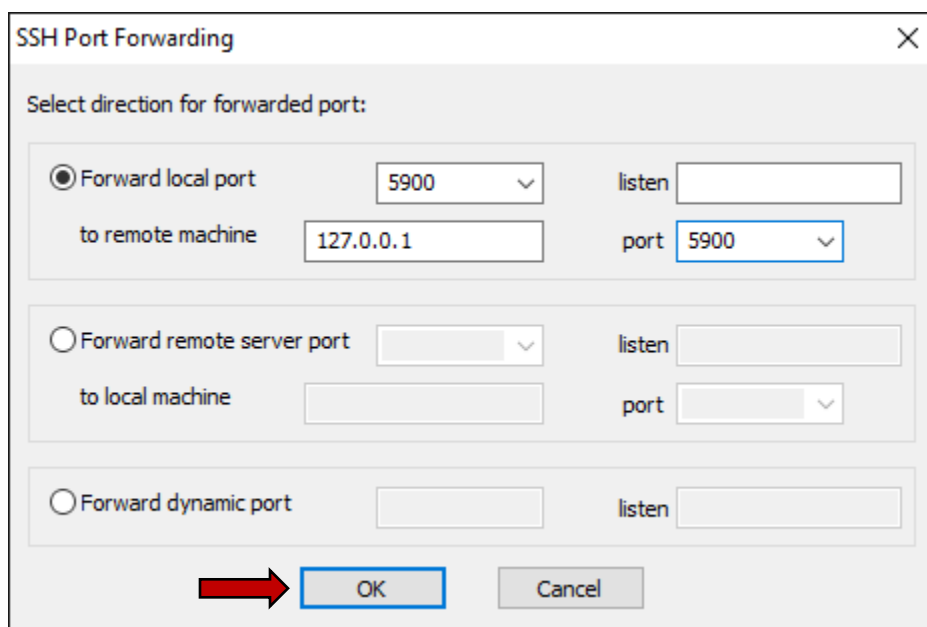
Open and configure *Tera Term* as follows. The connection must be reestablished every time *Tera Term* is started to access a remote machine.

1. Start the *Tera Term* program.
2. Close the "New Connection" window that appears.

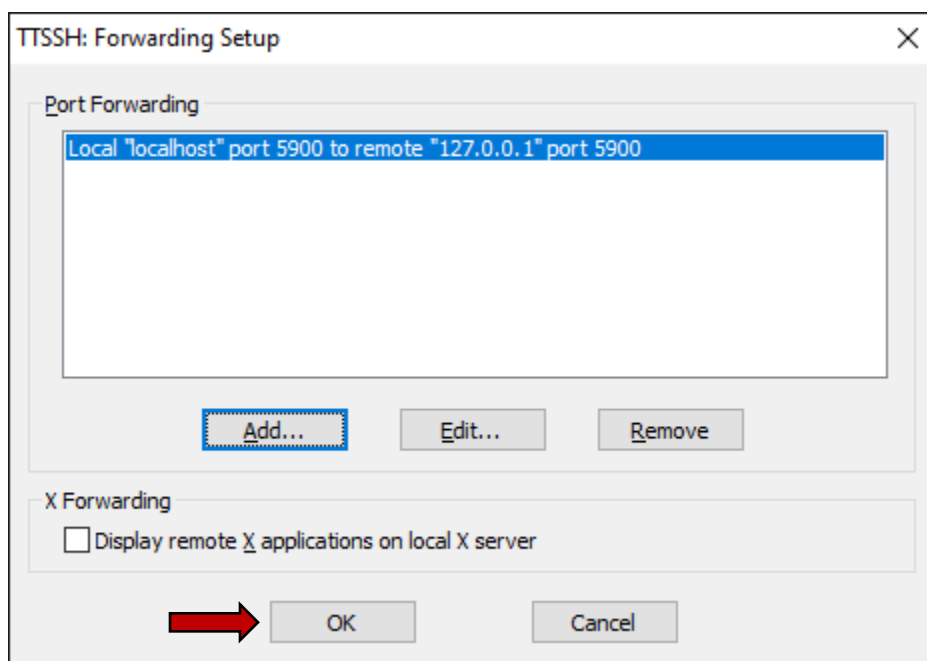
3. From the Setup menu select **SSH Forwarding...**
4. Click "**Add...**" on the Port Forwarding screen.



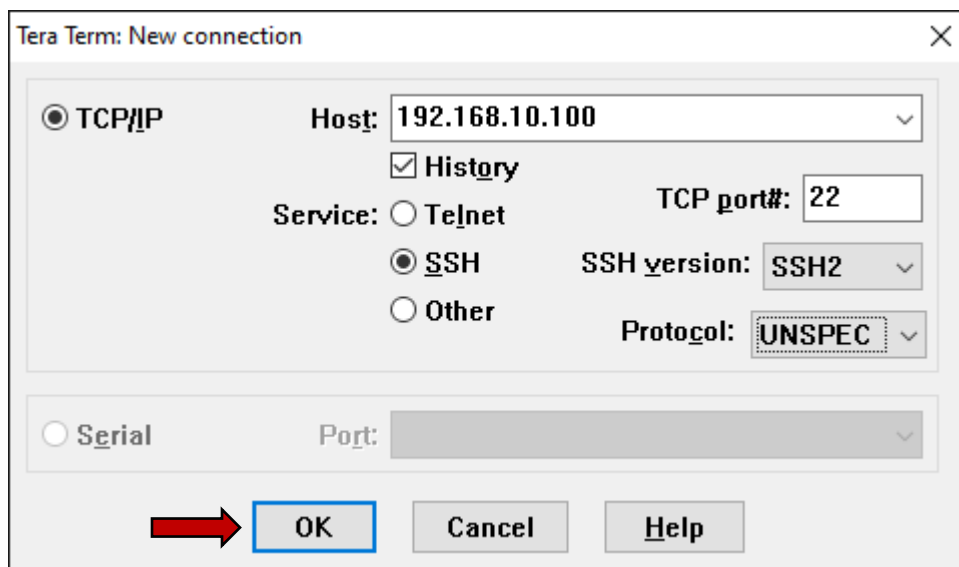
5. Enter the settings listed below at the SSH Port Forwarding screen and click **OK**.
 - Forwarding local port: **5900**
 - listen: (leave blank)
 - to remote machine: **127.0.0.1**
 - port: **5900**



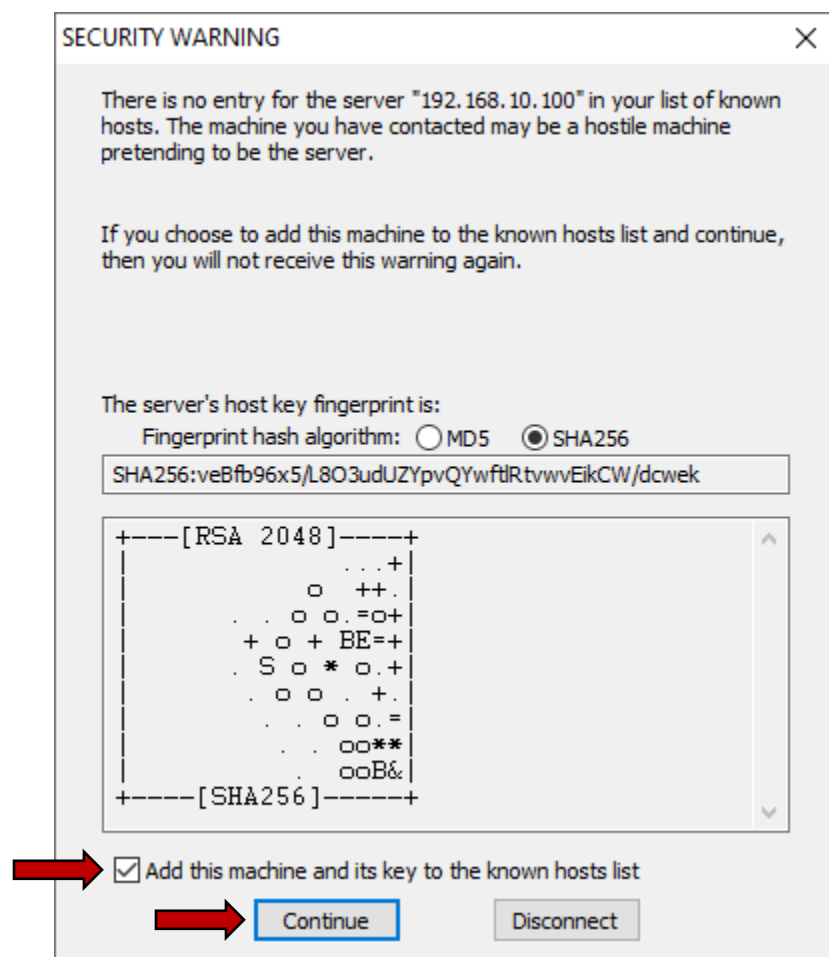
6. Click **OK** at the TTSSH: Forwarding Setup screen.



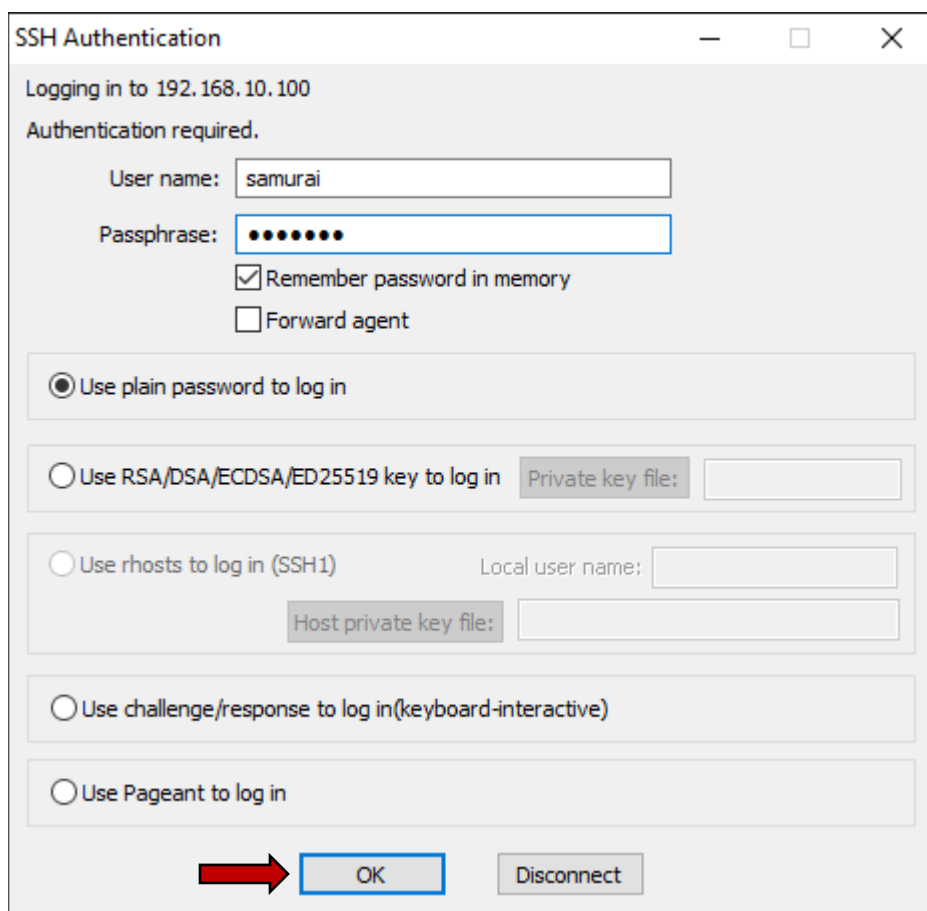
7. From the File menu select **New Connection**
8. Enter the settings listed below at the New Connection screen, then click **OK**.
 - TCP/IP: IP Address of the machine
 - Service: **SSH**
 - TCP port#: **22**
 - SSH Version: **SSH2**
 - Protocol: **UNSPEC**



9. Only during the initial connection, a security warning message is displayed to gain an RSA Password key.
10. Check the **"Add this machine..."** box and click **Continue**.

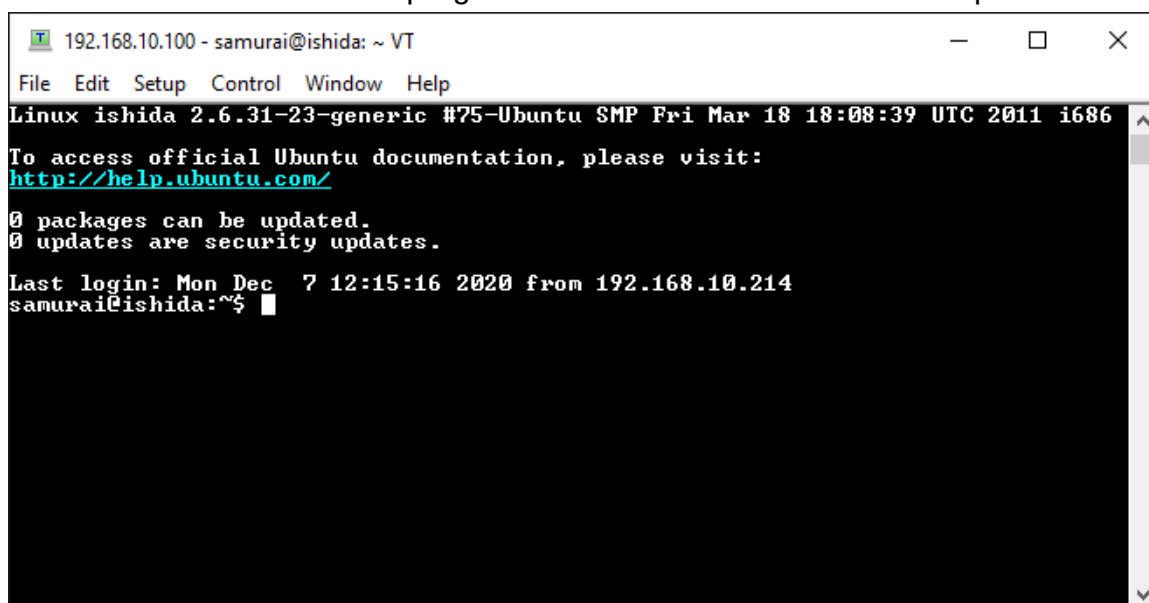


11. Enter **samurai** for both the User name and passphrase, and click **OK**.
The passphrase is shown as ●.



12. The Linux Ubuntu login screen will be displayed.

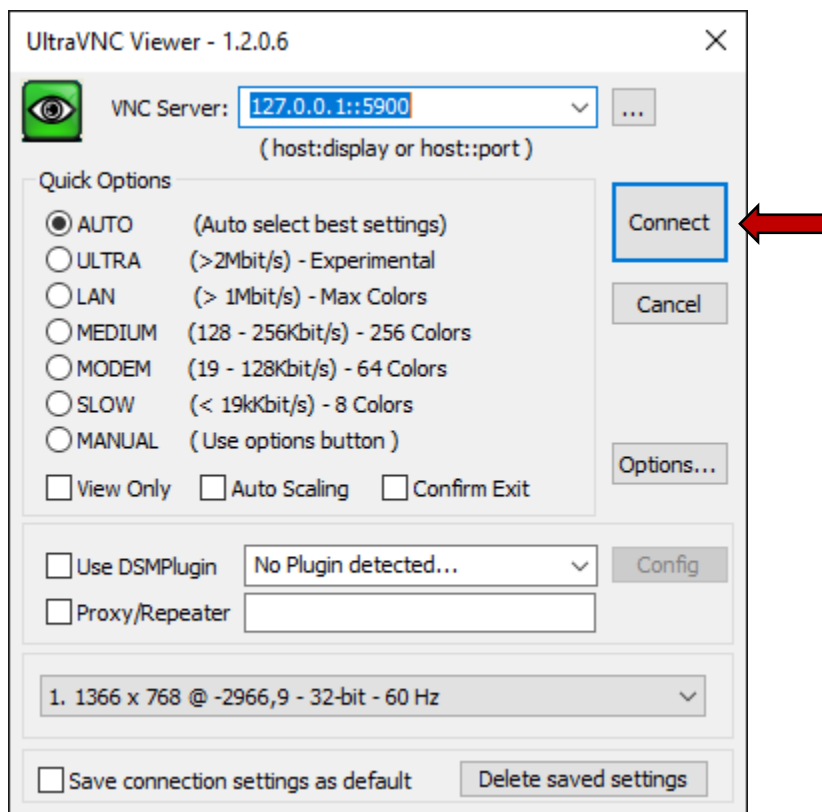
13. Do not close the *Tera Term* program until the remote session is complete.



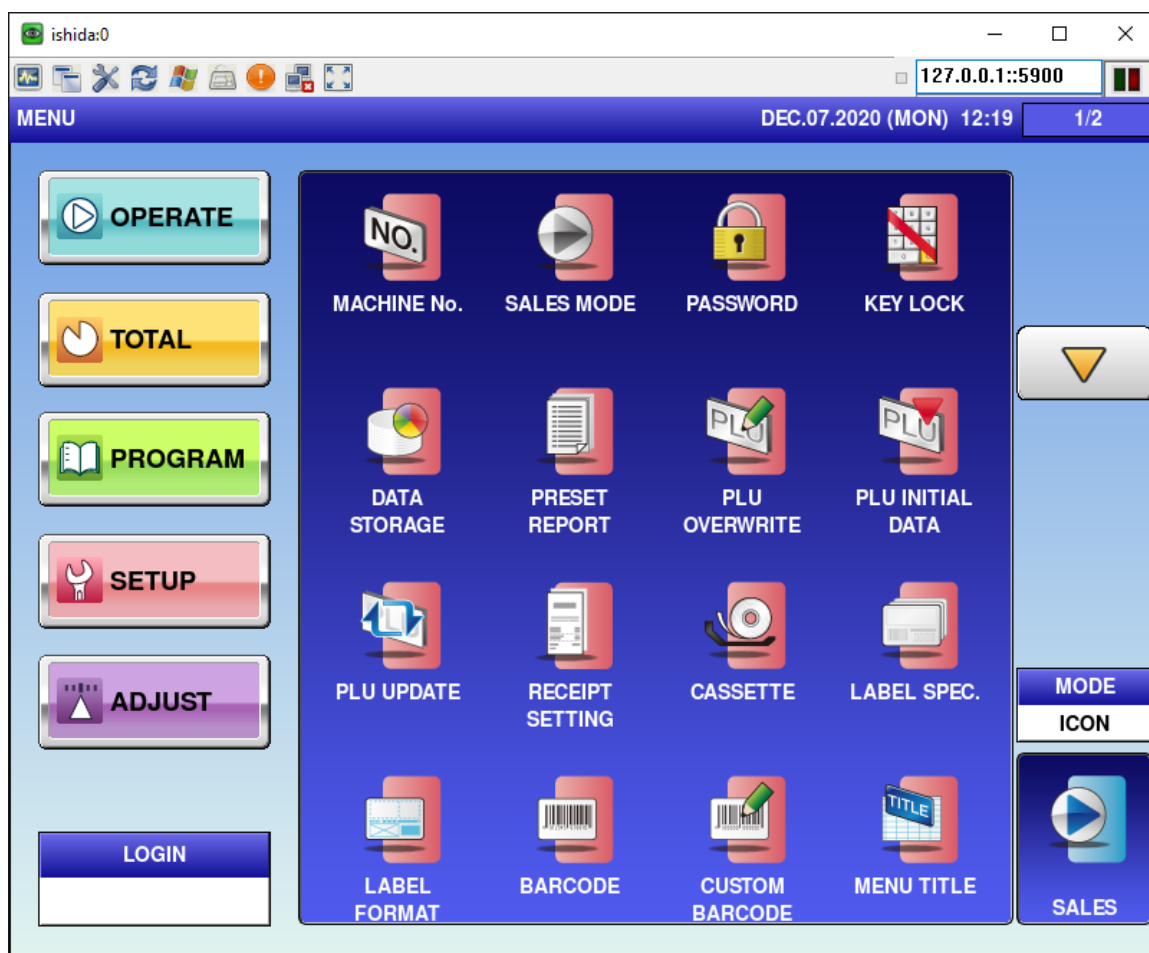
UltraVNC

After the *Tera Term* connection has been established, open *UltraVNC Viewer* and connect to the remote machine.

1. Start *UltraVNC Viewer*, enter **127.0.0.1::5900** at the VNC Server, and click **Connect**.



2. The connection is made and the screen of the machine is displayed.
Note: The machine must be in operation mode or a menu, i.e., past the date and time start screen.



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230 W. Coleman St. • Rice Lake, WI 54868 • USA
U.S. 800-472-6703 • Canada/Mexico 800-321-6703 • International 715-234-9171 • Europe +31 (0)26 472 1319

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