Installation and Set-up Manual for Masterclock NTP100 Server with SuperMicro SuperServer 5017A-EF

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First Draft
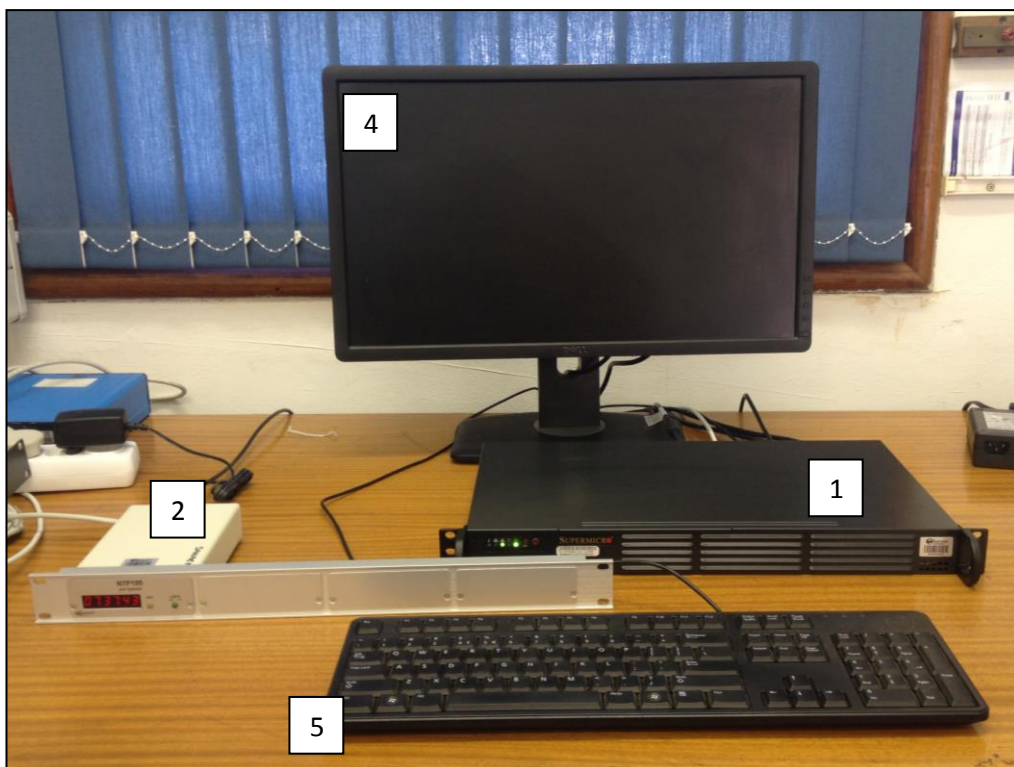
Table of Contents

Overview

This manual will serve as a guide to the set-up and installation of the Masterclock NTP100 Server with the SuperMicro SuperServer 5017A-EF. The hardware used in this manual includes:

1. SuperMicro SuperServer 5017A-EF

2. MasterClock NTP100 Server

3. Windows PC (not pictured)

4. Computer Monitor

5. Keyboard

The software used in this manual includes:

1. Ubuntu Server 14.04

2. Masterclock WinDiscovery Ver 4.1.12

Connections

Below is an image of the back-side of the Masterclock NTP100 Server, showing connection points used.

| Ethernet connected to network | | 12V | | GPS Antenna |

Below is an image of the back-side of the SuperMicro SuperServer 5017A-EF, showing connection points used.

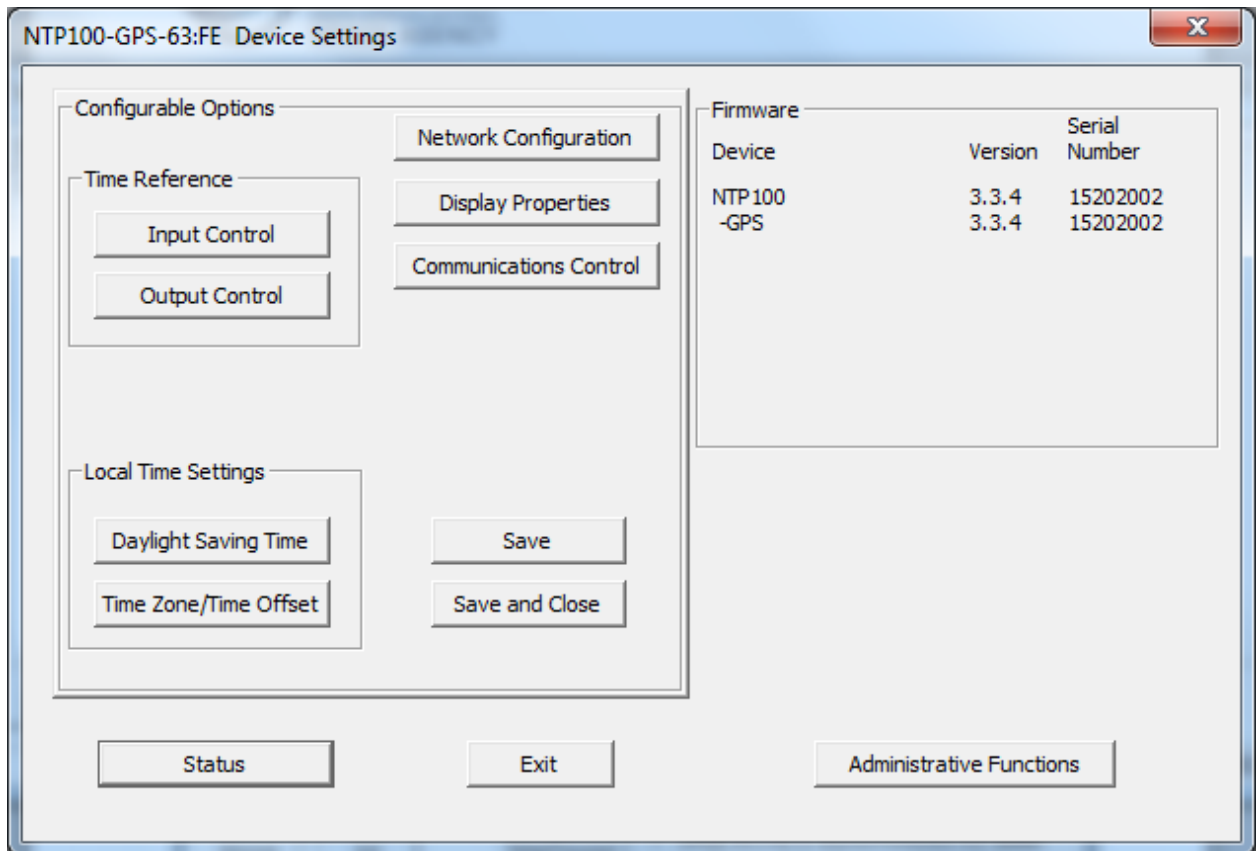**|AC Power| |Keyboard| |Ethernet connected to network| |Monitor|**

NTP Server Setup

This section will cover setting up the Mastercock NTP100 Server to display UTC and find out its DHCP IP address.

1. Connect the NTP server to same network as your Windows PC

2. Insert the Masterclock WinDiscovery CD and install the software

3. Open WinDiscovery and click Discover

4. The NTP Server should now be visible as shown below
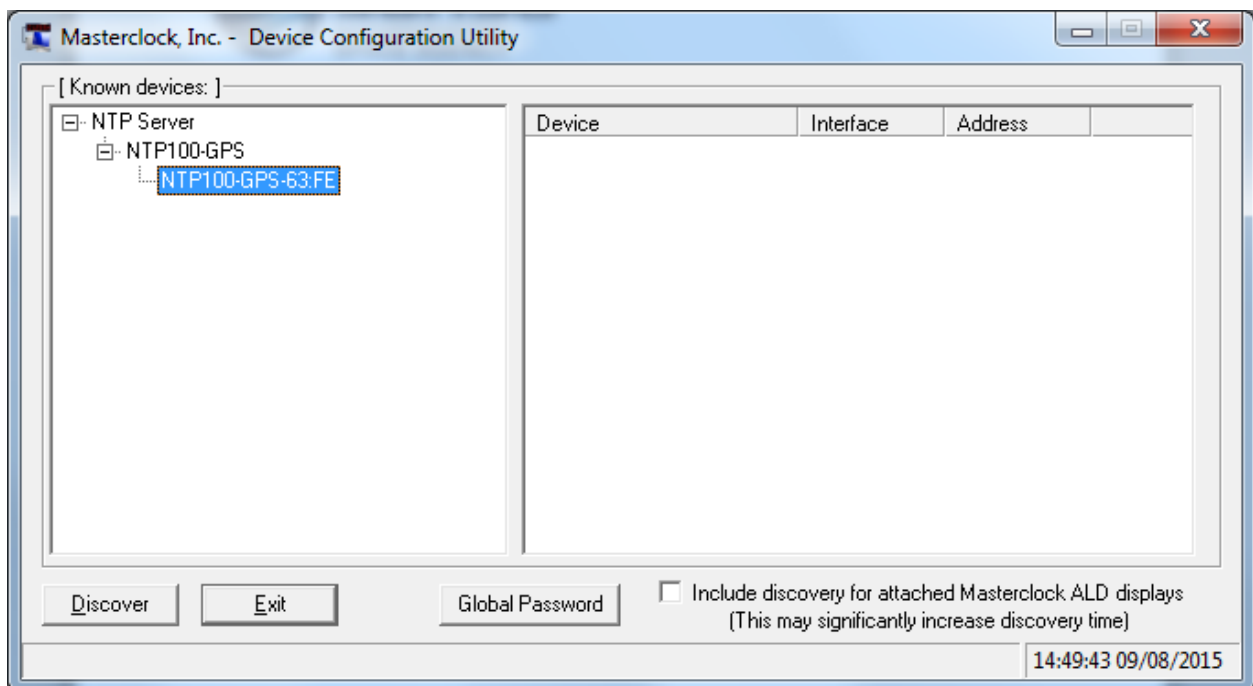
5. Make sure that the last 4 digits of the MAC address displayed on WinDiscovery match that on the NTP Server

6. Click on the name of the server to access the device settings as shown below

NTP100-GPS-63:FE Device Settings

Configurable Options

Time Reference
- Input Control
- Output Control

- Network Configuration
- Display Properties
- Communications Control

Local Time Settings
- Daylight Saving Time
- Time Zone/Time Offset
- Save
- Save and Close

Firmware

Device	Version	Serial Number
NTP 100 -GPS	3.3.4 3.3.4	15202002 15202002

- Status
- Exit
- Administrative Functions

7. Click on Network Settings to find the IP address of the server – make a note of this IP

8. Go to Display Properties and set the Time Display to UTC with Leading Zeros On

9. Check the Status and make sure that the GPS reference is locked

10. Click Exit and save using the default password: public

Ubuntu Server NTP Setup

This section will cover setting up an NTP Daemon on the Ubuntu Server and pointing it to the Masterclock NTP100 Server setup in the previous section.

1. Log in using credentials; username = gps, password = hmo

2. Ping the NTP Server IP address to make sure you are on the same network

3. Type, sudo apt-get install ntp

4. After installation, type, sudo nano /etc/ntp.conf

5. Comment out the servers from the NTP Pool Project and add the IP address of the Masterclock NTP100 Server noted in the previous section, followed by iburst. Eg. Server 10.160.11.25 iburst

6. Press Ctrl+x to exit and press y to save.

7. Restart the ntp service by typing, sudo /etc/init.d/ntp restart

8. Type ntpq –p to see the current ntp peer statistics. You should see the IP address entered above.