INTEGRATED TELECOMMUNICATION SYSTEMS

TECH NOTE 5
DOWNLOADING ACE CPUS

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You will use the **ACE3600 STS** program group to download your CPU. This group can be found either on your desktop or by selecting **Start, Programs, ACE3600 STS X.X** where **X.X** is the version of your **ACE3600 STS**. To begin, open the **ACE3600 STS** program group.

RESETTING THE CPU

If you are downloading a new CPU or a CPU which you do not know the port settings or password, you must first reset the CPU to the program defaults. If this is a CPU that has already been downloaded and you know the port settings (port number and baud rate) skip to **Verifying Communication with the CPU**. To reset the CPU, follow these steps:

1. Power off the CPU.
2. While holding PB1 and PB2 on the CPU, turn the power back on.
3. Continue holding **PB1** and **PB2** until a series of tones are played and the lights flash. You will also see the **RESET** LED illuminated.
4. When an ACE CPU has been successfully reset, the only LED to be illuminated is **PWR**.

Once a CPU has been reset it will default to its default configuration as shown below:

- SI1 [SERIAL 1]
  - Media RS-232
  - Baud Rate 9,600 BPS
- SI2 [SERIAL 2]
  - Media RS-232
  - Baud Rate 115,200 BPS
- ETH1 [ETHERNET 1] (ACE3640 ONLY)
  - Media 10/100 BT
  - IP Address 10.100.100.100
  - IP Network Mask 255.255.255.0

Also, the reset CPU will not have a password associated with it. The password will be set to the **Communication Driver Password** entered when downloading the **Site Configuration**.

VERIFYING COMMUNICATION WITH THE CPU

The most common problem when downloading a CPU is the communication setup. You must have the correct computer serial port selected, the correct baud rate of the CPU port and the programming cable connected from the configured serial port on your computer to a CPU port configured for **Local Computer**. If you are unsure of any of these settings, reset the CPU before continuing.

1. Open the **MDLC Communication Setup** application.
2. Set the **Communication port** to the computer port which is connected to your CPU.
3. Set the **Baud rate** to the port speed on the CPU configured for **Local Computer**. If you have just reset the CPU, the **Baud rate** should be set to **9,600** if you're connected to **SI1** or **115,200** if you're connected to **SI2**.
4. After properly setting **Communication port** and **Baud rate**, click the **OK** button.

5. If changes were made to the communication setup, stop the communication driver using the **Stop MDLC Communication Driver** application. If the communication driver was running, a pop-up window will indicate ”Communication driver was stopped”. If the communication driver was not running, a pop-up window will indicate “Communication driver is not running. Nothing to stop”.
6. Verify proper connection from the computer COM port listed in the **Communication port** setting to the ACE CPU port configured for **Local Computer**. If you have just reset the CPU you may use either **SI1** or **SI2**.
7. From the **ACE3600 STS** Program Group, launch **STS**.
8. When prompted, select your project and click **Open**.
9. Now test your connection using the **Logger**, select **Site, Logger**.
10. Once the **Logger** is open, click **Start**.
11. When prompted for a password, enter the communication password for your system. (If you are unsure of your password or if you have an ITS designed system, use **motorola)**. After you have entered the **Communication Driver Password**, click **Start** to test communications. If communication is successful, you will see either a list of errors or “No error messages”. If communication is not successful, the application will wait until **Stop** is used to terminate communication. If you fail to communicate in ten (10) seconds, **Stop** and review these steps again.

DOWNLOADING THE SITE CONFIGURATION

This explanation assumes that communication has been verified from your computer to the CPU. NOTE: If you are downloading the **Site Configuration** to a CPU that was just reset, the **Communication Driver Password** entered in **Step 9** of **Verifying Communication with the CPU** will be downloaded along with the **Site Configuration** and will become the **Communication Password** for your CPU. This password ***MUST*** match the **Communication Password** assigned to the CPUs in your system for successful CPU to CPU communications.

1. Locate the site to be downloaded.
    a. To create a new site, right-click an existing site with the correct **Site Configuration** and **Application** assigned and select **Copy**.
    b. Navigate to the desired **Area** and right-click an empty space on the screen and select **Paste**.
    c. When prompted, enter a unique **Site ID** and **Site Name**.
2. Right-click the desired site and select **Download**.
3. If you’re connected locally, make sure you have **Local** selected under **Connection**.
4. Uncheck **Remote System File** as this is the firmware.
5. Check **Site Configuration** and click **Download**. (You may also select **Ladder Application** and download them at the same time.)
6. The **CONF** light indicator should now be illuminated. (If you also included **Ladder Application** in the download **APPL** should also be illuminated.)

If you have downloaded a new site configuration to the CPU, it may be necessary to plug into the new **Local Computer** port on the CPU. For example, if you had reset your CPU prior to downloading the **Site Configuration** your programming cable may be plugged into **SI1**. If, in your site configuration, **Local Computer** is now **SI2**, you will need to plug into **SI2**. Likewise, you will most likely have to reconfigure the **Comm Driver** to match the new speed of the **Local Computer** port. Follow the steps in **Verifying Communication with the CPU** to modify the settings.

DOWNLOADING THE APPLICATION

This explanation assumes that communication has been verified to the CPU and a valid site configuration has been downloaded to the CPU.

1. Right-click the desired site and select **Download**.
2. If you're connected locally, make sure you have **Local** selected under **Connection**.
3. Uncheck **Remote System File** as this is the firmware.
4. Check **Ladder Application** and click Download.
5. The **APPL** should now be illuminated.

DOWNLOADING THE NETWORK CONFIGURATION

This explanation assumes that communication has been verified to the CPU and both a valid site configuration and application has been downloaded to the CPU.

1. Right-click the desired site and select **Download**.
2. Uncheck **Remote System File** as this is the firmware.
3. DO NOT CHANGE THE CONNECTION TO LOCAL, LEAVE AS IS!
4. Check **Network Configuration** and click **Download**.