

## **Installation and Application Note** **for** **The Milacron Genesys OCX to Milacron 486 Translator**

This application note explains the installation and operation of Mattec software that provides a Milacron 486 interface through an RS-232 port of a Milacron Xtream NT control. With this software installed and operating, the control can be connected to a standard Mattec MIU with the Milacron 486 PLC interface option.

### **Required Equipment**

1. The Windows NT Workstation or Windows 2000 Professional version of the Milacron XTREEM NT control with the Genesys Communication ActiveX control installed.
2. A Mattec MIU with the Milacron 486 interface installed and configured properly.
3. A connecting cable from the MIU to the Xtream Control
4. CD containing the GCL (Milacron Genesis Software), PLC Translator, and a Microsoft program vcredist.exe. This executable updates all the required DLL's in the Xtream NT control and is a requirement if the control is an NT Workstation.

### **Xtream NT Control**

In order to communicate with the control an Ethernet crossover cable and a laptop computer is required. Set the IP address of the laptop to 172.17.1.15. Set the subnet mask to 255.255.0.0. Set the gateway to 172.17.1.16. Depending on the laptop's operating system, a reboot may be required. A PS2 mouse and keyboard will also be required. Connect the keyboard and mouse to the PS 2 ports located on the side of the machine control. Plug in the crossover cable between the laptop and the control port also located on the side of the control, using normal precautions. Cycle the power on the machine and while the machine is booting, hold down the "shift" key on the keyboard. This will allow a technician to log in as administrator, which is required. When the log in screen appears, log in as "CustomerAdmin" with a password of "CustomerAdmin". Once logged in, explore the hard drive. If the GCL.OCX is installed, it will reside in the "\Milacron\tools directory. If the GCL is not installed, it will need to be installed from the supplied CD.

The easiest way to install the GCL, PLC Translator, and run "vcredist.exe" is to copy the contents of the CD from the laptop to the control. Depending on the control type (Windows NT Workstation vs. Windows 2000) the method to copy the contents of the CD to the control may differ. Once the CD is copied to the control, the laptop is no longer required.

### **Software Installation**

#### **GENESIS OCX**

Install the Genesis OCX by simply running the install program. The OCX will install into the \Milacron\Tools directory on drive C.

#### **PLC Translator**

Mattec's PLC Translator software is supplied in a single floppy disk or CD and is installed directly from this disk to the Milacron XTREEM NT control. Once the GCL is verified, the PLC Translator may be installed from floppy disk or the control hard drive. Installation is initiated by running "Setup.exe". The user is then guided through the installation.

It is recommended that all programs be exited before running the installation. If problems are encountered, manually removing a previously installed Mattec PLC Translator may be useful. An existing version can be removed through the "Add/Remove Programs" function of the Windows Control Panel. The program to remove is "Mattec Corporation - PLC Translator".

Once the PLC Translator and OCX are installed, the program vcredist.exe must be executed on a Windows NT control. Normally in a Windows 2000 control all the DLL's are installed and up-to-date. However, it doesn't harm anything to run vcredist.exe on a Windows 2000 system. Once the program is executed the control may need to be re-booted.

In order for execution of the translator to begin automatically, a short cut to it must be placed in the appropriate start-up folder. By default, the translator is installed in C:\Program Files\Mattec\PlcTranslator and the startup folder would be C:\Winnt\Profiles\Default User\Start Menu\Programs/Startup. In Windows NT, use Windows Explorer to find the “Profiles” folder. In the “Profiles” folder the various profiles for all users are stored. Simply create a shortcut to the PLC Translator executable in the appropriate profile start menu – normally this is either the “default user” or the “all users” folder. In Windows 2000 the profiles are located in each person’s Documents and Settings, and similarly a shortcut needs to be created to the PLC Translator executable.

Some aspects of PLC Translator operation can be configured by registry settings but each has a default value and most should not be altered without Mattec factory involvement. Two possible exceptions are “Verbose” and “MiuCommPort”. Associated registry settings are in “HKEY\_LOCAL\_MACHINE –SOFTWARE–Mattec–PlcTranslator”. “Verbose” is normally 0 and setting it to 1 results in additional information display which could be helpful in troubleshooting. “MiuCommPort” identifies the serial port used by the translator to communicate with the MIU. It is normally 1 but can be changed if another port must be used. In order to change the registry setting “regedit” will be required and this should only be used by a competent service person.

### **Finish**

Once the Genesis OCX is installed, vcredist.exe is run and the control re-booted, and the PLC Translator installed with the proper shortcut, the installation may be finalized. Test the installation by starting the PLC Translator in verbose mode. The message “Genesis OCX Communication successful” and “Communications Port Open Successful” should occur. If these fail the PLC Translator will not work properly.

Once the installation is verified, log off the control and change the user name and password to

**(Note: If by mistake 2 copies of the PLC Translator are started, the second instance will fail! Make sure when the shortcut is configured that you only place it in the proper directory.)**

## **Configuration**

An “.ini” file defines the relationship between register numbers, as used by the Milacron 486, and variable names, as used by the Milacron Genesys Communication OCX. It is expected that the file installed with the software will provide all desired values in most cases. However, it is possible to add variables to the file if that should be necessary. Two sections apply to this product and the first few lines of each are reproduced below:

```
[GENESYS486 REGS]
1281=Dsp_LastCycleTime
1282=Dsp_InjectionFillTime
1283=Dsp_ExtruderRecoveryTime
.
.
.
[GENESYS486 TYPES]
Dsp_LastCycleTime=float
Dsp_InjectionFillTime=float
Dsp_ExtruderRecoveryTime=float
```

The file name is “matteplc.ini” and it is located in the directory where the translator was installed (typically C:\Program Files\Mattec\Plc Translator). Each line in the GENESYS REGS section equates a number to a variable name. **Names must be exactly as defined by the XTREEM NT control.** The numbers are somewhat arbitrary. The file provided by Mattec duplicates Milacron 486 register identifiers where possible. For example, 1281 is the Milacron 486 Cycle Time register. Register numbers may be in the range 1 through 9999 and must be in numeric sequence. The last entry must contain the name “END” as in:

```
1299=END
```

Although not a requirement, keeping register numbers and the end marker tightly grouped will expedite startup.

The GENESYS486 TYPES section indicates whether a particular variable is integer or floating point. Integer is assumed so only floating point variables need be included.

If this file is changed, a copy should be maintained so that changes can be restored in the event the PLC Translator is reinstalled or updated. Informing Mattec of field changes and additions could lead to those changes being incorporated in future versions of the file.

Additional configuration items are contained in the registry. Registry items should only be changed after consulting with Mattec personnel.

## Operation

Once installed, the PLC Translator should execute automatically and without intervention. Stopping it requires use of the Windows NT Task Manager. A button is provided that allows it to be restarted if necessary to pick up configuration changes. Various events are reported to the screen and a " Save" button is provided that places a copy of this log into a disk file.

## Setup

In the PLC Definition Screen in ProHelp Millennium, make sure that the Slave Address is set to " 0 " (zero). Parameter selection is done as described in the ProHelp PLC Operator's Manual, 710-0078.

## Wiring

Shown below is the wiring required for the Xtream NT interface to the Mattec MIU 6 DP. Refer to Mattec Hardware Installation Guide 710-0043 for more detailed information.

The hardware interface from Mattec MIU's is a standard RS 232 interface. Normally the Milacron 486 interface is RS 485, but since the XTREEM NT control uses a standard computer comm. port, and it is not intended to be a daisy chain, a standard RS 232 interface is wired as shown below.. For other MIU types, please refer to document 710 0043.



