

Application note

Installing the Mint ActiveX controls

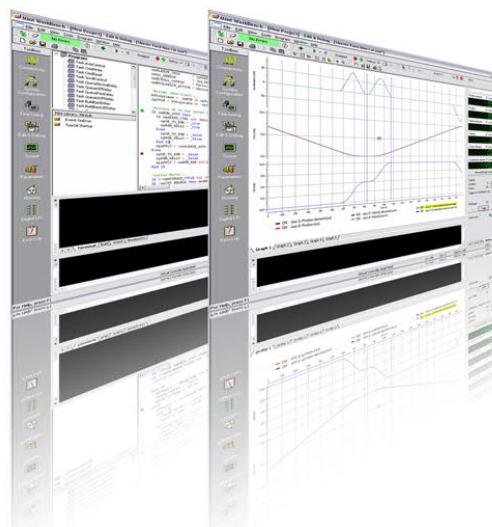
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Rev D (EN)

The Mint ActiveX controls provide a “Mint-like” interface to ABB drives and motion control products for host application developers. They are also a crucial component in the Mint WorkBench application.

Introduction

In order for the Mint ActiveX controls (and any host application that relies on them) to work correctly, they need to be installed and registered on the target PC. One way of achieving this is simply to install the Mint WorkBench software on that computer. The installer has an option for ‘Host Components only’ which installs all the required files for a host application to communicate with every product. However, it is recognised that this is not always possible or desirable, and so this application note details exactly what files need to be copied and how they should be registered.



Architecture

The components needed to develop a host PC application can be put into three groups.

Firstly, there is an “in-place ActiveX control”, `MintControls5xxx.ocx`. It is this component that provides the rich “Mint-like” interfaces that are used by the application developer in their host application.

Secondly, there is an “out-of-process COM server”, `MILServer5xx0.exe`. This component is used internally by the ActiveX control and concerns itself with low-level communications to the ABB drive and motion-control products (over mediums such as PCI, USB, Ethernet and RS232/422).

Lastly, there are a number of supporting files and DLLs that must be in place. These vary according to the ABB drives or motion control products being used in the application.

64bit Development

With Mint WorkBench 5850 and above, the ActiveX controls support 64bit host applications. These can run concurrently with 32bit host applications such as Mint WorkBench.

When using a development environment such as Visual Studio, where you require the controls to be available from the toolbox, then the 32bit ActiveX controls must be registered as well.

File Locations

To gather the files required, Mint WorkBench must be installed. Once installed the files can be found in the following folders:

64bit OS:

Location	Contains
C:\Program Files (x86)\ABB\Mint WorkBench\	MilServer5xxx.exe and VirtualController.dll MicroFlex and EuroFlex host component DLLs
C:\ProgramData\Mint WorkBench\	Mint compiler DLLs
C:\ProgramData\Mint WorkBench\Firmware\	ActiveX controls STB and PTXML files

32bit OS:

Location	Contains
C:\Program Files\ABB\Mint WorkBench\	MilServer5xxx.exe and VirtualController.dll MicroFlex and EuroFlex host component DLLs
C:\ProgramData\Mint WorkBench\	Mint compiler DLLs
C:\ProgramData\Mint WorkBench\Firmware\	ActiveX controls STB files

Required Files

ActiveX control

At least one version of the ActiveX controls must be registered in order to make use of the Mint API in a host application. The controls have the file extension .OCX. The OCX file can be placed in any location.

It must be registered to be used. This can be done programmatically, with an installation application, or manually using an elevated Command Prompt. Click Start, Run and enter "Cmd". Be sure to run the command prompt with Administrator privileges by right clicking and selecting "Run as Administrator". Navigate to the location of the Mint ActiveX Controls and enter:

```
regsvr32.exe MintControls5xxx.ocx          (where xxx is the required version of the ActiveX control, e.g. MintControls5852.ocx)
```

A confirmation message will be displayed if the registration succeeds.

The 64bit version of the ActiveX is called MintControls58xx_x64.ocx. This must also be registered if the application is 64bit. At the elevated command prompt, enter:

```
regsvr32.exe MintControls58xx_x64.ocx     (where xx is the required version of the ActiveX control, e.g. MintControls5852_x64.ocx)
```

A confirmation message will be displayed if the registration succeeds.

MilServer

The MilServer must be registered in order to communicate with any drives or motion controllers. There is one dependency; VirtualController.dll. The files can be placed in any location but must be together in the same folder.

It must be registered to be used. This can be done programmatically, with an installation application, or manually using an elevated Command Prompt. Click Start, Run and enter "Cmd". Be sure to run the command prompt with Administrator privileges by right clicking and selecting "Run as Administrator". Navigate to the location of the MilServer and enter:

```
MILServer5xxx.exe /regserver              (where xxx is the required version of the MilServer, e.g. MILServer5850.exe)
```

Note: there is no confirmation that this has succeeded.

Optional Files

WBAdmin

WBAdmin is required if the APIs `DoInstallMintSystemFile()` or `DoDownloadMintSystemFile()` will be used. The file, `WBAdmin.exe`, can be in any location. Using the elevated command prompt, enter:

```
WBAdmin.exe /regserver
```

Note: there is no confirmation that this has succeeded.

Mint Compilers

If your host application uses the Mint Command Prompt interface for command-line access to a controller, or if you use the `DoCompileMintProgram()` or `DoCompileMintProgramOffline()` APIs, then a Mint compiler must be registered. Mint compilers have a Target Format number that must match that used by the drive or motion controller firmware.

MintCompiler10	Compiling programs for Series II drives and very old NextMove firmware
MintCompiler13	Compiling programs for older NextMove firmware
MintCompiler14	Compiling programs for latest firmware on drives and NextMove

The files can be in any location. Using the elevated command prompt, enter:

```
regsvr32.exe MintCompilerxx.dll (where xx is the required version of the Compiler, e.g. MintCompiler14.dll)
```

A confirmation message will be displayed if the registration succeeds.

Symbol table files (.STB) are also required for offline compilation. These must be located in the folder `C:\ProgramData\Mint WorkBench\Firmware\`. The symbol table file must match the firmware on the drive or motion controller. For online compilation, the STB file will be automatically uploaded if needed.

If compilation is required in a 64bit host application, then the 64bit version of the compiler must also be registered. The file is `MintCompiler14_x64.dll`. The file can be in any location. Using the elevated command prompt, enter:

```
regsvr32.exe MintCompiler14_x64.dll
```

A confirmation message will be displayed if the registration succeeds.

Analog MicroFlex and EuroFlex DLLs

If the host application needs to communicate with analog MicroFlex (FMH) or EuroFlex (EFL) drives, then a host component DLL must also be registered. The file is named `MicroFlex Build 5xxx.dll` or `EuroFlex Build 5xxx.dll` where 5xxx must match the version of firmware on the drive.

The files can be in any location. Using the elevated command prompt, enter:

```
regsvr32.exe MicroFlex Build 5xxx.dll (where xxx is the required version of firmware, e.g. MicroFlex Build 5366.dll)
```

A confirmation message will be displayed if the registration succeeds.

Other Dependencies

The Microsoft Visual C++ runtime is required. The version required depends on the version of the components being used.

Version	Runtime Version
5812 and later	12.0 (download)
5810	11.0 (download 32bit OS) (download 64bit OS)
57xx and older	6.0 (download)

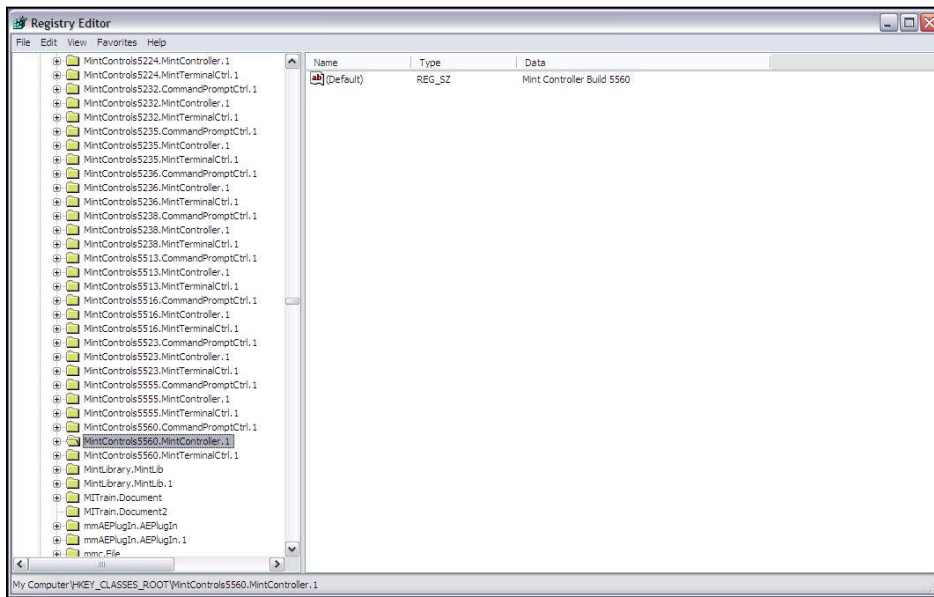
Checking the registration

On completion of the above installation process, the registry of the target PC can be checked to make sure that the process has been carried out successfully. Use is made of the Windows Registry Editor to perform this check. Please note that it is NOT recommended that you edit any data found in the system registry as this could seriously harm the operation of the PC in question.

To run the Registry Editor, select the "Run" command from the Start menu and type in "Regedit". This will launch a Windows Explorer type window and tree view. Installation of the Mint ActiveX controls will have created the following registry keys:

```
HKEY_CLASSES_ROOT\MintControls5xxx.MintController.1
HKEY_CLASSES_ROOT\MILServer5xxx.MintServer.1
```

Where, in both cases the "xxx" is the version of each file that was installed, see below for an example showing the ActiveX registry key:



Device drivers

In order to communicate with ABB drives or motion-controllers connected to the target PC via USB or PCI then the relevant device driver must also be installed. The device drivers can be found on the support site [here](#).

Contact us

For more information please contact your local ABB representative or one of the following:

- new.abb.com/motion
- new.abb.com/drives
- new.abb.com/drivespartners
- new.abb.com/PLC

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