

Upgrade Autoflow to Windows 10

Steps to upgrading an Autoflow to Windows 10, replacing both the front end and back end PCs

 Difficulty **Hard**

 Duration **1 day(s)**

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For Historical reference, these are the pre-2024 notes:

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Introduction

Update 2024 - Upgrades now consist of a new Windows 11 PC with VM for the front end and a C6017 PC for the back end.

Upgrading an Autoflow to Windows 10 involves upgrading two PCS

1. The Beckhoff control PC - replaced with a C0001225-KIT
2. The Camera PC - replaced with a C0000422-KIT with a VM setup. this now becomes the front end PC

For Historical reference, these are the pre-2024 notes:

Upgrading an Autoflow to Windows 10 on site involves upgrading two PCS

1. *The Beckhoff control PC*
2. *The Camera PC*

The Beckhoff PC is not upgradable so needs to be completely replaced. We use the miniature Beckhoff C6017 for this

It is not cost effective to upgrade and old camera PC, so a new one is supplied

Notes

- *The Beckhoff PC is now powerful enough to run the front end and back end.*
- *The camera PC is there to replace the camera PC on site and contains the storage for the machine cameras*
- *Because the Beckhoff PC has limited hard drive space, the DDRIVE will be on the cameraPC*

Step 1 - Set up the 6015 PC

- Ensure regional settings correct - correct date format
- Rename the Ethernet Adaptors to Ethernet and EtherCAT
- Ensure the TwinCAT Protocol is installed on the EtherCAT adaptor
- Teamviewer setup
- Administrator password set to "Stuga001"
- Add Stuga desktop image
- Latest winMulti in c:\multi

Step 2 - Set Up VM PC ready for project

Follow standard Setup procedure to step 5 to ensure sourcetree installed with latest tc3Multi software pulled to machine

Step 3 - Set up Front End PC

Step 4 - Convert the TC2 project from old machine

Follow this procedure to convert the project

Map the Saw On, Conveyor and extractor as outputs rather than invertergofwd links (outputs 97 and 98)

[ASK GG if not clear on this - it is confusing]

Ensure the PLC projects are in the correct ports

851- tc3multi

852 - PLC_Reset

Step 5 - Install the new PCs on site

- Ensure the 6015 PC has been earthed adequately

Step 6 - Set up the IP addresses

Map the network drives

Map customer network connections

Step 7 - Test all IO

This is important to ensure there have been no mistakes in the remapping

Step 8 - Test axis directions

Step 9 - Test axis Datuming

Step 10 - Check Spindles and alarms

Check inverter is wired so that OK=high on X90

Check alarms trigger on low signal on inverter ok

Check 50Hz and 300Hz spindles function correctly from SpindleIO screen

 ...A lot of the older machines were released with inverter OK active low, and the alarms file set up to "bodge" around this. The "correct" way should be active high which means it is also fail safe. Take this opportunity to ensure the machine is correct

Step 11 - Important parameters

Ensure:

autoQueue=1

sawSYType=1

allWasteAtStart=1

throwaway=230

throwawayChunkSize=120

throwawayMaxChunk=100

throwawayMinChunk=100

throwawayEjectAtStart=1

storeOffcuts=0

Step 12 - Check cut speeds

The software highlighted a bug in the calculation for the saw cutting speed which has now been corrected. Saw cut speeds should be checked if they are not default.

 ...The old software calculated the percentage based on the cut height, not the speed! It was not noticed because the cut height would be around 70-150mm (70-150%) so would not look excessively fast or slow
