JANUARY 2019

ABB Drives – Software Tool

Drive Manager tool for ABB or Siemens engineering environnent

Drive Manager Tool for ABB drives

Agenda

Drive Manager Tool – Short introduction

- Used with Siemens S7 PLCs
- Used with ABB AC500 PLCs

Drive Manager Tool

- Parametrization & Monitoring
- New features in version V1.2.0
- Documentation & Installation package

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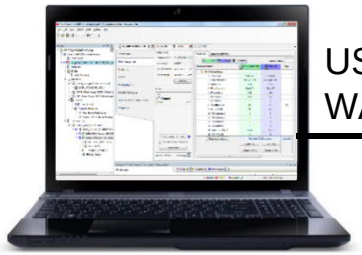
Drive Manager Tool

Short introduction

Drive Manager Software Tool

Available for ABB and Siemens PLCs

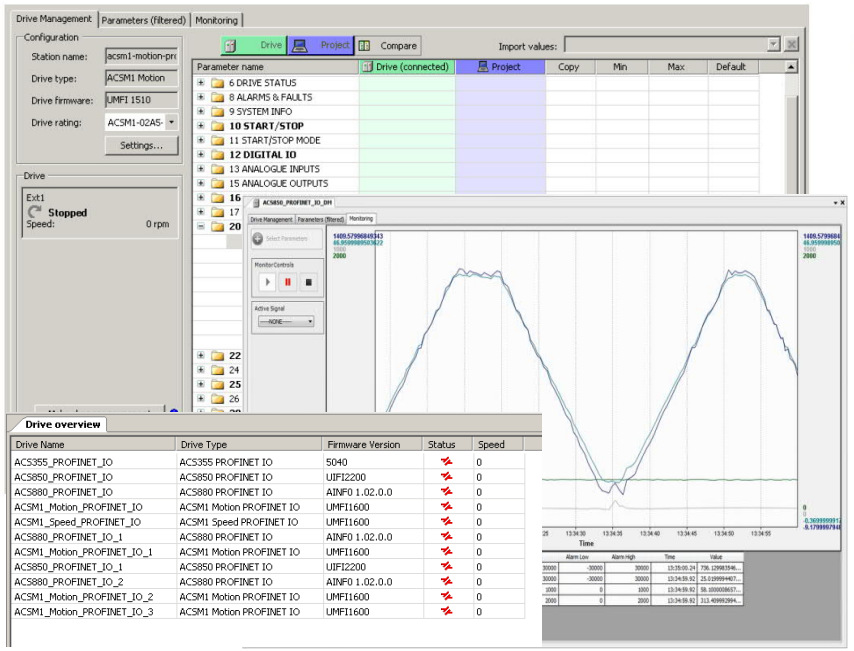


USB, Serial, LAN,
WAN, 2G/3G/4G

PROFIBUS • PROFINET

ACQ810 PROFINET IO
ACS355 PROFINET IO
ACS380 PROFINET IO
ACS480 PROFINET IO
ACS530 PROFINET IO
ACS560 PROFINET IO
ACS580 PROFINET IO
ACS850 PROFINET IO
ACS880 PROFINET IO
ACS880-M04 PROFINET IO
ACSM1 Motion PROFINET IO
ACSM1 Speed PROFINET IO
DCS880 PROFINET IO

ACS380 ACS480 ACS580 ACS880 DCS880



- Single access point for all Drives and PLC in network via PROFIBUS DP or PROFINET IO protocols
- Engineering online and offline modes
- Downloading Drive configuration, monitoring of Drive values, Backup of the whole project in one project archive

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Drive Manager for SIMATIC device tool

Remote connection using third part device

Remote connection using third part device (i.e. Ewon, or Tosibox device)

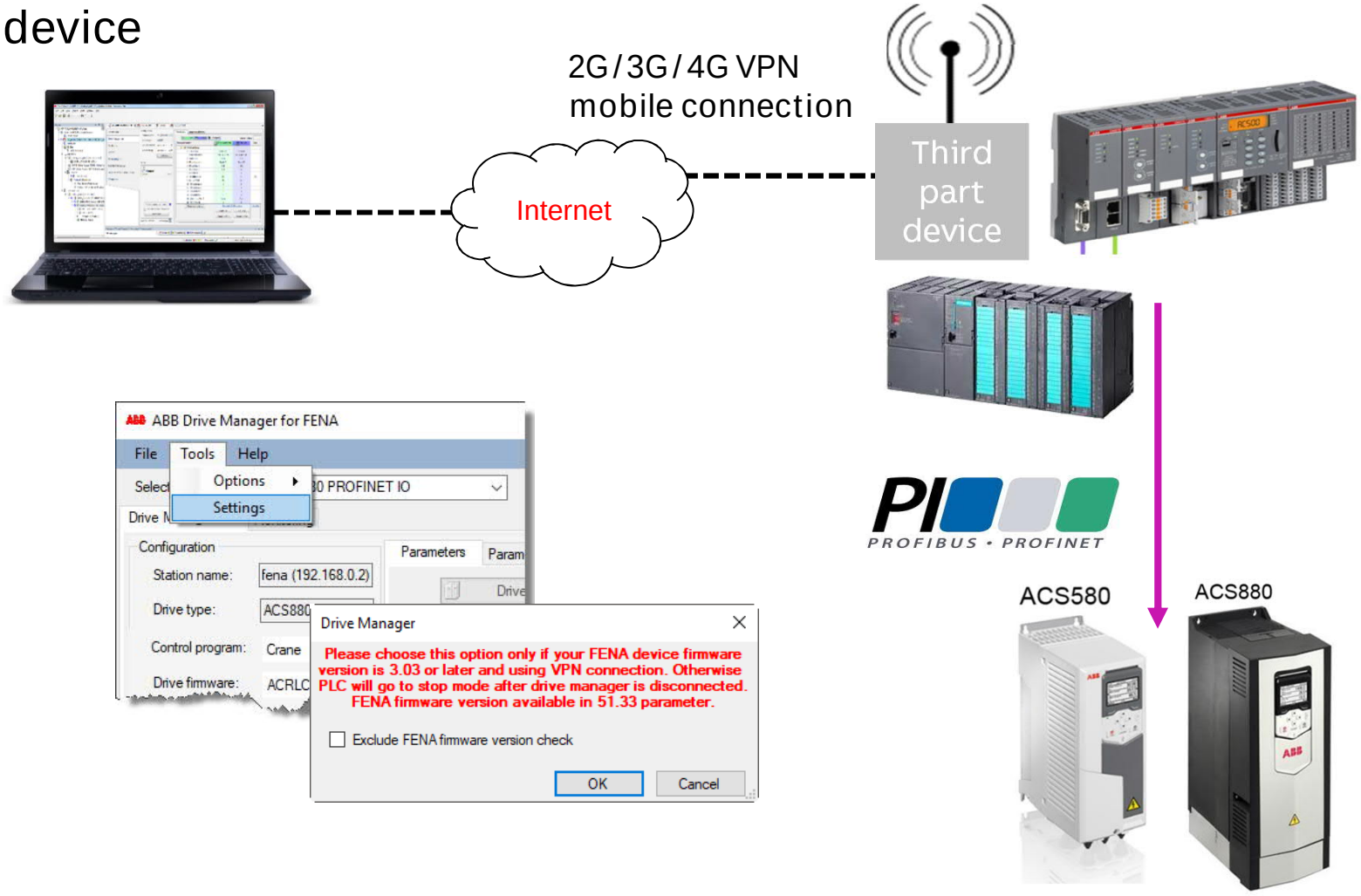
- Remote connection to all PLCs services
  - Programming, Diagnosis, FTP, Webserver…
- Remote connection to drives
  - Commissioning, monitoring, fault tracing

With Siemens PLC in PROFINET

- Drive Manager uses a UDP messages and it opens 2 connections to/from FENA module
- Need to ensure that remote connection or VPN tunnel allows UDP messages (de-activate RPC filtering or like) and that new connections are allowed from FENA

Excluding FENA firmware version check

- When using FENA In VPN connection



Drive Manager Software Tool

Available for ABB and Siemens PLCs

		Siemens	ABB
	System requirements	Windows 7 (32 + 64 bit) - Windows XP - STEP 7 Basic V5.4 or later - TIA Portal Professional V11 up to V14	Windows 7, 8 and 10 (32 + 64 bit) - Automation Builder 1.1.0 or later
	Software package	DM4S-01 is a plug-in device tool (need to be installed into the STEP 7 and TIA Portal) License key 3AXD50000012272	Included in Automation Builder “standard” license, free option, no installation
	CPUs	CPU 300 and 400 series with DPV1, 1200 and 1500 series	AC500 V2 CPUs (Not for AC500-eCo)
	Protocols	PROFIBUS DP, PROFINET IO	PROFIBUS DP, PROFINET IO
	Drives	ACS355, ACS380, ACS480, ACSM1, ACS550*, ACS580, ACQ310, ACS850, ACS880 and DCS880	ACS355, ACS380, ACS480, ACSM1, ACS550, ACS580, ACQ310, ACS850, ACS880 and DCS880
		*only with PROFIBUS	

Drive Manager Software Tool

Efficient Drive engineering (1)

Engineering Drives and PLCs in one environment

- Inside Automation Builder (ABB), or with TCI common tools calling interface (Siemens)
- Same tool and interface for different ABB drives

Simplifies work

- No changes needed to the PLC program and can be used independently

Improves project engineering quality

- Saving drive parameter settings within the PLC project
- Add also the specific application parameters (SPC/Codesys) to standard parameters list

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Drive Manager Software Tool

Efficient Drive engineering (2)

Saves commissioning time cost

- Online and offline configuration of Drives
- Monitoring of Drive actual values
- Graphical monitoring of Drive signals
- Parameter export to/import from the Drive

Less communication cabling

- Parallel communication with PLC master
- One connection point for all Drives in network - Supervisor (PROFINET)
- Class 2 master (PROFIBUS) connections

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Drive Manager Software Tool

Comparisons (1)

1. Drive composer entry
2. Drive composer pro
3. Automation Builder
4. DM4S-01 (Siemens)

	Features	1. DCE	2. DCP	3. AB	4. DM4S
	USB connection to a single drive	Yes	Yes	No	No
	USB + panel bus connection to multiple drives	No	Yes	No	No
	Ethernet Tool Network connection to multiple drives (dedicated network i.e. “two-wire” or shared with Ethernet-based fieldbus i.e. “one-wire”, local connection only	No	Yes	No	No
	Connection over PROFIBUS / PROFINET through PLC to multiple drives (including remote connection)	No	No	Yes	Yes
	Drive identification available in system level context	No	No	Yes	Yes
	Parameter value integration to an engineering project	No	No	Yes	Yes
	Local control of drive	Yes	Yes	No	No
	Parameter view and edit online	Yes	Yes	Yes *	Yes *
	Parameter values save to file	Yes	Yes	Yes	Yes
	Offline parameter file viewing	Yes	Yes	Yes	Yes
	Offline parameter file editing	No	Yes *	Yes *	Yes *
	Download offline parameter values from file to drive	No	Yes	Yes	Yes
	Parameter value printing	Yes	Yes	No	No
	Parameter value comparison between drives or offline files	No	Yes	Yes	Yes

* Excluding some dynamic parameters (e.g. I/O extensions and encoder settings)

** Available through parameters

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Drive Manager Software Tool

Comparisons (2)

1. Drive composer entry
2. Drive composer pro
3. Automation Builder
4. DM4S-01 (Siemens)

	Features	1. DCE	2. DCP	3. AB	4. DM4S
	Event logger view (faults, warnings)	Yes	Yes	No **	No **
	System info view (FW version, modules, application)	Yes	Yes	No **	No **
	Simple monitoring via parameter interface	No	No	Yes	Yes
	Basic monitoring up to 8 synchronized signals and 100ms sample rate	Yes	Yes	No	No
	Advanced monitoring up to 26 synchronized signals and 1ms sample rate	No	Yes	No	No
	Drive backup / restore	Yes	Yes	No	No
	Multiple drive backup over network	No	Yes	No	No
	Support package creation	Yes	Yes	No	No
	Manage data logger (configure, view)	No	Yes	No	No
	Configuration of FSO modules	No	Yes	No	No
	Control diagrams	No	Yes	No	No
	Adaptive programming	Yes	Yes	No	No
	Combined PLC / Drive process data management	No	No	Yes	No
	User interface in multiple languages	Yes	Yes	Yes	Yes

* Excluding some dynamic parameters (e.g. I/O extensions and encoder settings)

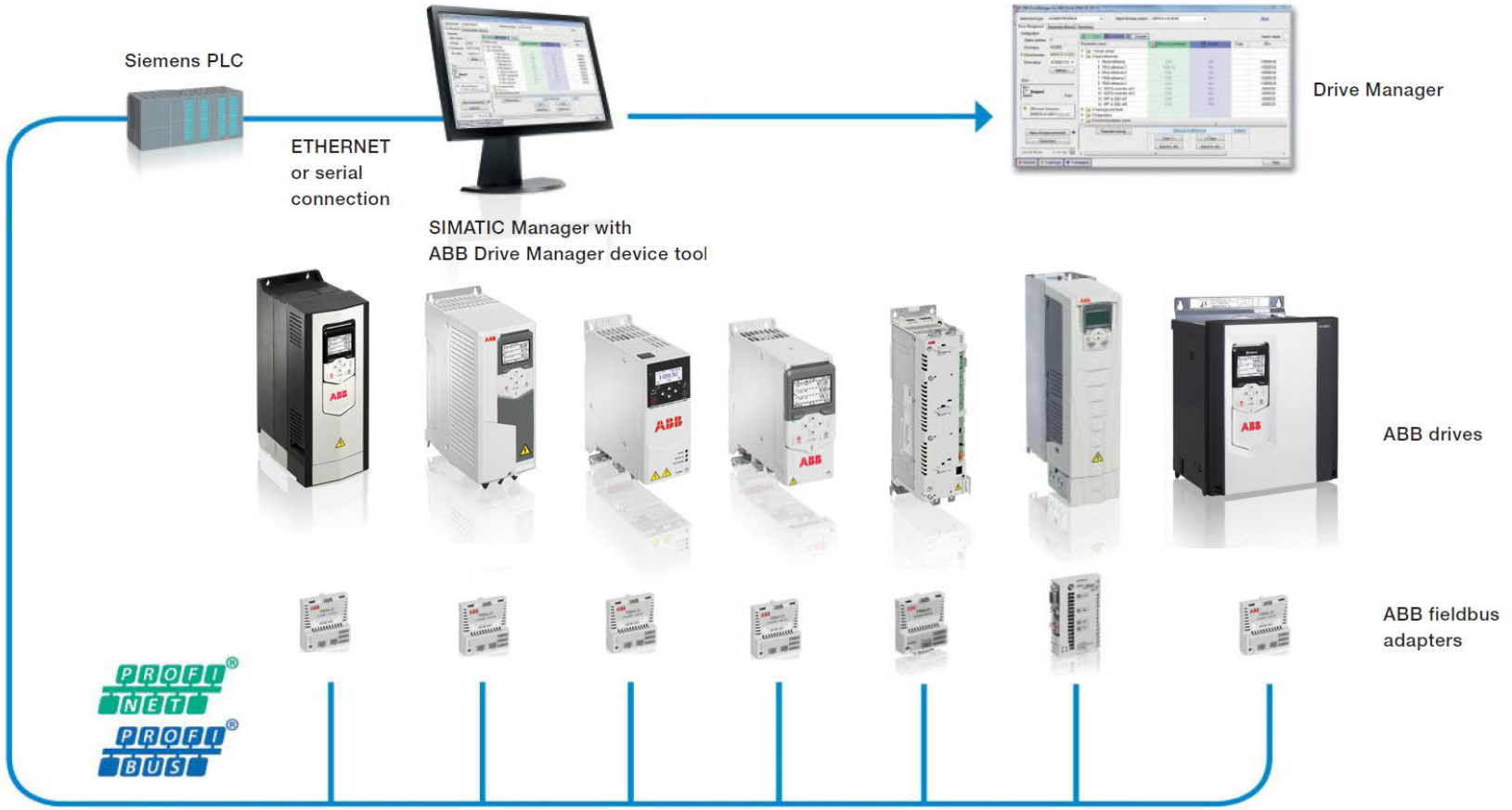
** Available through parameters

ABB Drive Manager Tool

Used with Siemens PLCs

ABB Drive Manager Tool

Used with Siemens PLCs



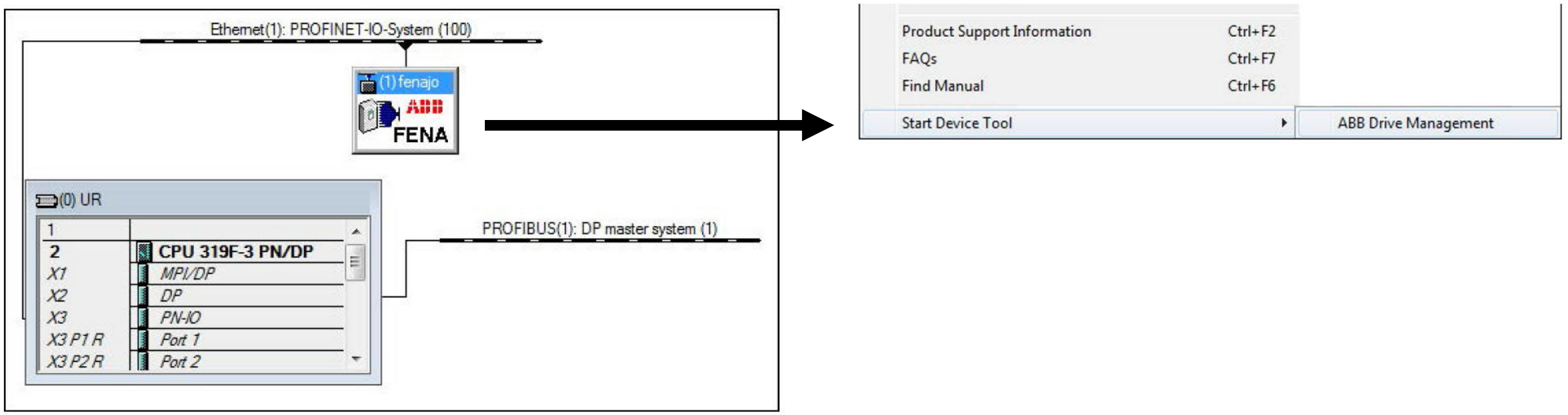
Drive Manager for SIMATIC device Tool

Integrated to engineering tool (1) – SIMATIC Manager

Add on tool easily previously installed into the Siemens Engineering tools

It will be started from the network (HW diagram) and Start device tool menu.

It can save the Drive parameter settings within the Step 7 project.



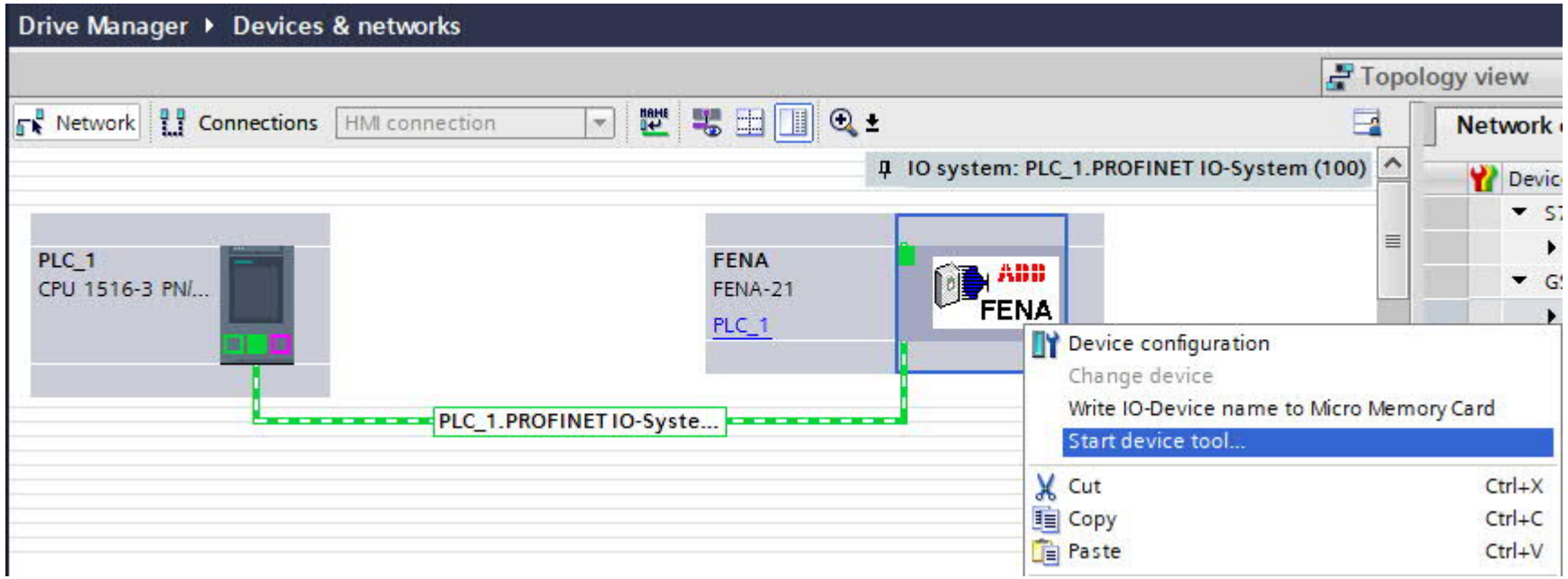
Drive Manager for SIMATIC device Tool

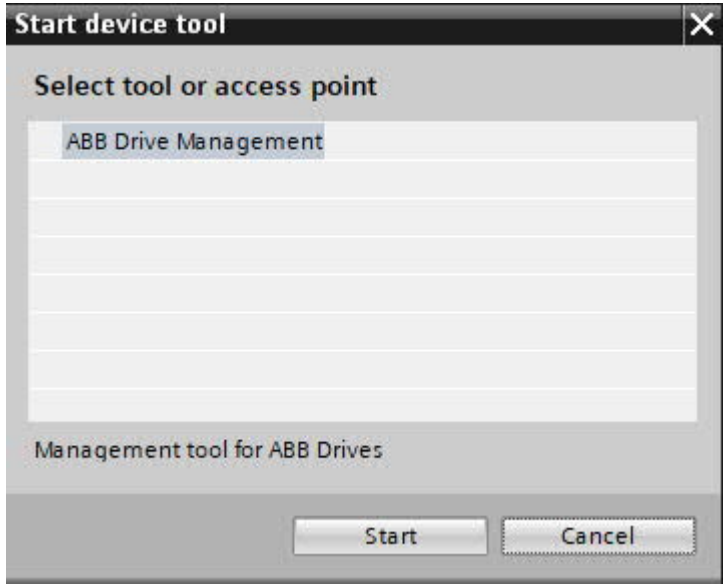
Integrated to engineering tool (2) – TIA Portal

Add on tool easily previously installed into the Siemens Engineering tools

It will be started from the Network view tab and Start device tool menu

It can save the Drive parameter settings within the Step 7 project





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Drive Manager for SIMATIC device Tool

ABB Drive Manager window displays

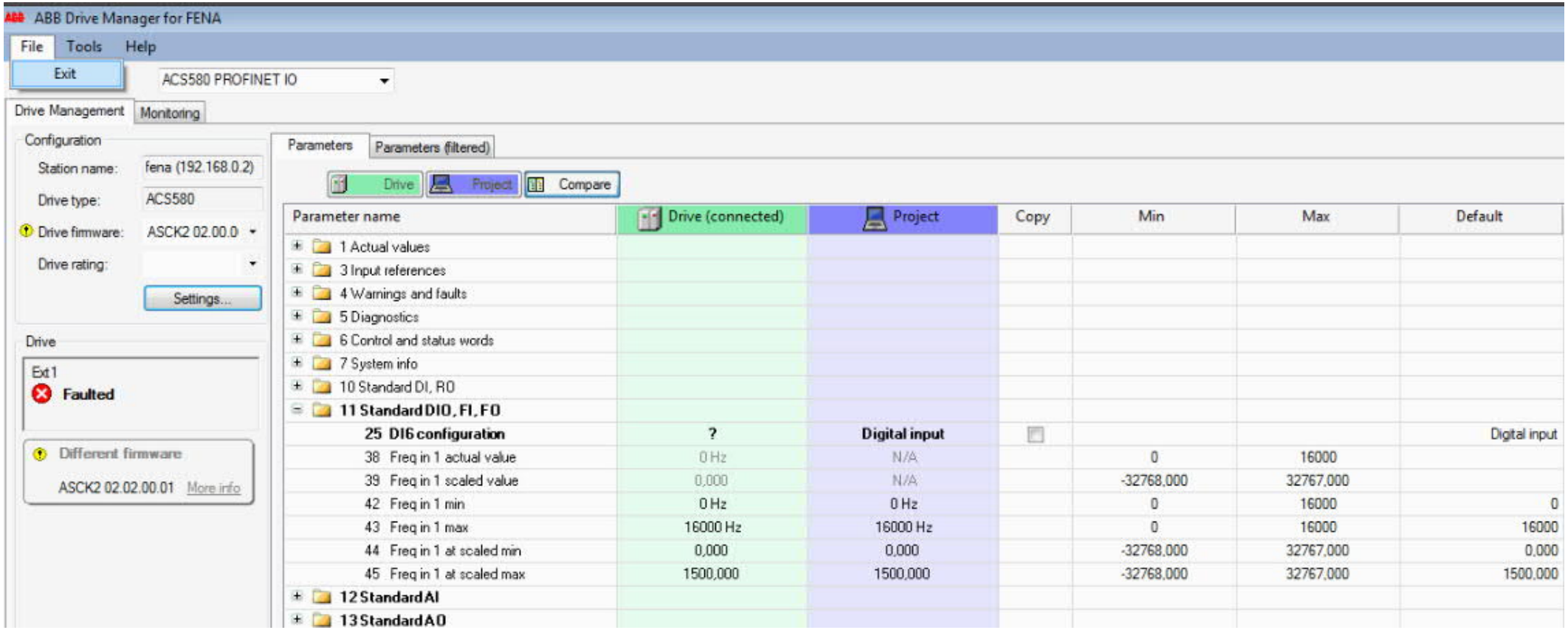
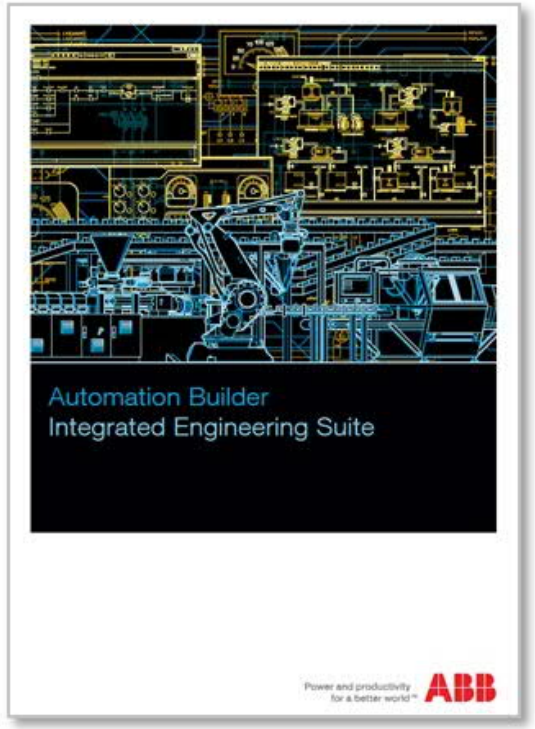


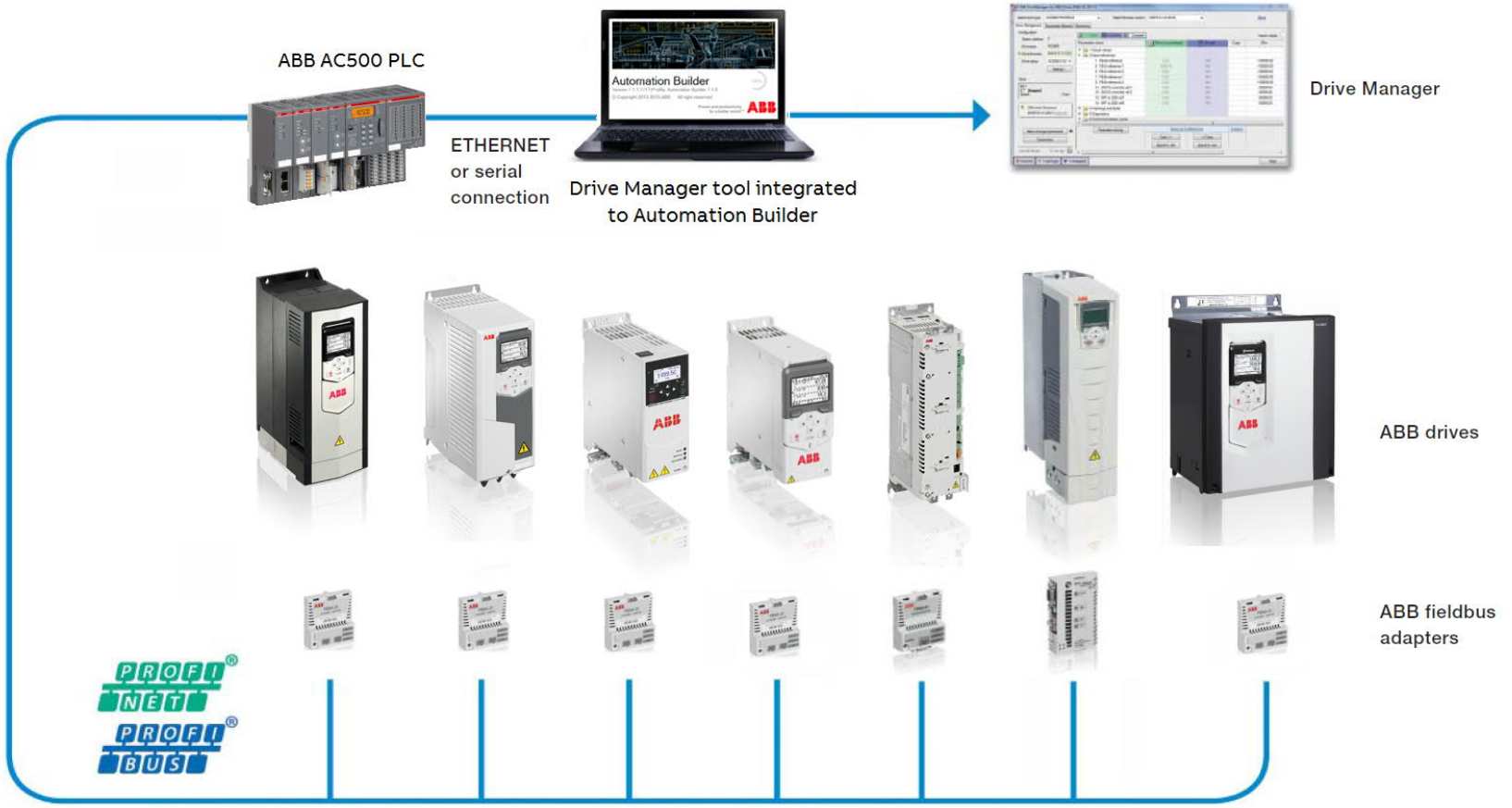
ABB Drive Manager Tool

Used with ABB AC500 PLCs

ABB Drive Manager Tool

Used with ABB AC500 PLCs





http://new.abb.com/plc/automationbuilder

Automation Builder

Complete Automation Solution from ABB

Automation Builder

Complete Automation Solution from ABB

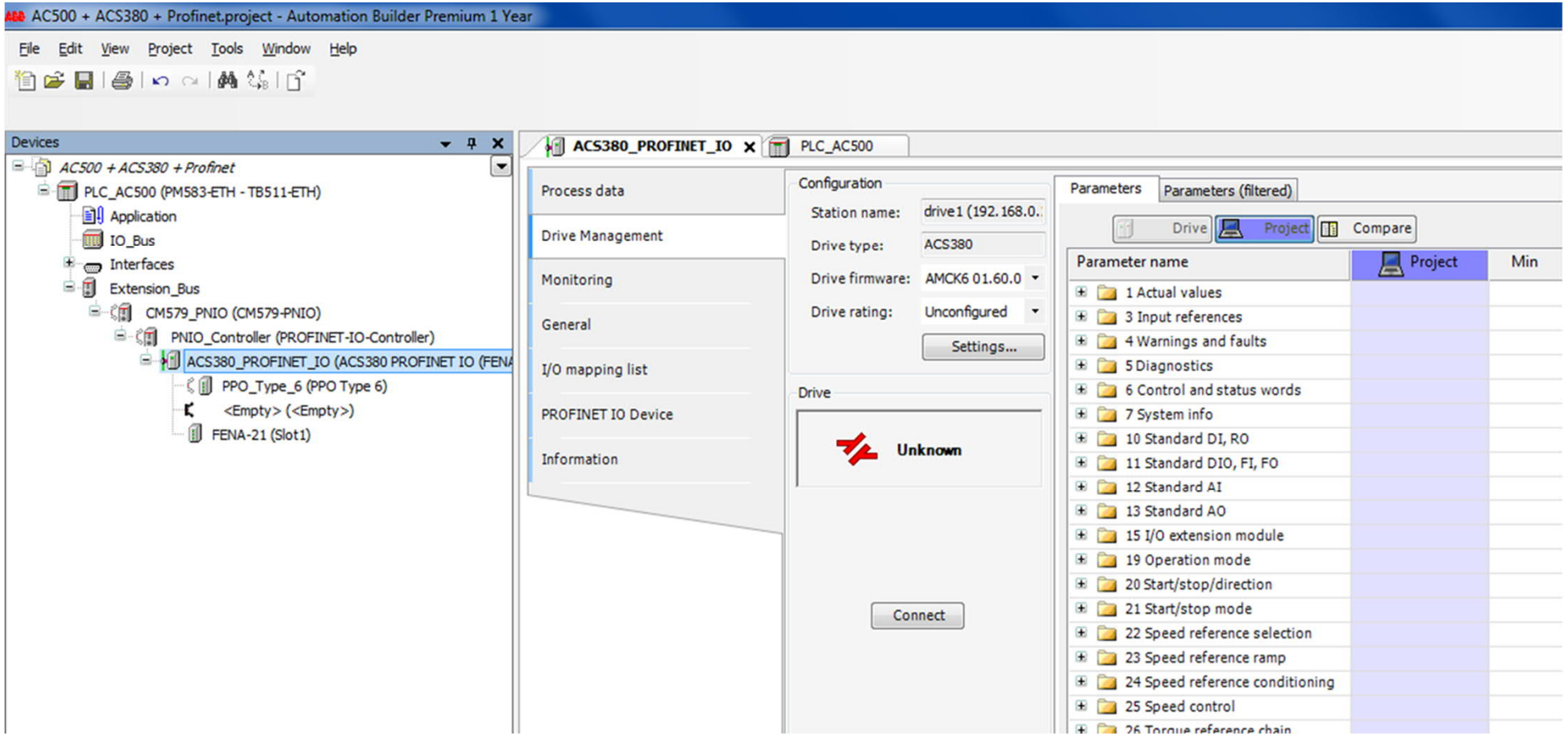


ABB Drive Manager Tool

Overview – Parametrization & Monitoring

ABB Drive Manager Tool

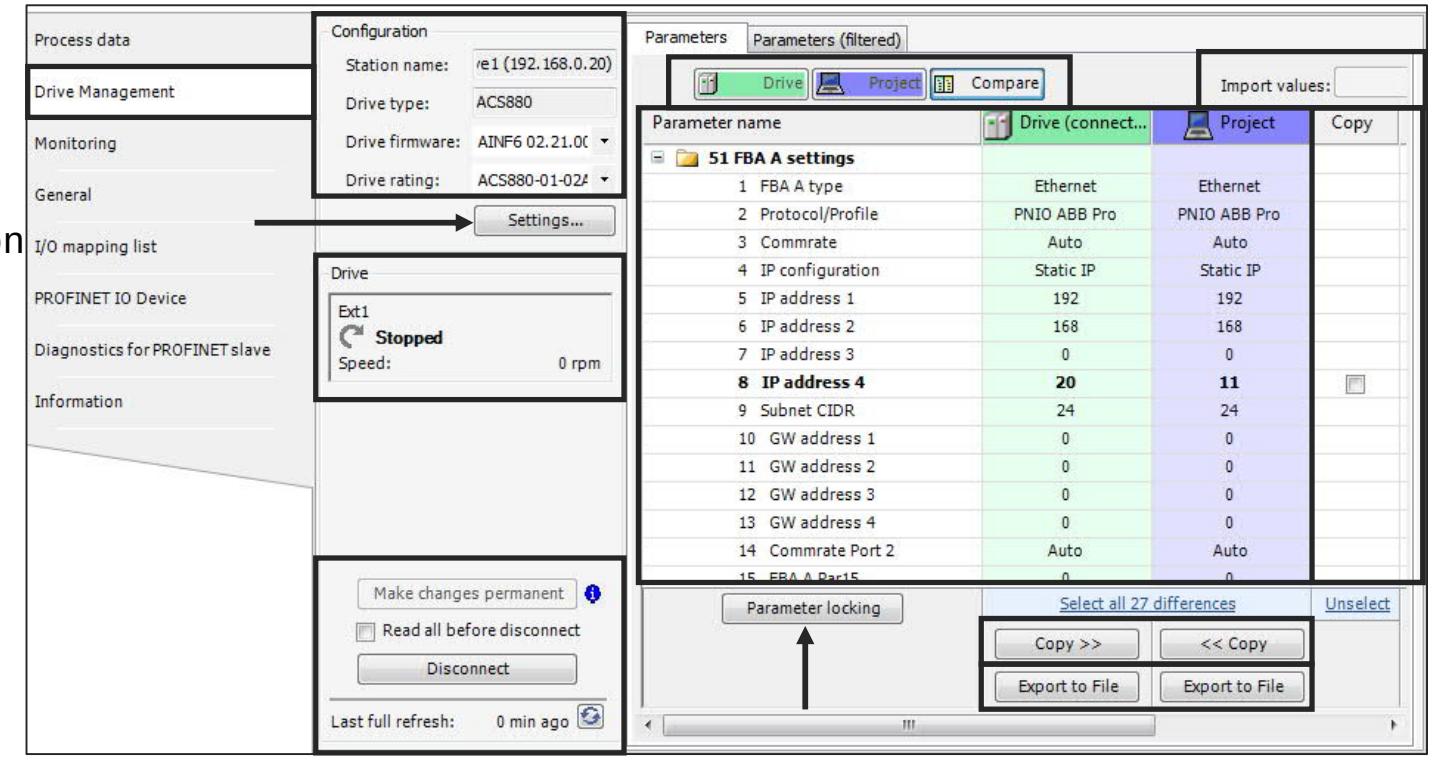
Drive Parametrization

Monitor Drive firmware
version, rating, properties

Drive analog input settings
for current/voltage configuration

Monitor Drive status
Running, stopped, direction, speed value…

Save parameters
Changes are not persistent, need manual action



Drives parameters locking
Select option for motor or/and fieldbus

Copy parameter(s)
Allow to write from drive to project or project to drive

Import values
Write from computer to project (file format .dsp, .dwp…)

Parameters view
3 option views:

- From drive connected
- Save in project
- Compare between drive & project

Export to file
Store drive or project parameters in file (format .dsp, .dwp…)

ABB Drive Manager Tool

Drives Monitoring

Graphical monitoring of the drives parameters

- Select maximum 12 signals
- Configure properties of signals:
  - Color, visible, auto scale, min, max,
  - Low, High limits
- Start and control monitoring
  - Scan time 250ms
- Save data in CSV format to file

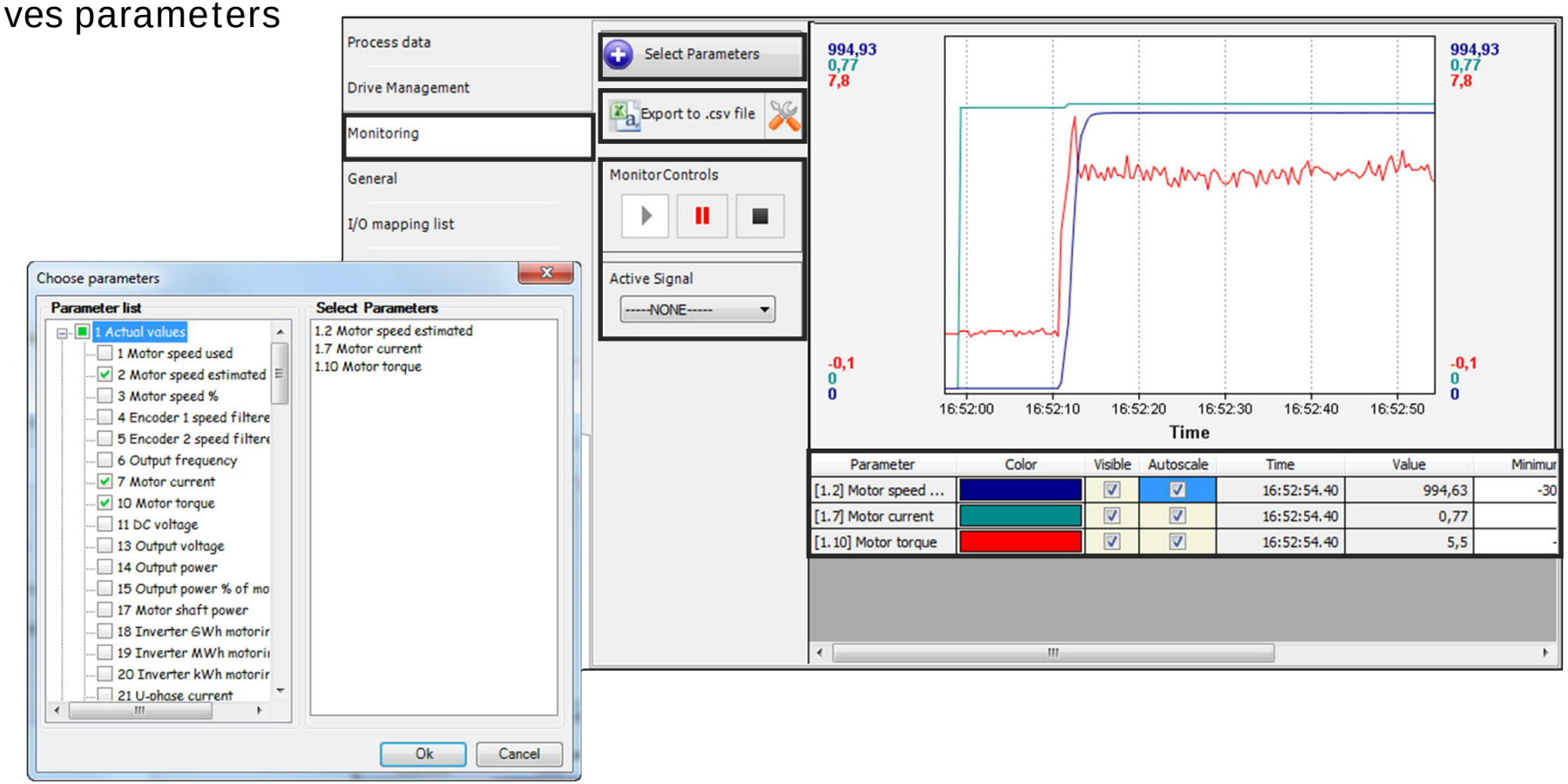


ABB Drive Manager Tool

New Features in version V1.2.0

Drive Manager for SIMATIC device tool

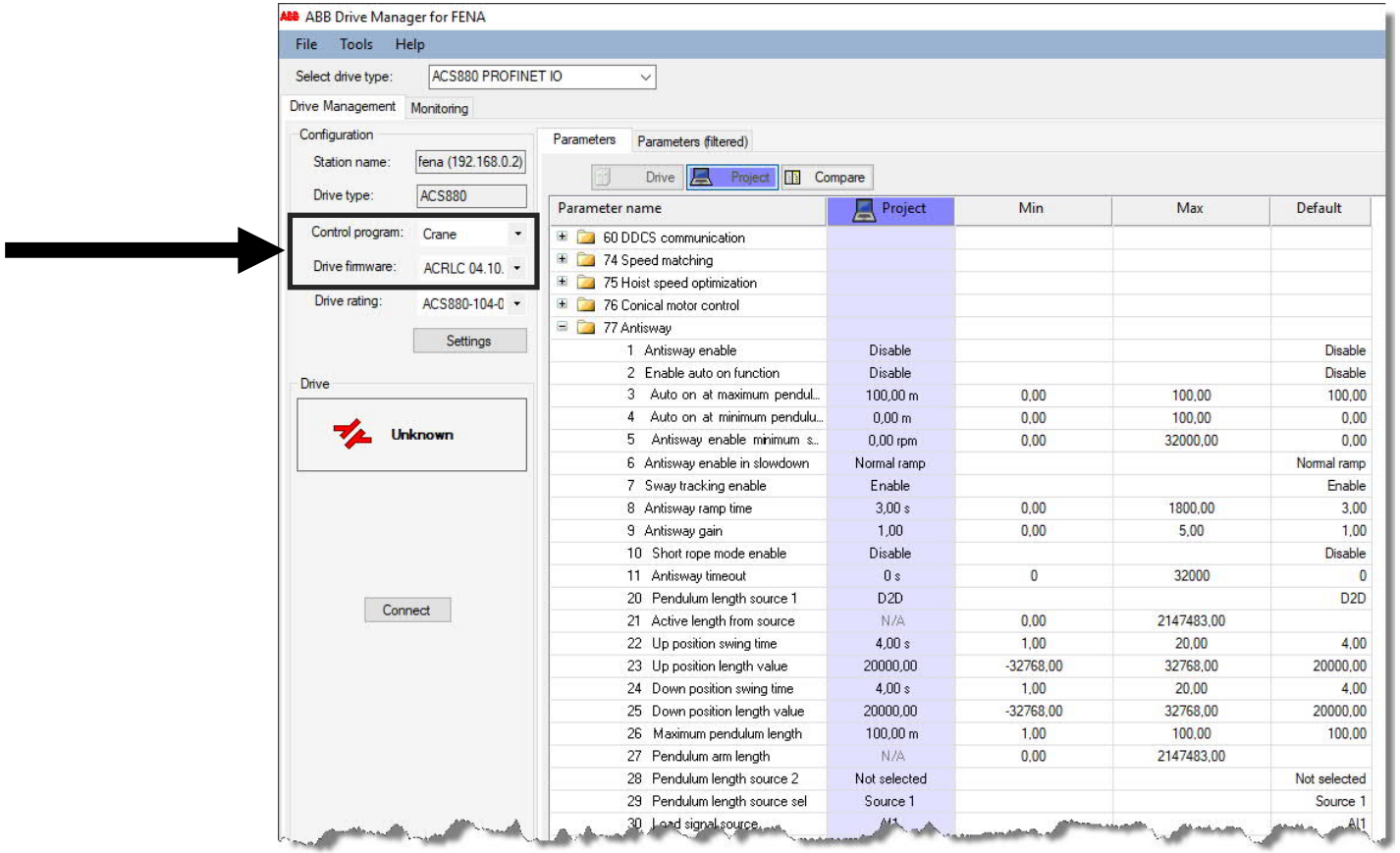
ACS880 crane firmware's are supported

Selection of control program for ACS880 drives

- ACS880 Firmware grouping based on application type
  - Primary Control
  - Crane Control

According to selection of Control Program

- The drive firmware list is updated automatically in the Drive firmware selection
- And the specific parameters groups associated are available for handling



Drive Manager for SIMATIC device tool

Auto update selected firmware in Drive Manager while connecting to drive device

Automatic detection of firmware version

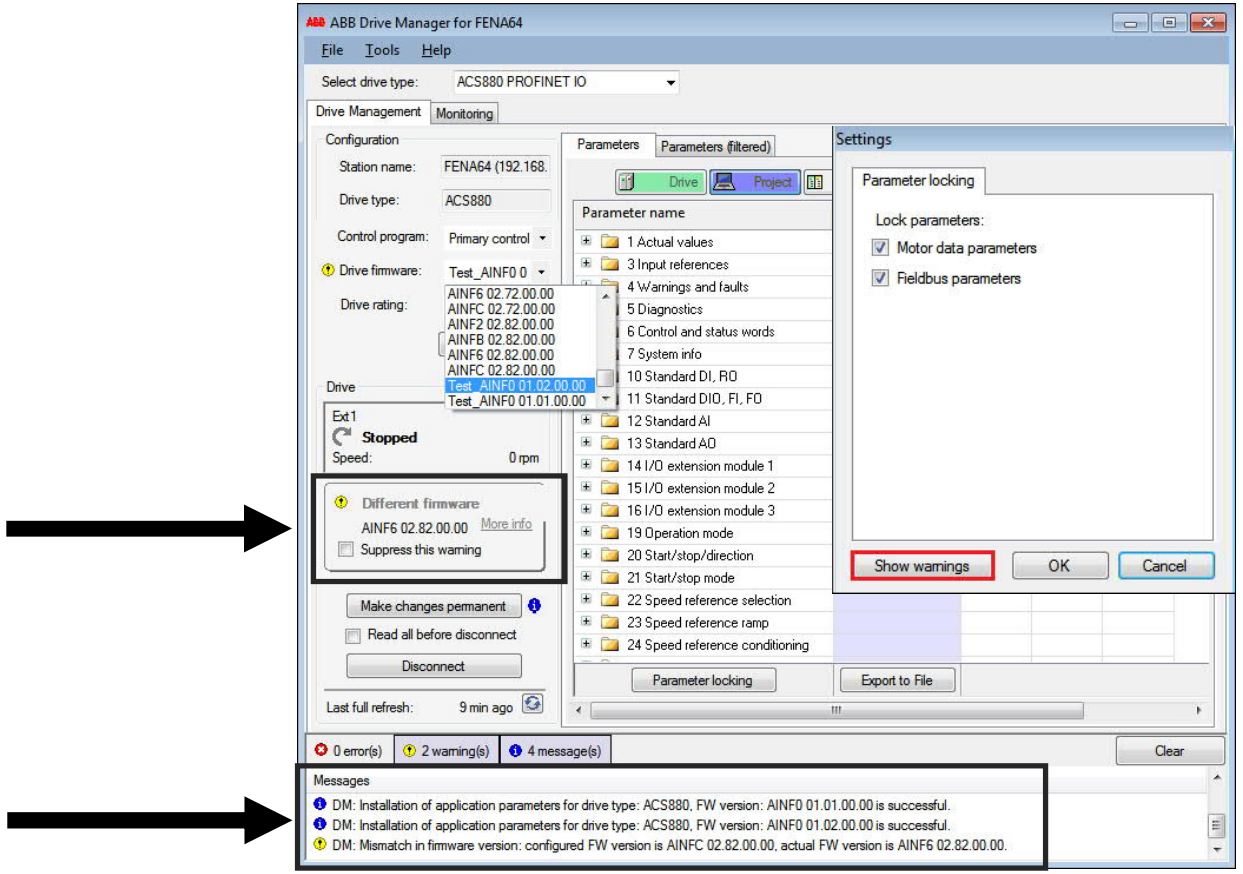
- If the selected drive firmware version is different from the actual drive firmware
  - The connection will be established…
  - and warning message will indicate the difference and the actual drive firmware version

Auto update selected firmware

- While connecting to drive device, Drive Manager is updated with the actual firmware version, if the configured firmware version is different

Suppress warning message option

- Firmware mismatch warnings
- Enable again messages by using settings menu



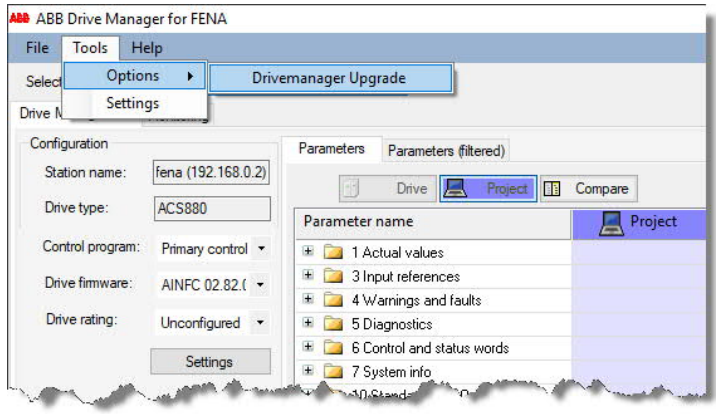
Drive Manager for SIMATIC device tool

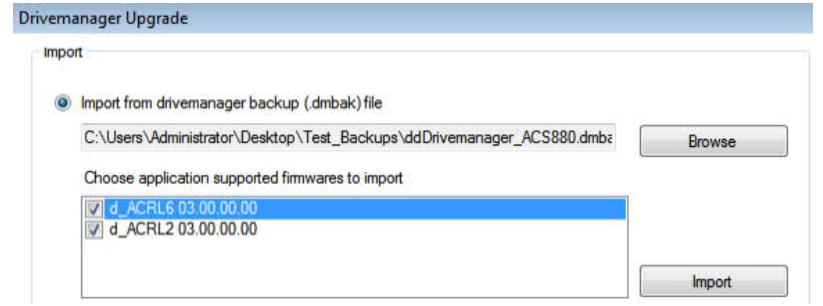
Import/Export of firmware's to / from Drive Manager tool

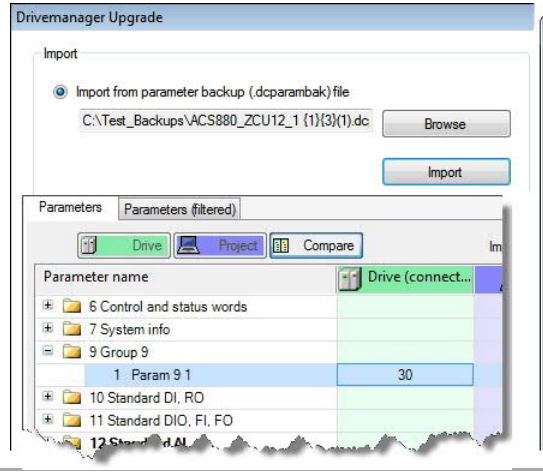
Drive Manager Upgrade functionality

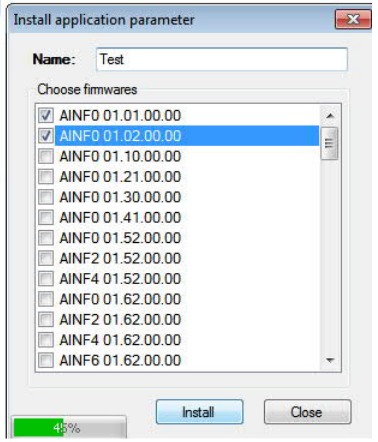
Only supported by ACS880, ACS850, ACSM1

- Import from Drive Manager backup
  - Backup file .dmbak
  - Selection of firmware's supported
- Import from parameter backup
  - Backup file .dcparambak or .dsp
  - Selection of firmware's supported
- Export custom Drive Manager backup
  - Selection of firmware's supported
  - Save in backup file .dmbak









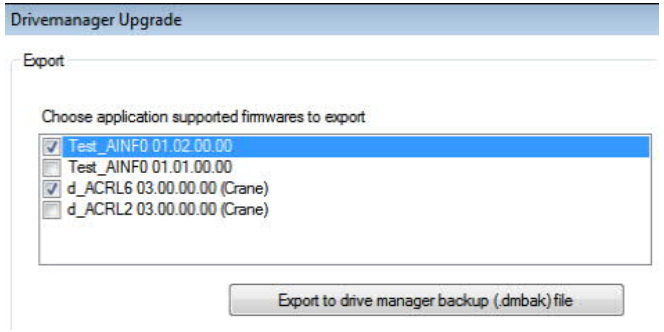


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ABB Drive Manager Tool

Documentation & Installation package

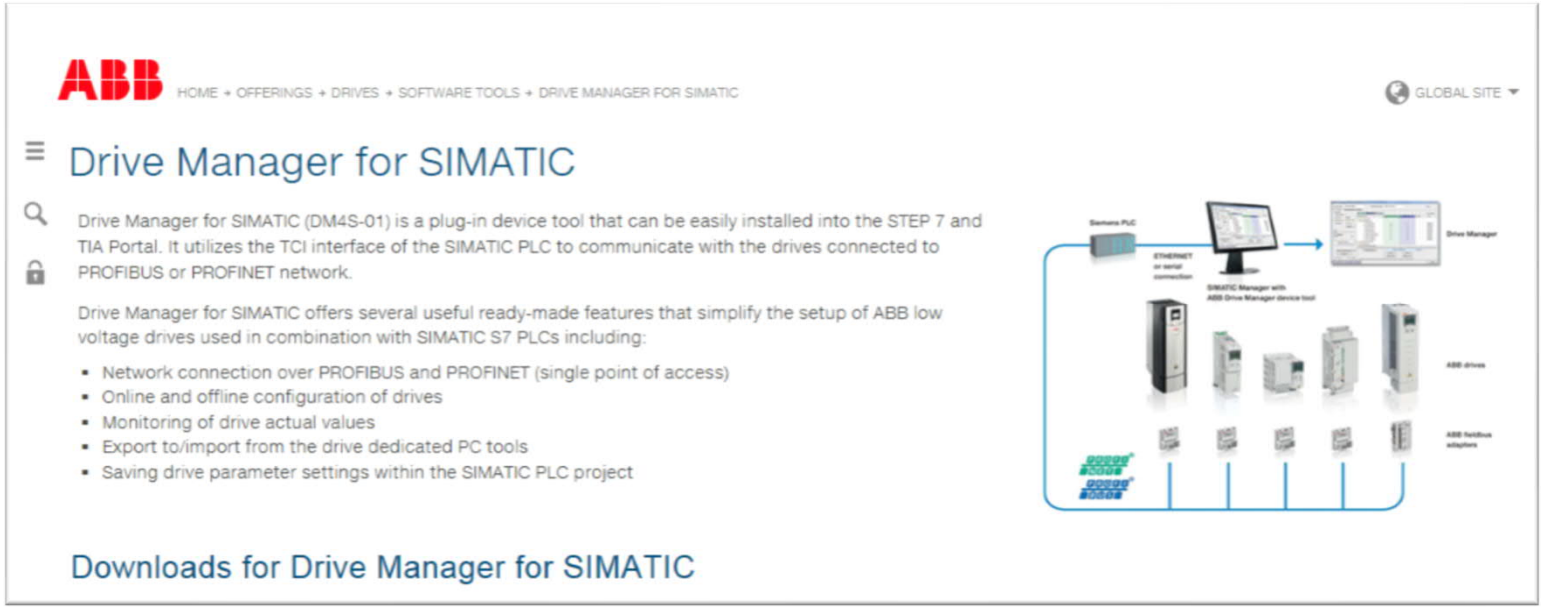
Drive Manager for SIMATIC device tool

Documentation & Installation package & Ordering reference

Documentation in ABB Library
- Quick start-up guide
- Product flyer
- Software updates

Plastic box containing
- USB stick
- Quick installation guide
- End User License Agreement (EULA)
- License code (on the back side…)

Ordering reference
- DM4S-01
- 3AXD5000001227



Software Version: Drive Manager for SIMATIC update package DM4S 1.2.0

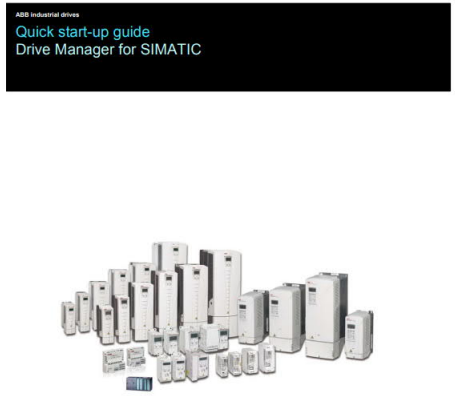
http://new.abb.com/drives/software-tools/drive-manager-for-simatic

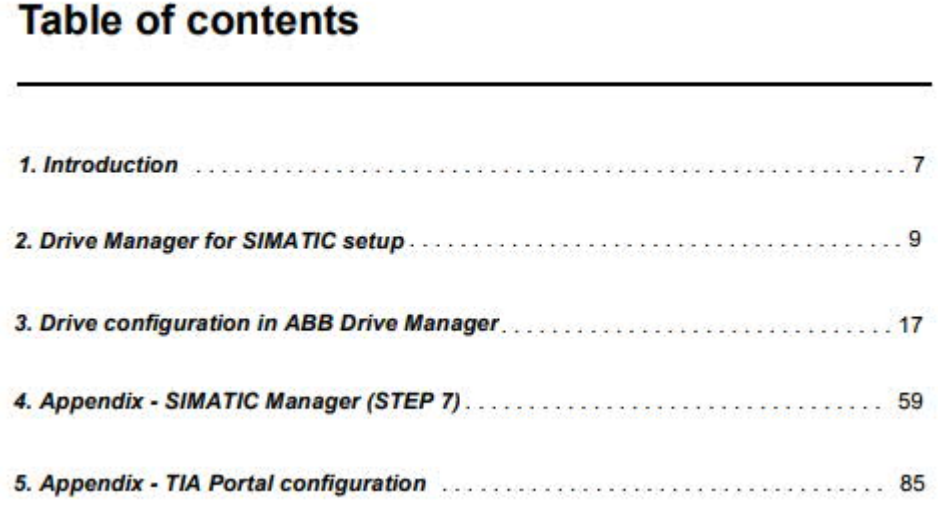
Drive Manager for SIMATIC device tool

Quick Start-up Guide and Online Help

Comprehensive instructions on installation and usage of the tool

Guides to set-up a project both for TIA Portal and SIMATIC Manager





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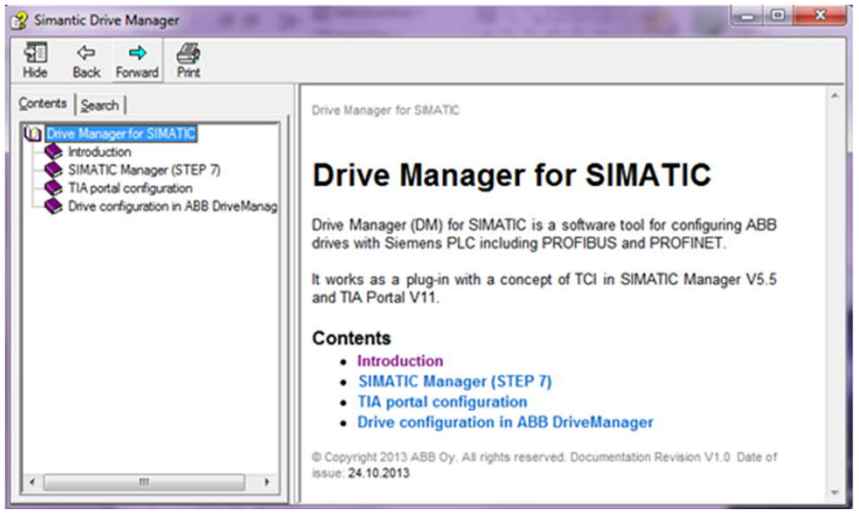


https://search.abb.com/library/Download/DocumentID=3AXD50000012364

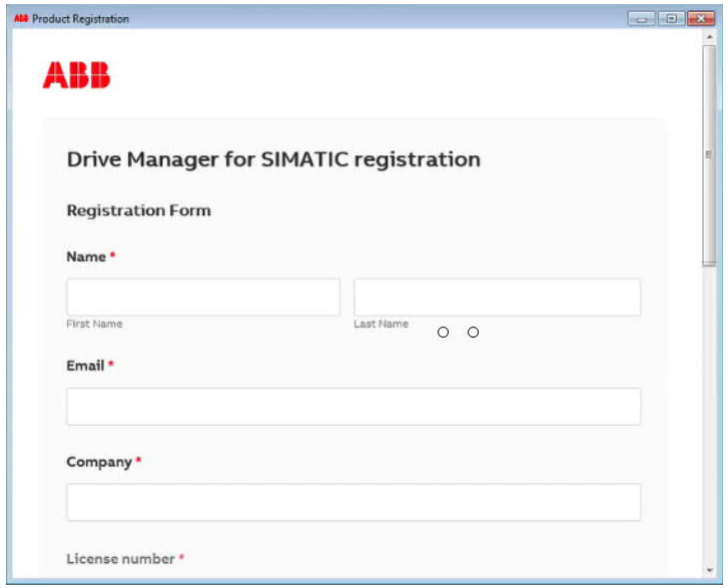
Drive Manager for SIMATIC device tool

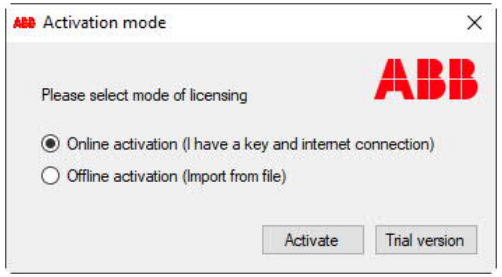
Installation and registration – New user registration process

Prerequisites: Need already SIMATIC Manager (STEP 7) or TIA Portal installed on computer before to launch installation of ABB Drive manager tool

The application can run in trial version for a specific period of 30 days

Or activate the licensing mechanism for online or offline registration





New user registration process

- ABB is fully committed to protecting the privacy and respecting the rights to control how the personal data is used
- An information during installation explain why and how ABB collects and uses the personal data and the rights that user have in relation to that data

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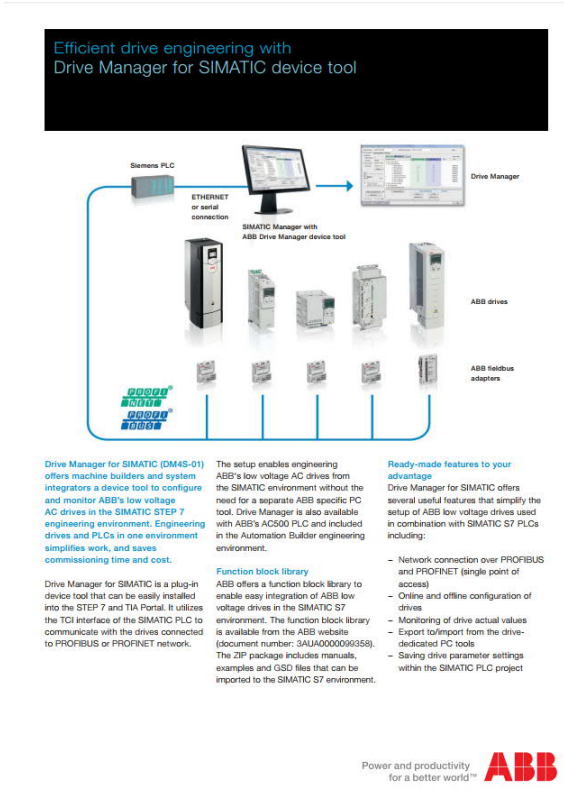
Drive Manager for SIMATIC device tool

Product Flyer (Brochure)

Document available in ABB Library:



Efficient drive engineering with
Drive Manager for SIMATIC device tool

Drive Manager for SIMATIC (DM4S-01) offers machine builders and system integrators a device tool to configure and monitor ABB's low voltage AC drives in the SIMATIC STEP 7 engineering environment. Engineering drives and PLCs in one environment simplifies work, and saves commissioning time and cost.

Drive Manager for SIMATIC is a plug-in device tool that can be easily installed into the STEP 7 and TIA Portal. It utilizes the TCI interface of the SIMATIC PLC to communicate with the drives connected to PROFIBUS or PROFINET network.

The setup enables engineering ABB's low voltage AC drives from the SIMATIC environment without the need for a separate ABB specific PC tool. Drive Manager is also available with ABB's AC500 PLC and included in the Automation Builder engineering environment.

Function block library

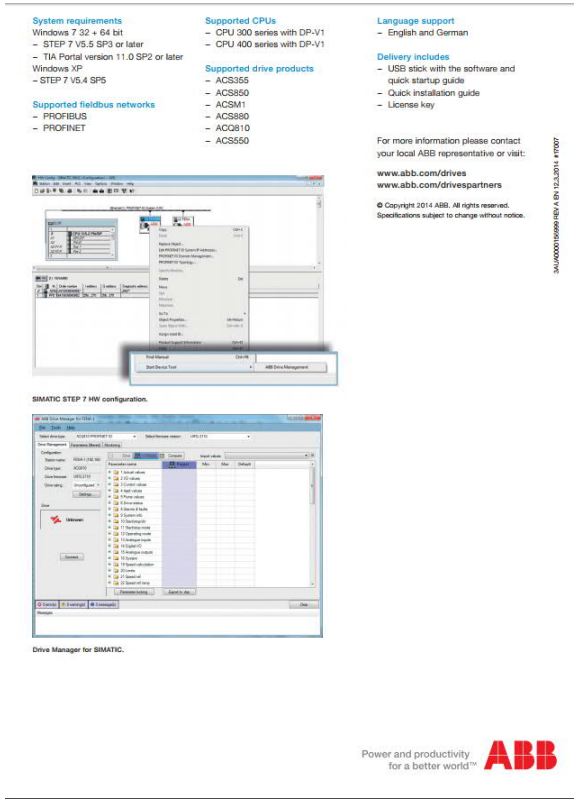
ABB offers a function block library to enable easy integration of ABB low voltage drives in the SIMATIC S7 environment. The function block library is available from the ABB website (document number: 3AUA0000099358). The ZIP package includes manuals, examples and GSD files that can be imported to the SIMATIC S7 environment.

Ready-made features to your advantage

Drive Manager for SIMATIC offers several useful features that simplify the setup of ABB low voltage drives used in combination with SIMATIC S7 PLCs including:

- Network connection over PROFIBUS and PROFINET (single point of access)
- Online and offline configuration of drives
- Monitoring of drive actual values
- Export to/import from the drive-dedicated PC tools
- Saving drive parameter settings within the SIMATIC PLC project

Power and productivity for a better world™ ABB



System requirements
Windows 7 32 + 64 bit
- STEP 7 V5.5 SP3 or later
- TIA Portal version 11.0 SP2 or later

Windows XP
- STEP 7 V5.4 SP5

Supported fieldbus networks
- PROFIBUS
- PROFINET

Supported CPUs
- CPU 300 series with DP-V1
- CPU 400 series with DP-V1

Supported drive products
- ACS355
- ACS850
- ACSM1
- ACS880
- ACQ810
- ACS550

Language support
- English and German

Delivery includes
- USB stick with the software and quick startup guide
- Quick installation guide
- License key

For more information please contact your local ABB representative or visit:

www.abb.com/drives
www.abb.com/drivespartners

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Specifications subject to change without notice.

3AUA0000156999 REV A EN 12.3.2014 #17007

SIMATIC STEP 7 HW configuration.

Drive Manager for SIMATIC.

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http://new.abb.com/drives