

PacDriveM Tools

Tools on Service CD

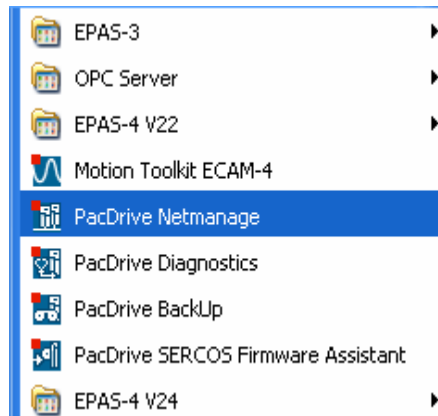
- **PacDrive NetManage**
- **PacDrive Diagnostics**
- **PacDrive Backup**
- **Sercos – Firmware Assistant**



PacDriveManage Call

- **PacDriveNetManage scans network and finds Controllers, which have minimum Firmware V15.**
- **With PacDriveNetManage you get Informations about network settings, Project and Firmware of the Controller**
- **Change of network settings are possible**

- **Call:**



PacDriveManage Handling

PacDrive Netmanage V2.0

Deutsch - German

Controller	TimeSinceBoot	IP_Address	FW_Version	ProjectName
PacDrive C600	02h 05m 55s	10.201.240.223	V00.22.06 Nov 27 2006	PicknPlace_PDTP2002_C600_V2200_4Service.pro
PacDrive C600	00h 01m 30s	10.201.240.222	V00.22.06 Nov 27 2006	PicknPlace_PDTP2002_C600_V2200_4Troubleshoot....
PacDrive C600	00h 01m 30s	10.201.240.221	V00.22.06 Nov 27 2006	L5_4_EmergencyStop_C600_V1640_C600_V2200.pro

Kommunikationseinstellungen bearbeiten

Netzwerkeinstellungen:

IP-Adresse: 10.201.240.223

Subnetzmaske: 255.255.0.0

Gateway: 0.0.0.0

☐ In Parameterdatei schreiben (Customer.par)

OK Abbrechen

Detail-Ansicht

Parameter	Wert
Controller	PacDrive C...
ControllerType	C600/AX=99/...
DhcpState	Not connected
FW_Version	V00.22.06 Nov...
IP_Address	10.201.240.223
IP_Gateway	0.0.0.0
IP_SubNetMask	255.255.0.0
KernalVersion	V00.05.00 C600
MacAddress	00:04:17:02:0...
NetbiosName	
P600_GatewayStarted	
ProgrammingSystem	EPAS-4 V00.2...
ProjectAuthor	ELAU AG
ProjectDate	2007-12-19-1...
ProjectDescription	Copyright (c) ...
ProjectName	PicknPlace_PD...
ProjectVersion	V00.20.02 buil...
RemoteCommunicationAc...	2
TimeSinceBoot	02h 05m 55s

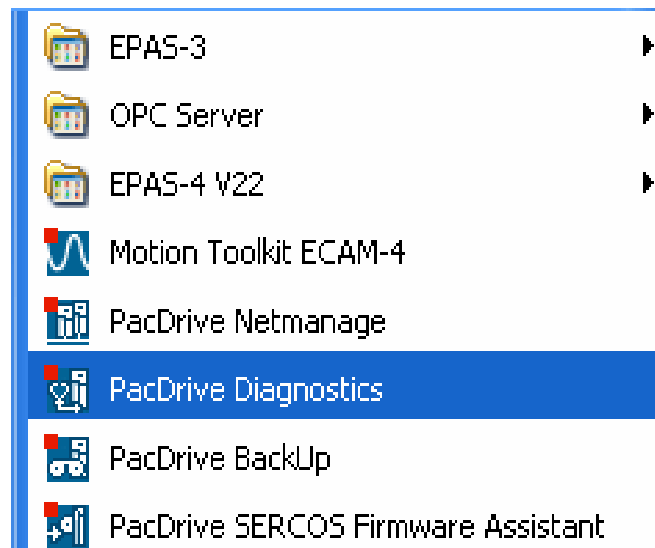
Alle / Gefilterte / Inaktive Steuerungen: 74 / 3 / 0 Uptime: 00h 02m

PacDriveDiagnostics Call

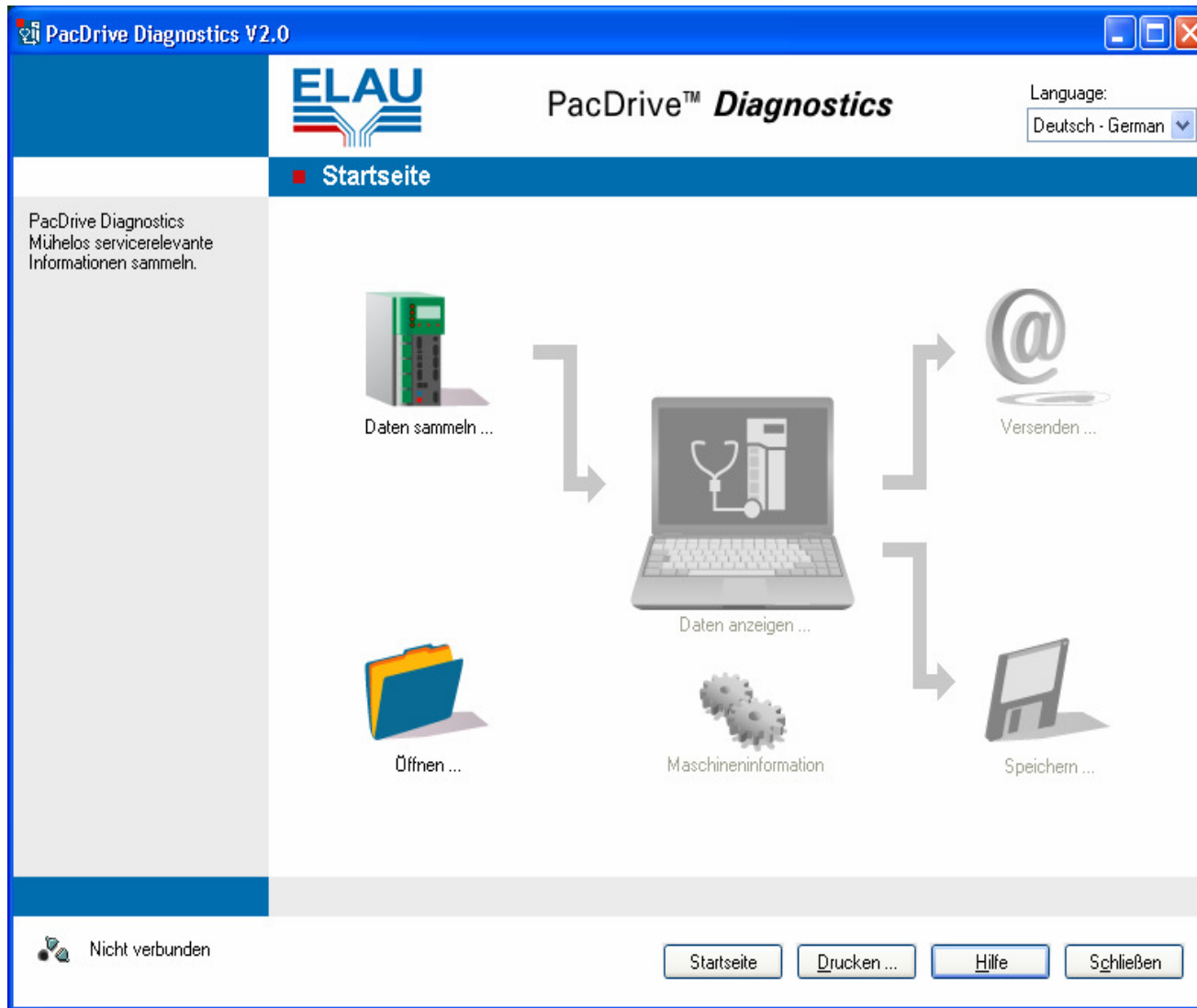
- **Diagnosis tool for reading out project datas without EPAS-4**

- **PD Diagnostics is only a minimal load, so working on a running machine is possible**

- **Call:**



PacDriveDiagnostics Startpage



PacDriveDiagnostics Evaluation



PacDrive™ Diagnostics

Language: Deutsch - German

HW / SW-Versionen der verfügbaren HW-Komponenten

System Überblick

HW/SW Versionen

Controller Info

Projekt-Information

SERCOS-Konfiguration

Systemauslastung

Nockenschaltwerk

System-Diagnose

Meldungslogger

Maschineninformation

Steuerungskonfiguration

Verbunden: 10.201.240.221

PacDrive™ Diagnostics

Language: Deutsch - German

Meldungslogger

No.	Timestamp	Type	Object	Instance	Diag_code	Ext. diagnose	Message
325	1:04.688	0x0002	MC_4	MC_Drive_2	6132		Schleppfehler
324	54.763	0x1000	LZS	LZS	8010	Vest.par	Datei schreiben
323	52.522	0x0001	LZS	LZS	8007	EPAS-4	Login
322	52.507	0x1000	LZS	LZS	8013	0ac90c8	connect zum TCP/IF
321	34.339	0x1000	LZS	LZS	8014	0ac90c8	disconnect vom TCF
320	34.336	0x0001	LZS	LZS	8008	EPAS-4	Logout
319	19.097	0x0001	LZS	LZS	8004		IEC-Programm gesta
318	11.266	0x0001	LZS	LZS	8007	EPAS-4	Login
317	11.250	0x1000	LZS	LZS	8013	0ac90c8	connect zum TCP/IF
316	4.487	0x1000	SERC	RTB	8042	Phase=4	SERCOS Phasenwe
315	4.225	0x1000	SERC	RTB	8042	Phase=3	SERCOS Phasenwe
314	2.620	0x1000	SERC	RTB	8042	Phase=2	SERCOS Phasenwe
313	2.180	0x0001	MAX4	PacDriveM	8003	V00.04.03 MAX4	Max4-Boot beendet
312	980	0x1000	SERC	RTB	8042	Phase=1	SERCOS Phasenwe
311	176	0x0001	MAX4	PacDriveM	8051		Max4/AX=8/RAM=C
310	0	0x0001	MAX4	PacDriveM	8002	Pw V00.16.42	Max4-Boot gestartet
309	5:29:26.019	0x1000	MAX4	PacDriveM	8016		System Reset
308	5:29:26.015	0x1000	SERC	RTB	8042	Phase=0	SERCOS Phasenwe
307	5:29:25.910	0x0001	LZS	LZS	8006		IEC-Programm gesta
306	5:29:23.975	0x1000	LZS	LZS	8010	Vest.scf	Datei schreiben
305	5:29:23.908	0x1000	LZS	LZS	8010	\profil.con	Datei schreiben
304	5:29:23.844	0x1000	LZS	LZS	8010	\profima.con	Datei schreiben
303	5:29:23.757	0x1000	LZS	LZS	8010	\canst.con	Datei schreiben
302	5:29:23.601	0x1000	LZS	LZS	8010	\canma.con	Datei schreiben
301	5:29:16.947	0x1000	LZS	LZS	8010	\source.pak	Datei schreiben
300	5:29:09.593	0x1000	LZS	LZS	8010	Vestres.par	Datei schreiben

Verbunden: 10.201.240.221

Startseite Drucken ... Hilfe Schließen

Firmware Notation

- Firmware consists of software routines which are stored on a non-volatile storage
- Firmware is responsible for the 'playing together' of Hardware and Software.
- Storage :
 - Controller - Firmware is stored on the flash
 - MotorController - Firmware is stored on an EEPROM



Firmware Hierarchy

- **For a correct working of software commands it's necessary that:**
 - **EPAS-4 Version higher or equal of project version (identical to Controller firmware version)**
 - **Firmwareversion of Controller is higher or equal to Firmwareversion of Drive (MC-4, SCL, iSH)**

Firmware

Diagnosis message 509

- If previous condition are not given you get in case of higher FW-Version drive than Controller following diagnosis message:

509 Unsupported FW-version

Diagnosis class (default): 4

The firmware version of the SERCOS slave is incorrect.

- The firmware version of the SERCOS slaves (MC-4, SCL, PS-4, ...) is higher than the firmware version of the PacDrive controller in the first 4 positions.
- ▶ Update the PacDrive controller firmware or import an older firmware version into the SERCOS slave.

(see also OnlineHelp)

Firmware

Controller folder 'Version'

Steuerungskonfiguration PacDriveC600 002000

Steuerungskonfiguration

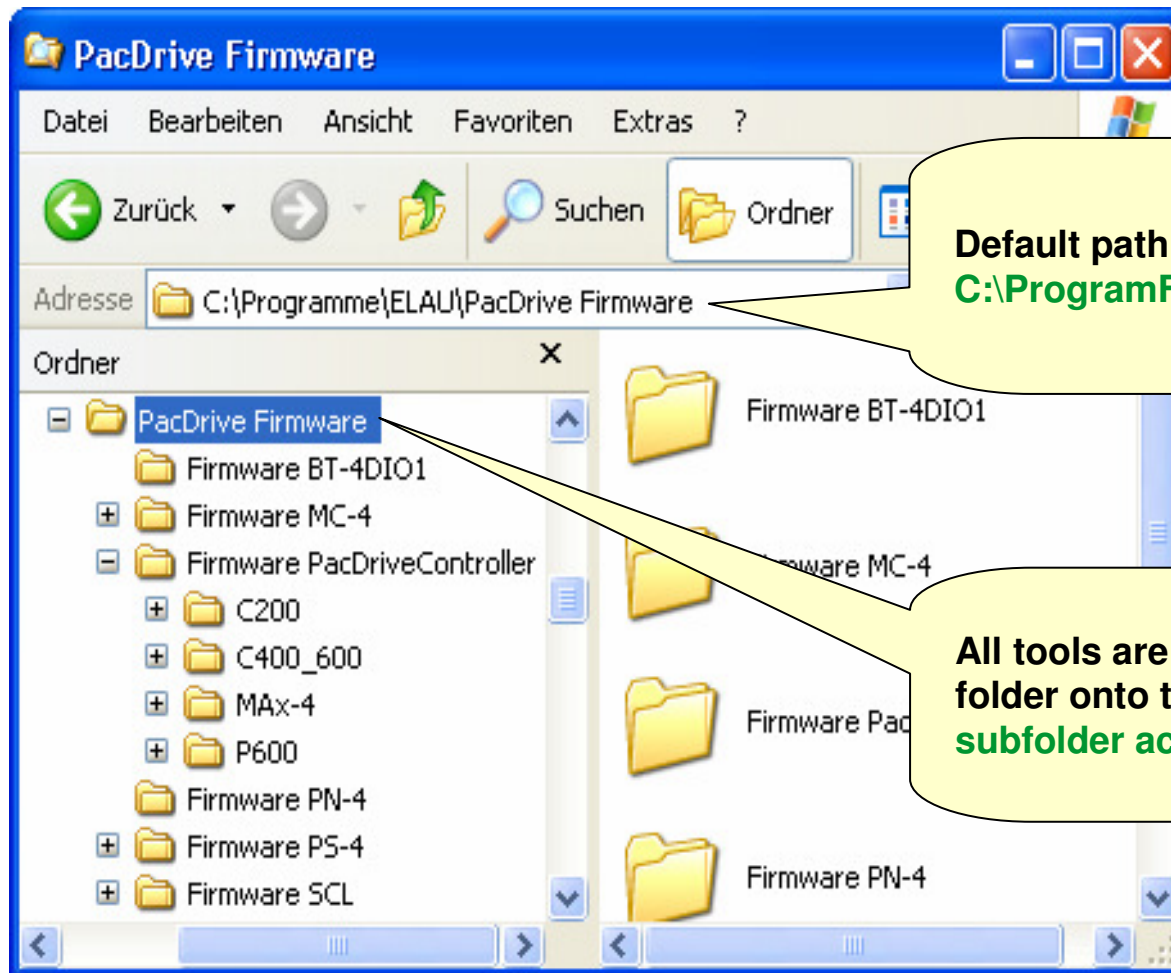
- PacDrive C600 <PacDriveM>
 - Allgemein
 - Diagnose
 - Versionen
 - Memory & Disks
 - System
 - IEC-Programm
 - Lizenzierung
- SERCOS interface <RTB>
 - Allgemeines
 - Systemintern
 - MC-4 <MC_Fuellen>
 - Status
 - Soll-Istwerte
 - Allgemein
 - Regler
 - Controller
 - Motor
 - Mechanik
 - YOffset Generator
 - YAmplituden Generator
 - Systemintern

Nr.	Name	Wert
1	FW_Version	'V00.20.02 Oct 10 2005'
2	KernalVersion	'V00.04.02 C600'
3	ControllerType	'C600/AX=99/RAM=248/NRAM=256/DiskS=32'
4	ControllerType1	'FPGA=0401/CPU=695/PIC=0500.010b.0511.01.01'
5	Opt1Type	'EC1/PBDP_M'
6	Opt2Type	'EC1/COP_M'
7	Opt3Type	'
8	Opt4Type	'
9	HW_Code	'186310P'
10	SerialNumber	'00594195 -'

**Controller C600:
Firmwareversion 20.02**

Firmware

Firmware folder

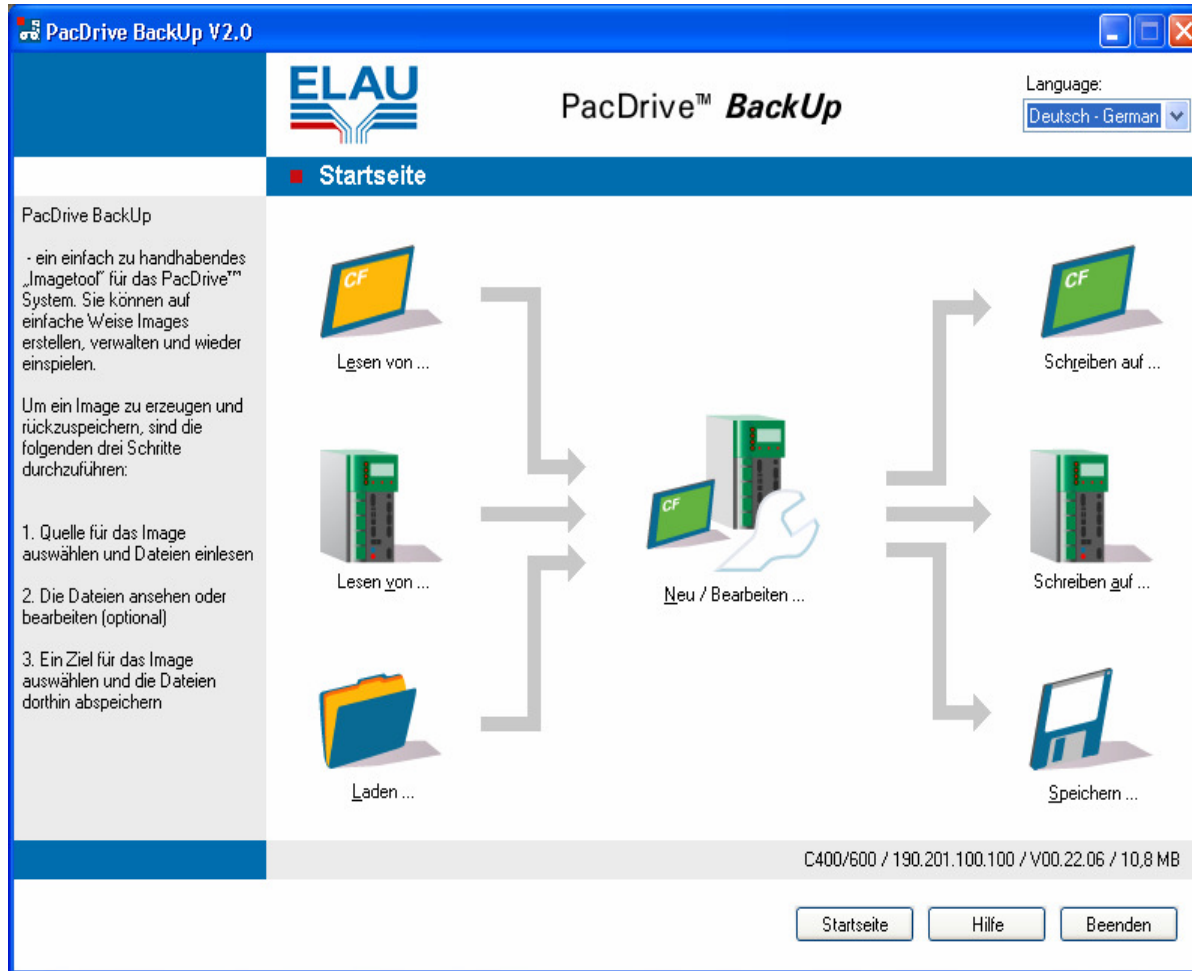


Default path of Firmware
C:\ProgramFiles\ELAU

All tools are to be set as standard
folder onto that path. **Tools open
subfolder according your selection.**

PacDriveBackup

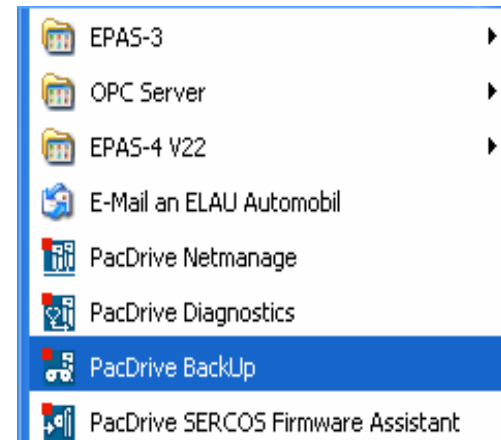
Call and start page



- Firmware change
- Formatting aFlash
- Create Backup

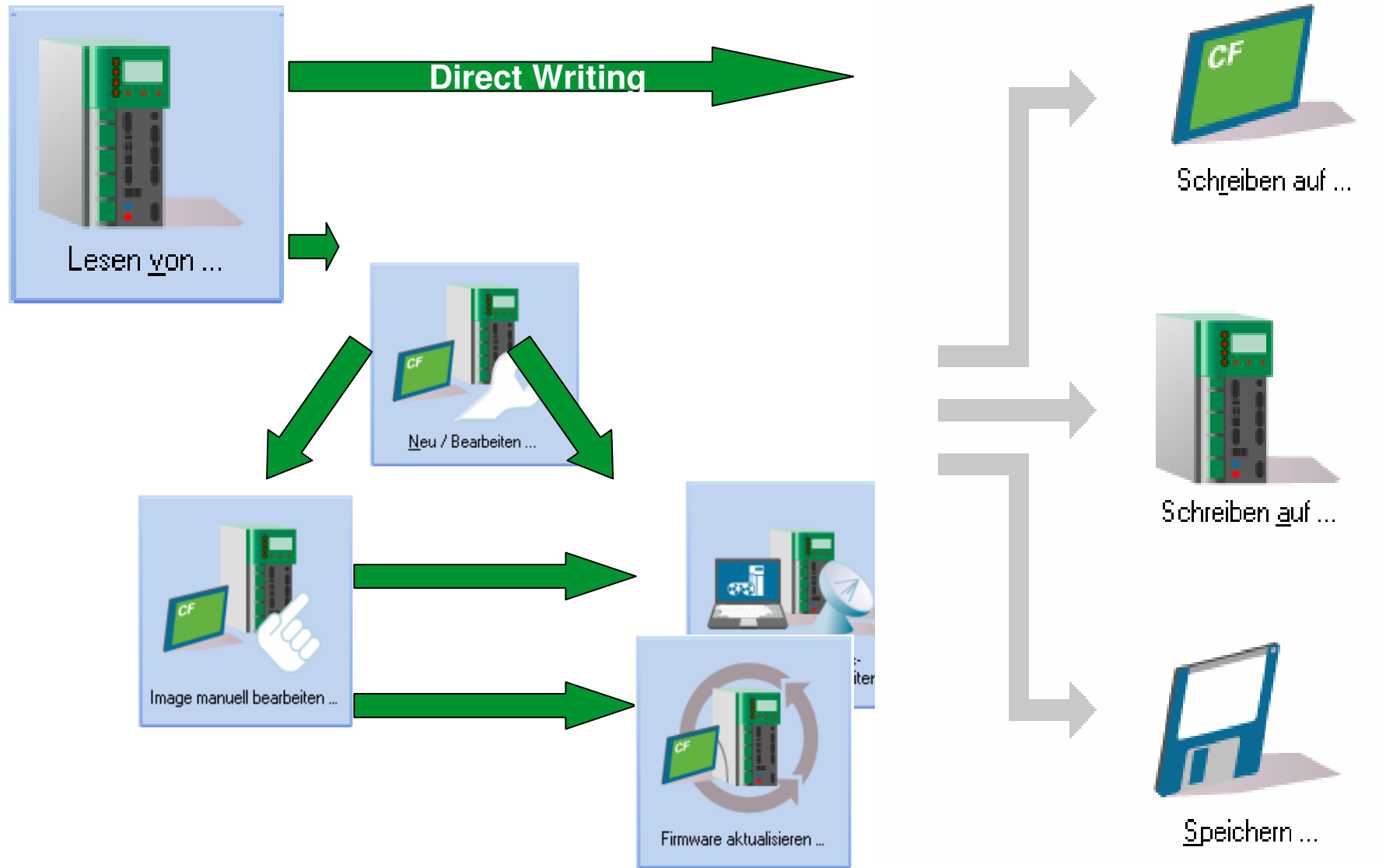
■ Call

PROGRAMFILES | ELAU |
PacDriveBackup



PacDriveBackup

Create a Backup



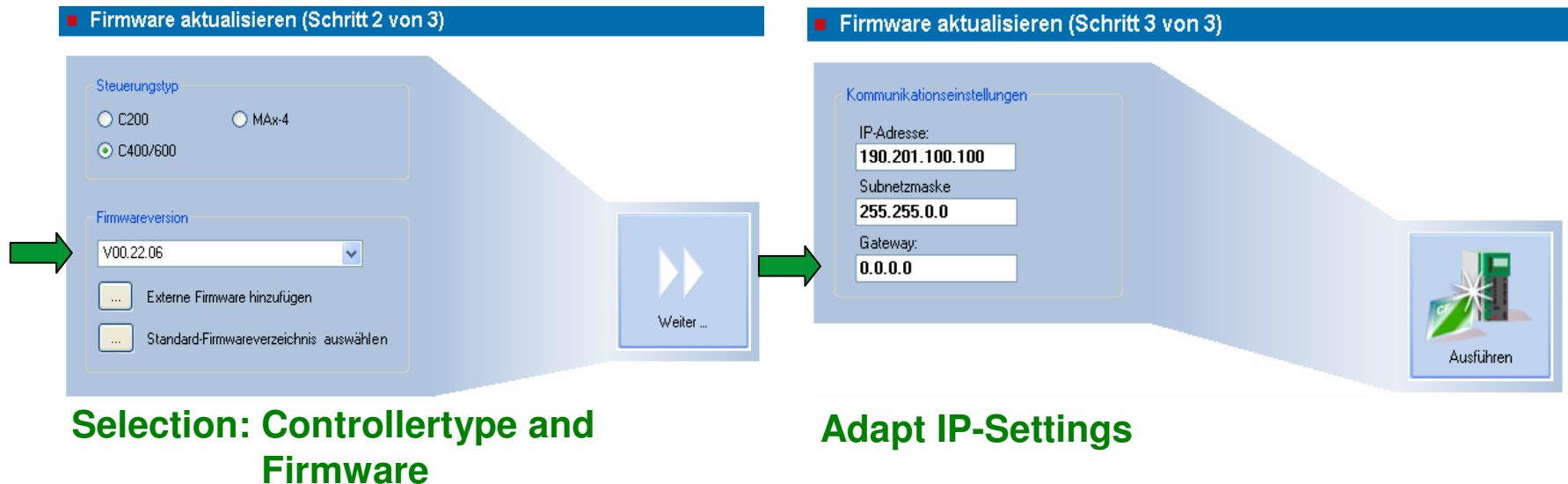
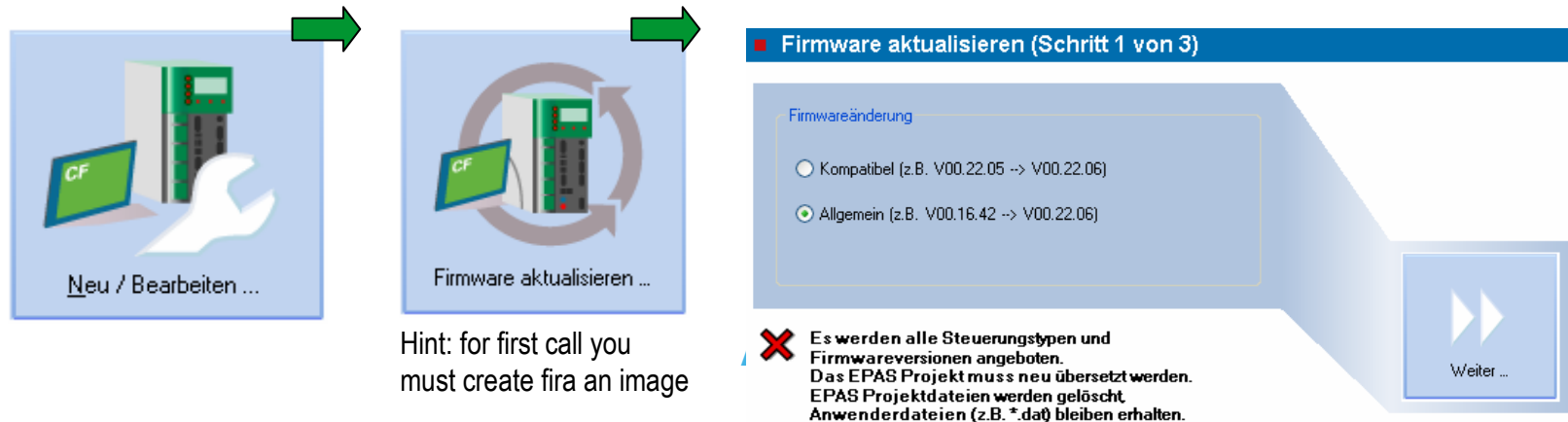
PacDriveBackup

Firmware change

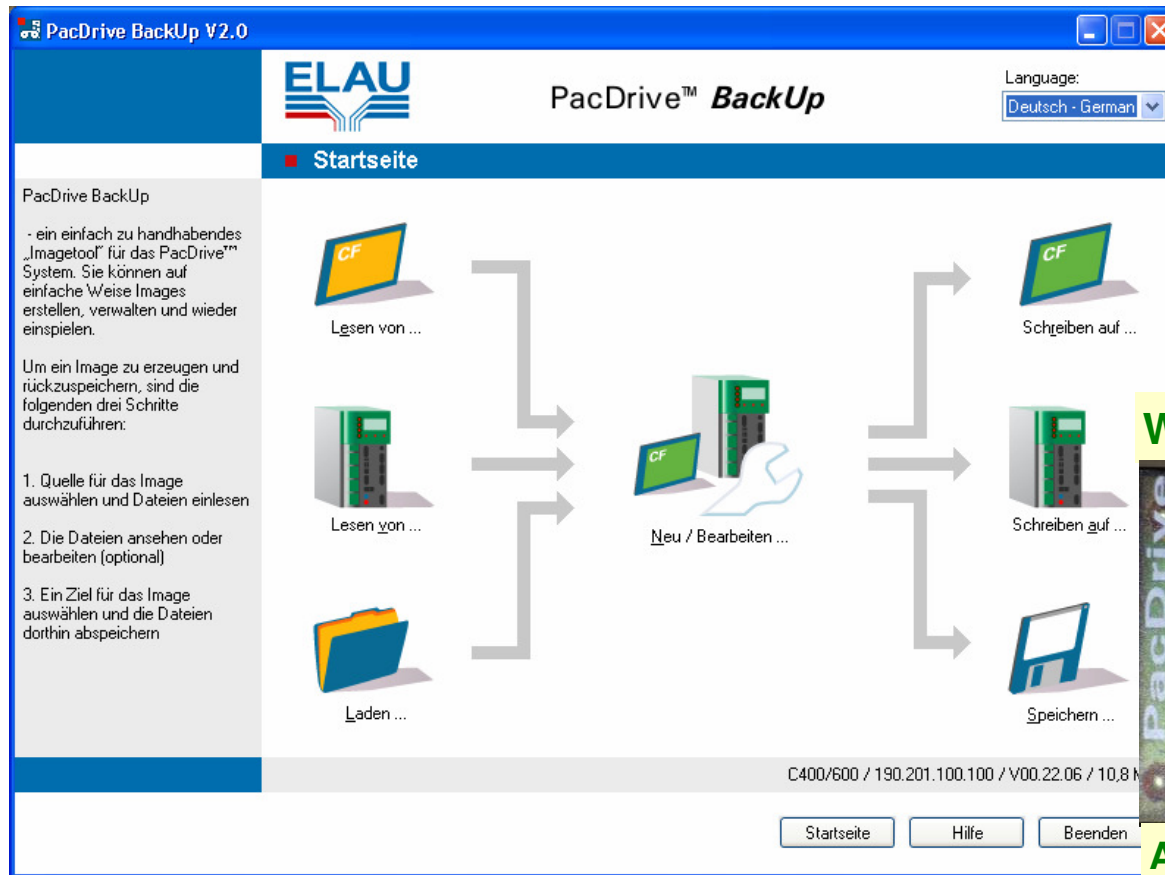
- **Firmwarechange with DriveBackup**
 - **can take place with built in flash**
 - **deletes program- and configuration file**
 - **copys selected firmware onto the flash**
 - **copys a minimal configuration file with selected IP-Settings onto the flash**

PacDriveBackup

Firmware change Controller



PacDriveBackup Firmware change Controller



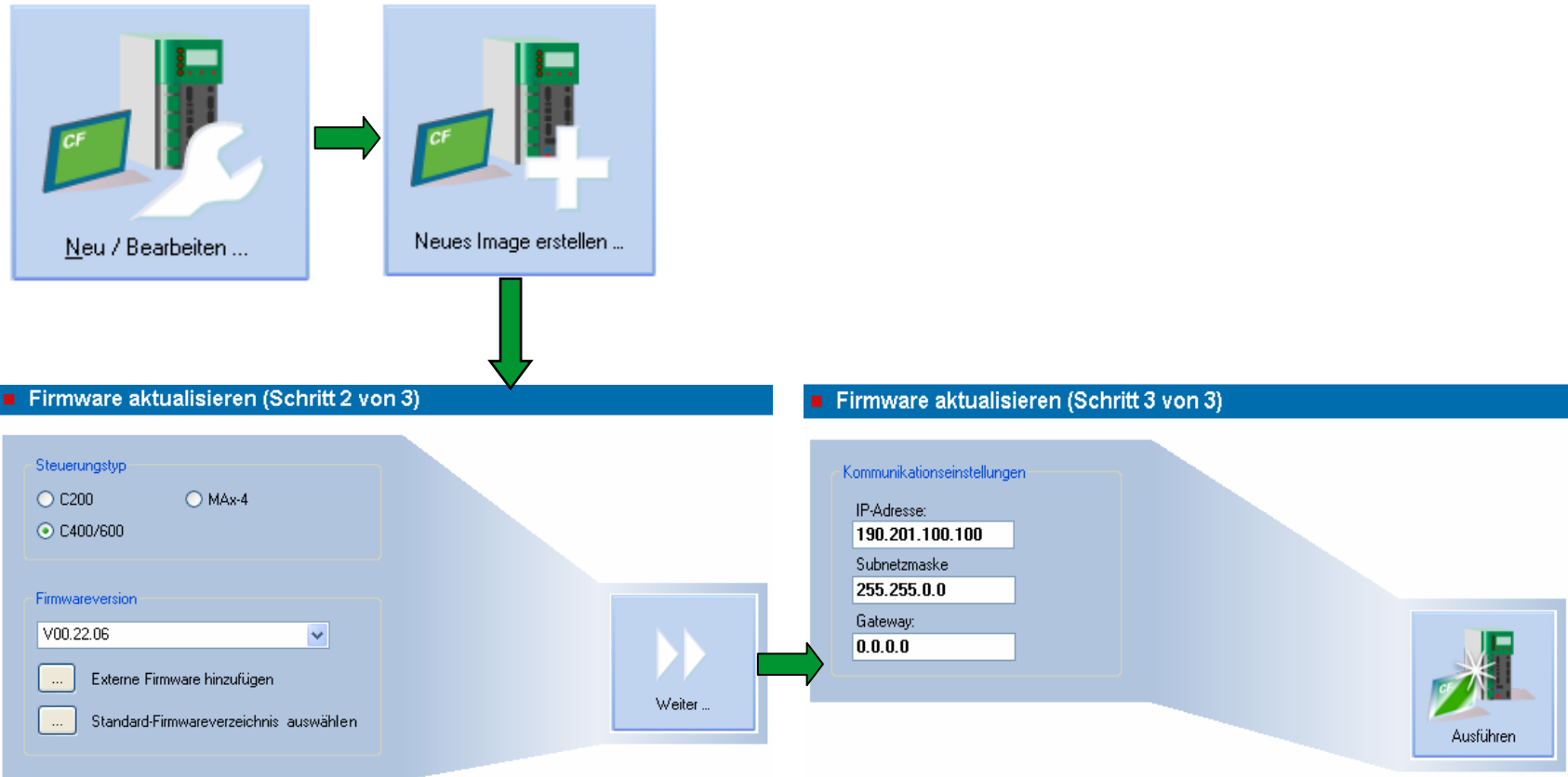
Write to controller



After bootsequence error LED flashes, because program and configuration file have been deleted !!

PacDriveBackup

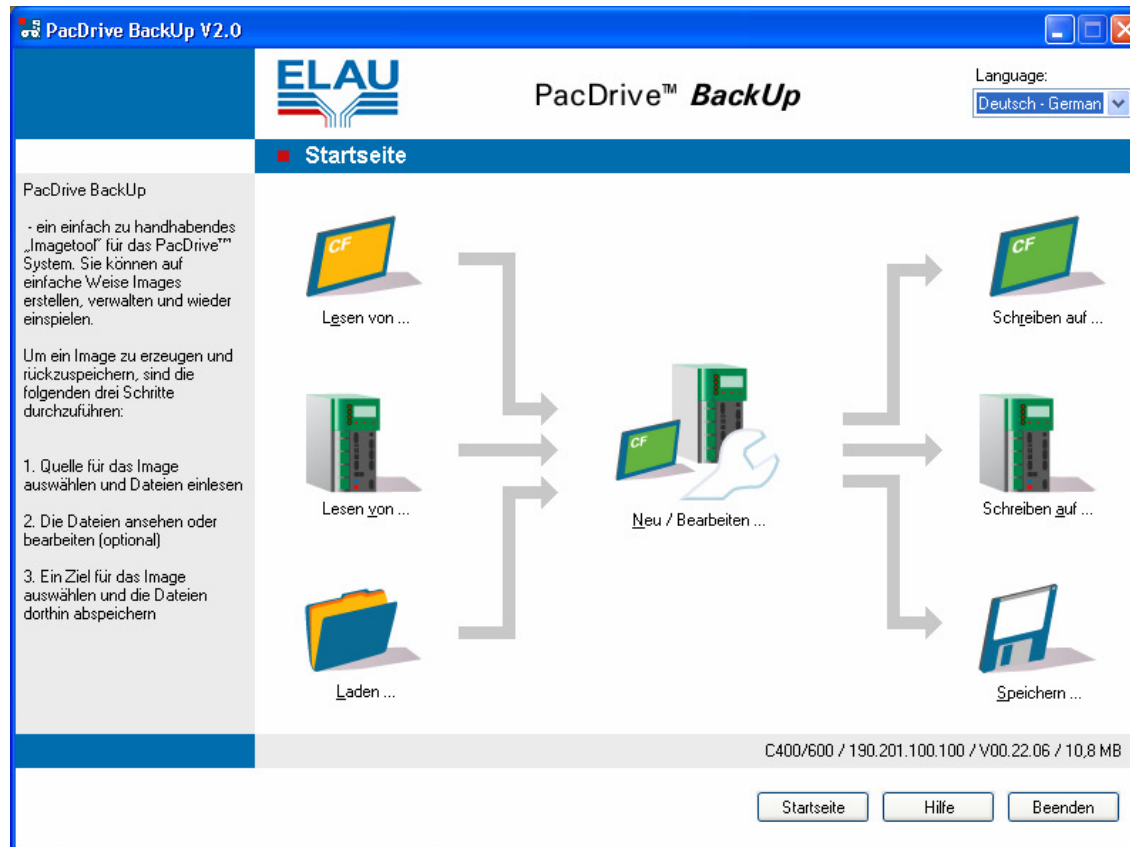
Creating a Flash with OS



Selection: Controllertype and Firmware Adapt IP-settings

PacDriveBackup

Create a Flash with OS



**Write to flash in
Reader / Writer**

Name	Größe	Typ
FBUSFW		Dateiordner
bootC1	191 KB	Systemdatei
Customer	1 KB	PAR-Datei
kernelC1	1.773 KB	Datei
MAx4.out	7.466 KB	OUT-Datei

Firmware

MC-4 folder 'Controller'

Steuerungskonfiguration PacDriveC600 002000

Steuerungskonfiguration

- PacDrive C600 <PacDriveM>
 - Allgemein
 - Diagnose
 - Versionen
 - Memory & Disks
 - System
 - IEC-Programm
 - Lizenzierung
- SERCOS interface <RTB>
 - Allgemeines
 - Systemintern
- MC-4 <MC_Fuellen>
 - Status
 - Soll-Istwerte
 - Allgemein
 - Regler
 - Controller
 - Motor
 - Mechanik
 - YOffset Generator
 - YAmplituden Generator
 - Systemintern

Nr.	Name	Wert
1	ControllerType	'MC4/11/05/230'
2	PWMRateHigh	'30 / TRUE'
3	FW_Version	'V00.20.01 24.06.05'
4	HW_Version	'D0G503'
5	BootloaderVersion	'V00.01.02'
6	PartNumberController	'13130246'
7	SerialNumberController	'578547.013'
8	Motorless	'nein'

**MotorController MC-4:
Firmwareversion 20.01**

PacDriveSercos Firmware Assistant

Firmware change of Drives

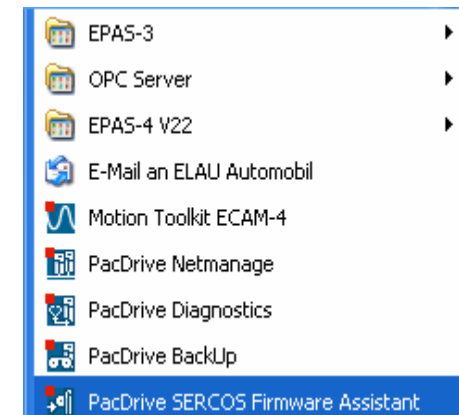
- Change via TCP / IP
- Fw change of different devices in one step (MC-4, PS-4, SCL055, iSH)
- Automatical recognition of drives within SERCOS-Bus
- Conditions
 - Hardwareversion Dirve minimum Cxxxxx
 - Actual Firmwareversion minimum 15.xx

Controller

Nr.	Name	Wert
3	FW_Version	'V00.20.01 24.06.05 '
4	HW_Version	'D0G503 '

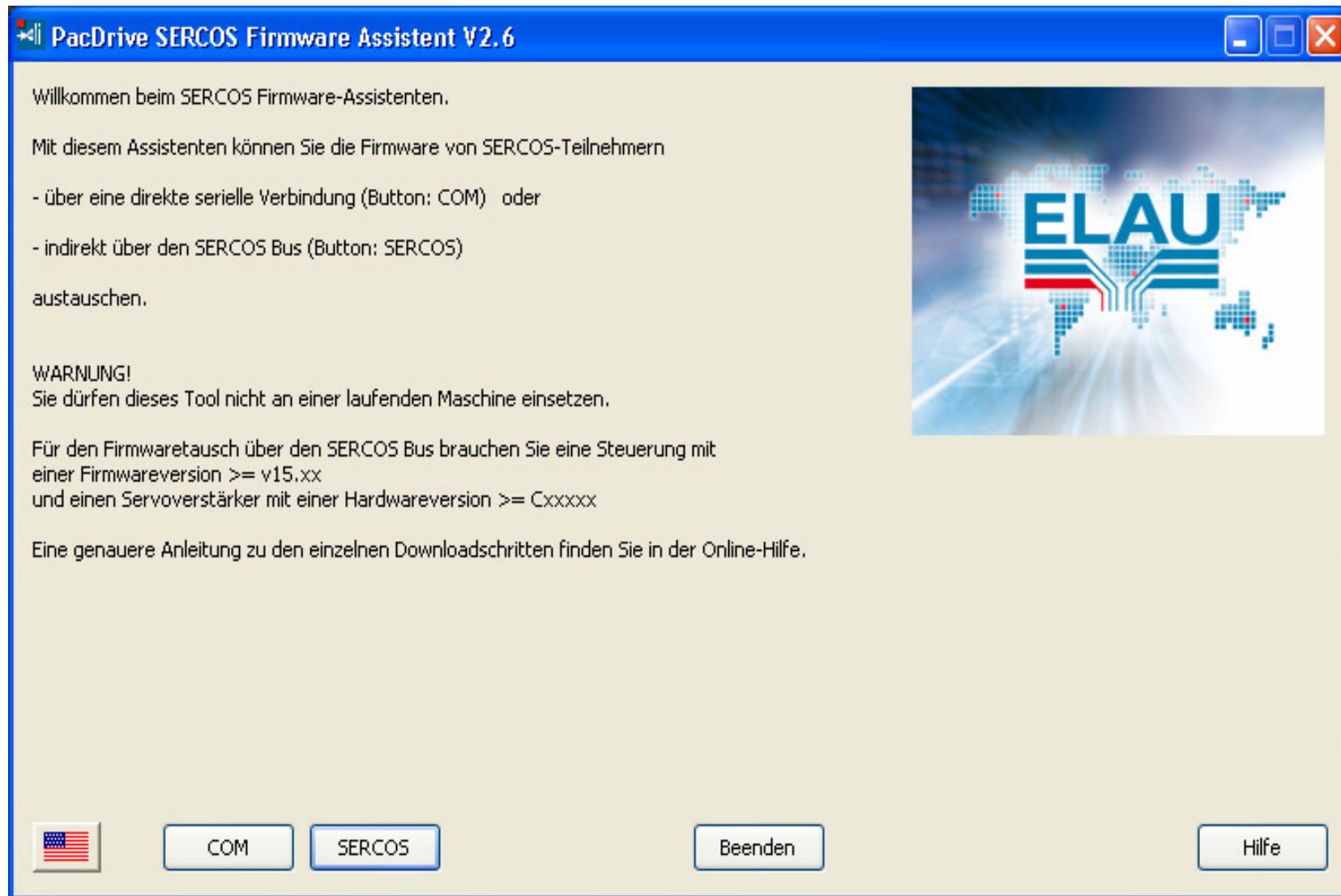
■ Call of SERCOS Firmware-Assistenten

PROGRAMFILES | ELAU | SERCOS Firmware Assistent



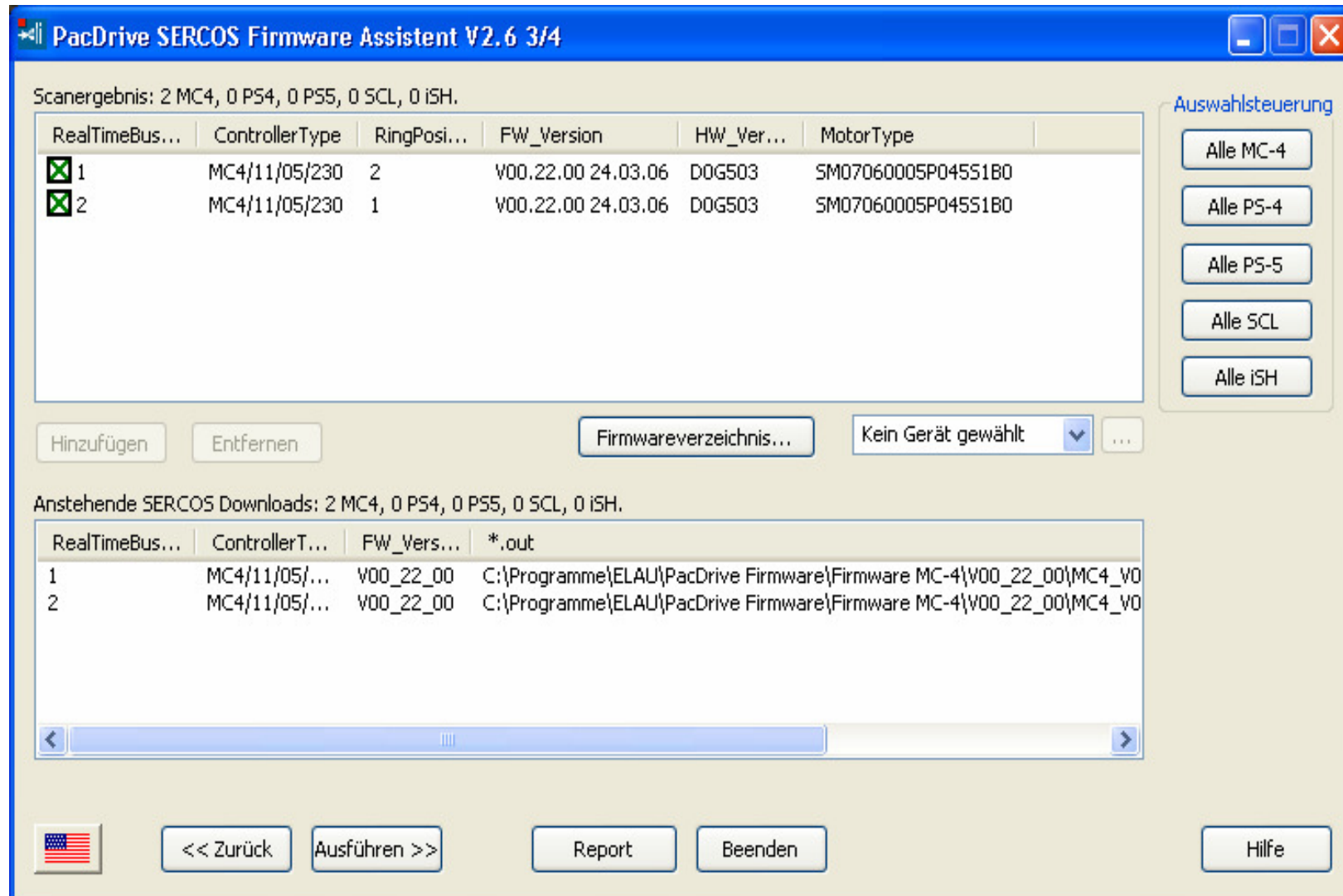
PacDriveSercos Firmware Assistant

Firmware change of Drives



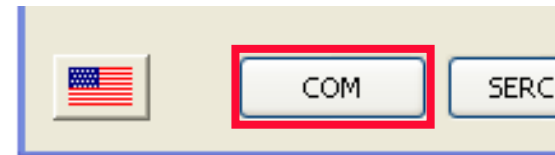
PacDriveSercos Firmware Assistant

Firmwarechange of Drives



PacDriveSercos Firmware Assistant Firmwarechange of Drives

- **Change via COM – Interface**
with Bootloader kcable (single device)



**MC-4
X7**

**PC
Com 2**

