

# ESP302 vs. ESP 301

## Introduction

This document describes the differences that users will have to take into consideration when transitioning from ESP301 family to the ESP302 family of motion controllers.

## Hardware

	ESP301	ESP302
<b>Display</b>	Push buttons	Touch screen
<b>ESP300-J compatibility</b>	Yes	No
<b>Number of axis</b>	3	3
<b>Communication</b>	USB, RS232, GPIB	RS232, Ethernet, optional GPIB add-on
<b>Inhibit connection</b>	Pulled up	Pulled down
<b>Weight</b>	6 kg	3 kg
<b>Dimensions</b>	419 x 305 x 83 mm	87 H x 223 W x 223 D (mm)

## Additional ESP302 hardware related comments:

- No MIM reduction from spec, while driving certain stepper motors with ESP302
- ESP 302 is not compatible with obsolete PP/PE unipolar stepper motor driven stages (ILS-PP, IMS-PP, RV-PP/PE, BGM-PP/PE)

## Software

	ESP301	ESP302
<b>Software</b>	GUI Installer	Web based GUI
<b>Servo rate</b>	2.5 kHz	10 kHz
<b>Error Compensation</b>	Backlash, Linear error	Backlash, Linear error
<b>Axis Configuration Changes</b>	Via ASCII commands	Secure ftp (SFTP), Samba Microsoft SMB/CIFS Networking Protocol
<b>Stored Program Memory</b>	64 kB	300 MB

## Additional ESP302 software related comments:

- Multi user capability (similar to what's available on XPS-D/XPS-RLD)
- Process sockets for parallel processing

## Commands backwards compatibility

- All ESP302 commands are backwards compatible with ESP301
- ESP302 does not support SM command (stage information is in configuration file)