

MicroAutoBox power input connector. With the common power input, you can control the power-on and power-off behavior of the entire system. With a connected keyboard and monitor, you can use the MicroAutoBox Embedded PC as host PC.

The MicroAutoBox Embedded PC provides standard connectors for several use cases, for example:

- DVI-I connector for graphical devices
- Ethernet interface 100/1000 Mbit/s (two RJ45 connectors, one LEMO connector)
- USB connectors

For further information, refer to *Using MicroAutoBox Embedded PC* ([📖 MicroAutoBox II Hardware Installation and Configuration](#)) and *Data Sheet for MicroAutoBox Embedded PC* ([📖 MicroAutoBox II Hardware Installation and Configuration](#))

Related topics

Basics

- *Feature Support* on page 42

Overview of Board Revisions

Introduction

MicroAutoBox was first released in October 1999. The major updates of the DS1401 Base Board and the I/O boards are listed below.

DS1401 base board revisions

Tip

The board revision is printed on a type plate on the bottom of your MicroAutoBox. You can also read the board revision on the DS1401 Properties page in your experimentation software.

These are the most important DS1401 Base Board revisions:

Date	Revision	Modifications	Boot Firmware Version	dSPACE Release ¹⁾
Q2/2010	22	<ul style="list-style-type: none"> ■ Processor: PPC750GL ■ CPU clock: 900 MHz ■ Memory: 16 MB ■ Ethernet host interface ■ Ethernet I/O interface 	<ul style="list-style-type: none"> ■ 2.7 For MicroAutoBox II variants 1401/1501, 1401/1504, 1401/1507, 1401/1505/1507 ■ 3.0 For MicroAutoBox II variants 1401/1511, 1401/1511/1512 	Using the new components requires at least Release 6.6.
		<ul style="list-style-type: none"> ■ Watchdog handling 	<ul style="list-style-type: none"> ■ 3.3 (System PLD version 1.4) 	7.4
		<ul style="list-style-type: none"> ■ Challenge-response monitoring 	<ul style="list-style-type: none"> ■ 3.3 (System PLD version 1.5) 	2016-B
		<ul style="list-style-type: none"> ■ Memory Integrity and Extras 	<ul style="list-style-type: none"> ■ 3.3 (System PLD version 1.6) 	2017-A
Q4/2011	23	<ul style="list-style-type: none"> ■ Ethernet host interface and Ethernet I/O interface with GBit support ■ Onboard pressure sensor ■ Onboard acceleration sensor 	<ul style="list-style-type: none"> ■ 3.2 ■ 3.2 (System PLD version 1.3) ■ 3.3 (System PLD version 1.4) 	7.2 7.3 7.4
Q2/2012	25	Internal Ethernet switch	3.3 (System PLD version 1.4)	7.4

¹⁾ The hardware is delivered independently of a dSPACE Release. This column shows the first dSPACE Release that provides the required boot firmware version.

Note

The table lists the minimum boot firmware version required by the respective board revision to support the new feature. Higher boot firmware versions can be used without problems. With lower boot firmware versions, MicroAutoBox does not work.

A real-time application for MicroAutoBox can be executed on newer revisions, if the specified I/O is available and the boot firmware version is at least the firmware version listed above. You can possibly not use the entire memory, see the table above.

I/O board revisions

The following I/O board revisions are of interest:

Date	Revision	Features	Boot Firmware Version	dSPACE Release
DS1501				
Q2/2002	07	Multichannel PWM added	not relevant	3.4
Q3/2003	09	LIN support added	not relevant	Using the LIN support requires at least Release 4.0.
DS1504				
Q2/2003	03	LIN support added	not relevant	Using the LIN support requires at least Release 4.0.
DS1505				
Q3/2003	01	Internal redesign to support MicroAutoBox with two I/O boards.	not relevant	not relevant
DS1507				
Q4/2005	01	<ul style="list-style-type: none"> ■ LIN support ■ FlexRay support ■ 2 ECU interfaces 	not relevant	Using DS1507 requires at least Release 4.0.
DS1511				
Q4/2010	03	New I/O board providing: <ul style="list-style-type: none"> ■ ADC Type 4 ■ DAC Type 3 ■ DIO Type 3 ■ Updated CAN Type 1 	3.0.1	7.0
Q4/2011	03	New I/O features for DIO Type 3: <ul style="list-style-type: none"> ■ Multichannel PWM signal generation ■ SENT receiver 	not relevant (DIO Type 3 PLD version 1.3)	7.2
Q2/2012	03	New I/O feature for DIO Type 3: <ul style="list-style-type: none"> ■ SPI master 	not relevant (DIO Type 3 PLD version 1.4)	7.3

Date	Revision	Features	Boot Firmware Version	dSPACE Release
Q4/2015	03	New I/O feature for DIO Type 3: <ul style="list-style-type: none"> ■ Pulse width measurement (PW2D) 	not relevant (DIO Type 3 PLD version 1.5)	2015-B
DS1512				
Q4/2010	03	New I/O board providing: <ul style="list-style-type: none"> ■ Xilinx® Spartan 6 FPGA XC6SLX150 ■ Updated FlexRay support 	3.0.1	7.0
Q2/2011	03	<ul style="list-style-type: none"> ■ FPGA support ■ Support of DS1552 Multi-I/O Module 	3.1.2	7.1
Q2/2012	03	Support of serial interface via FPGA module	3.1.2	7.3
DS1513				
Q3/2013	01	New I/O board providing: <ul style="list-style-type: none"> ■ ADC Type 4 ■ AIO Type 1 ■ DIO Type 4 ■ Updated CAN Type 1 	3.3	2013-B
Q4/2015	01	New I/O feature for DIO Type 4: <ul style="list-style-type: none"> ■ Pulse width measurement (PW2D) 	not relevant (DIO Type 4 PLD version 1.5)	2015-B
DS1514				
Q2/2015	01	New I/O board providing: <ul style="list-style-type: none"> ■ Xilinx® Kintex®-7 FPGA XC7K325T ■ Support of DS1552 Multi-I/O Module 	3.9	2015-A
Q2/2016	01	Support of DS1554 Engine Control I/O Module	3.9	2016-A