

**DS1401 base board revisions**

These are the most important DS1401 Base Board revisions:

Date	Revision	Modifications	Boot Firmware Version	dSPACE Release <sup>1)</sup>
Q4/1999	03	First released board revision: <ul style="list-style-type: none"> <li>■ Processor: PPC603</li> <li>■ CPU clock: 200 MHz</li> <li>■ Memory: 2MB</li> </ul>	1.0	2.2
Q4/2001	04	CPU clock: 300 MHz	-	3.4
Q1/2002	06	Memory: 8 MB	2.0	Using the entire 8 MB main memory requires at least Release 3.4 with patch 1 or Release 3.4.1.
Q1/2004	09	<ul style="list-style-type: none"> <li>■ Processor: PPC750FX</li> <li>■ CPU clock: 800 MHz</li> <li>■ L2 cache: 512 kB</li> </ul>	2.3	4.1
Q3/2007	18	New flash memory components	2.4.1	5.3 Patches are available for older releases.
Q4/2009	19	<ul style="list-style-type: none"> <li>■ Processor: PPC750GL</li> <li>■ CPU clock: 800 MHz</li> <li>■ Memory: 16 MB</li> <li>■ L2 cache: 1024 kB</li> </ul>	2.6.1	Using the entire 16 MB main memory requires at least Release 6.4.
Q2/2010	22	First released version of MicroAutoBox II: <ul style="list-style-type: none"> <li>■ Processor: PPC750GL</li> <li>■ CPU clock: 900 MHz</li> <li>■ Memory: 16 MB</li> <li>■ Ethernet host interface</li> <li>■ Ethernet I/O interface</li> </ul> <ul style="list-style-type: none"> <li>■ Watchdog handling</li> </ul>	<ul style="list-style-type: none"> <li>■ 2.7 For MicroAutoBox II variants 1401/1501, 1401/1504, 1401/1507, 1401/1505/1507</li> <li>■ 3.0 For MicroAutoBox II variants 1401/1511, 1401/1511/1512</li> <li>■ 3.3 (System PLD version 1.4)</li> </ul>	Using the new components requires at least Release 6.6.  7.4

Date	Revision	Modifications	Boot Firmware Version	dSPACE Release <sup>1)</sup>
Q4/2011	23	■ Ethernet host interface and Ethernet I/O interface with GBit support	■ 3.2	7.2
		■ Onboard pressure sensor	■ 3.2 (System PLD version 1.3)	7.3
		■ Onboard acceleration sensor	■ 3.3 (System PLD version 1.4)	7.4
Q2/2012	25	Internal Ethernet switch	3.3 (System PLD version 1.4)	7.4

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



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
<b>DS1501</b>				
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.
<b>DS1504</b>				
Q2/2003	03	LIN support added	not relevant	Using the LIN support requires at least Release 4.0.

Date	Revision	Features	Boot Firmware Version	dSPACE Release
<b>DS1505</b>				
Q3/2003	01	Internal redesign to support MicroAutoBox with two I/O boards.	not relevant	not relevant
<b>DS1506</b>				
Q3/2003	01	<ul style="list-style-type: none"> <li>■ LIN support</li> <li>■ FlexRay support</li> </ul>	not relevant	Using the LIN support and the FlexRay support requires at least Release 4.0.
<b>DS1507</b>				
Q4/2005	01	<ul style="list-style-type: none"> <li>■ LIN support</li> <li>■ FlexRay support</li> <li>■ 2 ECU interfaces</li> </ul>	not relevant	Using DS1507 requires at least Release 4.0.
<b>DS1511</b>				
Q4/2010	03	New I/O board providing: <ul style="list-style-type: none"> <li>■ ADC Type 4</li> <li>■ DAC Type 3</li> <li>■ DIO Type 3</li> <li>■ Updated CAN Type 1</li> </ul>	3.0.1	7.0
Q4/2011	03	New I/O features for DIO Type 3: <ul style="list-style-type: none"> <li>■ Multichannel PWM signal generation</li> <li>■ SENT receiver</li> </ul>	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"> <li>■ SPI master</li> </ul>	not relevant (DIO Type 3 PLD version 1.4)	7.3
Q4/2015	03	New I/O feature for DIO Type 3: <ul style="list-style-type: none"> <li>■ Pulse width measurement (PW2D)</li> </ul>	not relevant (DIO Type 3 PLD version 1.5)	2015-B

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