

Issue with device-specs/specs-avr128db48

Error when uploading to the AVR128DB48

```
C:\Program Files (x86)\Arduino\arduino-builder -dump-prefs -logger=machine -
hardware C:\Program Files (x86)\Arduino\hardware -hardware
C:\Users\paulm\AppData\Local\Arduino15\packages -tools C:\Program Files
(x86)\Arduino\tools-builder -tools C:\Program Files
(x86)\Arduino\hardware\tools\avr -tools
C:\Users\paulm\AppData\Local\Arduino15\packages -built-in-libraries C:\Program
Files (x86)\Arduino\libraries -libraries
C:\Users\paulm\OneDrive\Documents\Arduino\libraries -
fqbn=Microchip:megaavr:avrdb:chip=avr128db48 -vid-pid=03EB_2175 -ide-version=10819
-build-path C:\Users\paulm\AppData\Local\Temp\arduino_build_595628 -warnings=none
-build-cache C:\Users\paulm\AppData\Local\Temp\arduino_cache_602275 -
prefs=build.warn_data_percentage=75 -
prefs=runtime.tools.avrdude.path=C:\Users\paulm\AppData\Local\Arduino15\packages\ar
duino\tools\avrdude\6.3.0-arduino18 -prefs=runtime.tools.avrdude-6.3.0-
arduino18.path=C:\Users\paulm\AppData\Local\Arduino15\packages\arduino\tools\avrdu
de\6.3.0-arduino18 -verbose
C:\Users\paulm\AppData\Local\Temp\untitled2006265873.tmp\sketch_feb13a\sketch_feb1
3a.ino
C:\Program Files (x86)\Arduino\arduino-builder -compile -logger=machine -hardware
C:\Program Files (x86)\Arduino\hardware -hardware
C:\Users\paulm\AppData\Local\Arduino15\packages -tools C:\Program Files
(x86)\Arduino\tools-builder -tools C:\Program Files
(x86)\Arduino\hardware\tools\avr -tools
C:\Users\paulm\AppData\Local\Arduino15\packages -built-in-libraries C:\Program
Files (x86)\Arduino\libraries -libraries
C:\Users\paulm\OneDrive\Documents\Arduino\libraries -
fqbn=Microchip:megaavr:avrdb:chip=avr128db48 -vid-pid=03EB_2175 -ide-version=10819
-build-path C:\Users\paulm\AppData\Local\Temp\arduino_build_595628 -warnings=none
-build-cache C:\Users\paulm\AppData\Local\Temp\arduino_cache_602275 -
prefs=build.warn_data_percentage=75 -
prefs=runtime.tools.avrdude.path=C:\Users\paulm\AppData\Local\Arduino15\packages\ar
duino\tools\avrdude\6.3.0-arduino18 -prefs=runtime.tools.avrdude-6.3.0-
arduino18.path=C:\Users\paulm\AppData\Local\Arduino15\packages\arduino\tools\avrdu
de\6.3.0-arduino18 -verbose
C:\Users\paulm\AppData\Local\Temp\untitled2006265873.tmp\sketch_feb13a\sketch_feb1
3a.ino
Using board 'avrdb' from platform in folder:
C:\Users\paulm\AppData\Local\Arduino15\packages\Microchip\hardware\megaavr\1.0.1
Using core 'dxcore' from platform in folder:
C:\Users\paulm\AppData\Local\Arduino15\packages\Microchip\hardware\megaavr\1.0.1
Detecting libraries used...
"C:\Program Files (x86)\Arduino\hardware\tools\avr\bin/avr-g++" -c -g -Os -
Wall -std=gnu++17 -fpermissive -Wno-sized-deallocation -fno-exceptions -ffunction-
sections -fdata-sections -fno-threadsafe-statics -Wno-error=narrowing -flto -
mrelax -w -x c++ -E -CC -mmcu=avr128db48 -DF_CPU=24000000L -DCLOCK_SOURCE=0 -
DCORE_ATTACH_ALL -DTWI_MORS_SINGLE -DMILLIS_USE_TIMERB2 -DARDUINO=10819 -
```

```

DARDUINO_avrdb -DARDUINO_ARCH_MEGA AVR "-DDXCORE=\"1.0.1\" \" -DDXCORE_MAJOR=1UL -
DDXCORE_MINOR=0UL -DDXCORE_PATCH=1UL -DDXCORE_RELEASED=0 \"-
IC:\\Users\\paulm\\AppData\\Local\\Arduino15\\packages\\Microchip\\hardware\\megaa
vr\\1.0.1\\cores\\dxcore/api/deprecated\" \"-
IC:\\Users\\paulm\\AppData\\Local\\Arduino15\\packages\\Microchip\\hardware\\megaa
vr\\1.0.1\\cores\\dxcore\" \"-
IC:\\Users\\paulm\\AppData\\Local\\Arduino15\\packages\\Microchip\\hardware\\megaa
vr\\1.0.1\\variants\\48pin-standard\"
"C:\\Users\\paulm\\AppData\\Local\\Temp\\arduino_build_595628\\sketch\\sketch_feb1
3a.ino.cpp\" -o nul
Error while detecting libraries included by
C:\\Users\\paulm\\AppData\\Local\\Temp\\arduino_build_595628\\sketch\\sketch_feb13a.ino.cp
p
Generating function prototypes...
"C:\\Program Files (x86)\\Arduino\\hardware\\tools\\avr\\bin\\avr-g++\" -c -g -Os -
Wall -std=gnu++17 -fpermissive -Wno-sized-deallocation -fno-exceptions -ffunction-
sections -fdata-sections -fno-threadsafe-statics -Wno-error=narrowing -flto -
mrelax -w -x c++ -E -CC -mmcu=avr128db48 -DF_CPU=24000000L -DCLOCK_SOURCE=0 -
DCORE_ATTACH_ALL -DTWI_MORS_SINGLE -DMILLIS_USE_TIMERB2 -DARDUINO=10819 -
DARDUINO_avrdb -DARDUINO_ARCH_MEGA AVR "-DDXCORE=\"1.0.1\" \" -DDXCORE_MAJOR=1UL -
DDXCORE_MINOR=0UL -DDXCORE_PATCH=1UL -DDXCORE_RELEASED=0 \"-
IC:\\Users\\paulm\\AppData\\Local\\Arduino15\\packages\\Microchip\\hardware\\megaa
vr\\1.0.1\\cores\\dxcore/api/deprecated\" \"-
IC:\\Users\\paulm\\AppData\\Local\\Arduino15\\packages\\Microchip\\hardware\\megaa
vr\\1.0.1\\cores\\dxcore\" \"-
IC:\\Users\\paulm\\AppData\\Local\\Arduino15\\packages\\Microchip\\hardware\\megaa
vr\\1.0.1\\variants\\48pin-standard\"
"C:\\Users\\paulm\\AppData\\Local\\Temp\\arduino_build_595628\\sketch\\sketch_feb1
3a.ino.cpp\" -o
"C:\\Users\\paulm\\AppData\\Local\\Temp\\arduino_build_595628\\preproc\\ctags_targ
et_for_gcc_minus_e.cpp\"
avr-g++: error: device-specs/specs-avr128db48: No such file or directory
exit status 1
Error compiling for board AVR128DB48 Curiosity Nano.

```

Spence Konde has encountered this error before:



The screenshot shows three GitHub comments. The first two are from user 'SpenceKonde' on August 16, 2020. The first comment says 'Those files are definitely in the archive....'. The second comment says 'I think I may be in deeper water than I was expecting here... I am not going to try to sort this out at this moment, as I don't really know what to do, and these problems imply that it is significantly more complicated than I was giving it credit for.' The third comment is from user 'per1234' on August 18, 2020. It provides a link to an Arduino forum post about the 'GCC_EXEC_PREFIX' environment variable and the 'avr-g++: error: device-specs/specs-...: No such file or directory' error. It also includes a terminal command to check the environment variable.

SpenceKonde commented on Aug 16, 2020

Those files are definitely in the archive....

SpenceKonde commented on Aug 16, 2020

I think I may be in deeper water than I was expecting here... I am not going to try to sort this out at this moment, as I don't really know what to do, and these problems imply that it is significantly more complicated than I was giving it credit for.

per1234 commented on Aug 18, 2020

Here's a current reference for the `GCC_EXEC_PREFIX` environment variable as a cause of the `avr-g++: error: device-specs/specs-...: No such file or directory` error:
<https://forum.arduino.cc/index.php?topic=701026>

It's fixed it every time the error is reported on the forum. I think it's always been Windows users before now (which is why my instructions are Windows-specific), but that might simply be because the majority of Arduino users use Windows.

An easy check would be to run this from the terminal:

```
echo "$GCC_EXEC_PREFIX"
```

Possible Reasons for the Error

When Spence's original DxCore is install alongside Team 25's repo, the IDE is then capable of uploading a sketch to the AVR128DB48. It appears the IDE will use the avr-gcc tool that is installed with the DxCore rather than the default version that is downloaded with the IDE.

Before the DxCore is installed:

```
"C:\\Program Files (x86)\\Arduino\\hardware\\tools\\avr\\bin\\avr-g++"
```

After the DxCore is installed:

```
"C:\\Users\\paulm\\AppData\\Local\\Arduino15\\packages\\DxCore\\tools\\avr-gcc\\7.3.0-atmel3.6.1-azduino4b\\bin\\avr-gcc"
```

The IDE chooses this version automatically even though it is not associated with the Microchip core package.

Possible Fixes

The Microchip core package needs to function properly without requiring users to also download the DxCore. For this reason, the JSON file must be updated to allow for the 7.3.0-atmel3.6.1-azduino4b to be downloaded into the Team's tools folder. The IDE will install this tool when the core package is downloaded if a reference to the tool is made in the JSON file.

```

{
  "packages": [
    {
      "name": "Microchip",
      "maintainer": "ASU Capstone Team 25",
      "websiteURL": "https://github.com/Emsloan/Microchip-DA48",
      "email": "emsloan@asu.edu",
      "help": {
        "online": "https://github.com/Emsloan/Microchip-DA48"
      },
      "platforms": [
        {
          "name": "Team 25 core",
          "architecture": "megaavr",
          "version": "1.0.1",
          "category": "Contributed",
          "url": "https://github.com/Emsloan/Microchip-DA48/archive/refs/heads/master.zip",
          "archiveFileName": "Microchip-DA48-master.zip",
          "checksum": "SHA-256:875c5a46e038a3ff9a102a30186dd75905fa83ccb43026b01052f61ef06b2568",
          "size": "133000",
          "boards": [
            {
              "name": "AVR128DA48"
            },
            {
              "name": "AVR128DB48"
            }
          ],
          "toolsDependencies": [
            {
              "packager": "arduino",
              "name": "avrdude",
              "version": "6.3.0-arduino18"
            }
          ]
        }
      ],
      "tools": []
    }
  ]
}

```