Subject: theide Compilation Error - UPP ver 18167
Posted by deep on Sat, 22 Nov 2025 09:05:58 GMT
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My Hardware

Processor ARM cores

While compiling theide with ./install command
I get following error in ./uppsrc/Core/SIMD_NEON.h file

/uppsrc/Core/SIMD_NEON.h: In function 'int Upp::CountTrue(i16x8)':
./uppsrc/Core/SIMD_NEON.h:135:86: error: cannot convert 'Upp::int16x8_t' to 'Upp::uint16x8_t'
  135 | force_inline int   CountTrue(i16x8 a)   { return CountBits64(cmask16__(a.data)) >>
3; }

./uppsrc/Core/SIMD_NEON.h:248:41: note: initializing argument 1 of 'Upp::uint64
Upp::cmask8__(uint8x16_t)'
  248 | force_inline uint64 cmask8__(uint8x16_t mask)   { return
cmask16__(vreinterpretq_u16_u8(mask)); }

./uppsrc/Core/SIMD_NEON.h:190:42: note: initializing argument 1 of 'Upp::uint64
Upp::cmask32__(uint32x4_t)'
  190 | force_inline uint64 cmask32__(uint32x4_t mask)   { return
cmask16__(vreinterpretq_u16_u32(mask)); }

Subject: Re: theide Compilation Error - UPP ver 18167
Posted by mirek on Mon, 24 Nov 2025 07:59:59 GMT
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deep wrote on Sat, 22 November 2025 10:05My Hardware

Which one exactly?

Subject: Re: theide Compilation Error - UPP ver 18167
Posted by deep on Thu, 27 Nov 2025 04:24:07 GMT
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Nvidia DGX spark.

With DGX OS

Subject: Re: theide Compilation Error - UPP ver 18167
Posted by mirek on Thu, 27 Nov 2025 06:14:19 GMT
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OK. Please try to add

force_inline uint64 cmask16__(uint16x8_t mask) { return vreinterpretq_s16_u16(mask); }

at the start of SIMD_NEON.h

If it fixes the compilation and you have theide working, please run autotest/SIMD_CMP test (should end with OK). Also autotest/SIMD and autotest/SIMD2 just to be sure all is with NEON...

Subject: Re: theide Compilation Error - UPP ver 18167
Posted by deep on Sun, 14 Dec 2025 05:30:42 GMT
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Hi Mirek,

I could not chack this for couple of weeks.

I downloaded version 18235.

I am getting following errors

<pre>In file included from ./uppsrc/Core/Core.h:313,
                 from ./uppsrc/Esc/Esc.h:4,
                 from ./uppsrc/ide/Core/Core.h:4,
                 from ./uppsrc/ide/Builders/Builders.h:4,
                 from ./uppsrc/umk/umake.h:4,
                 from ./uppsrc/umk/Export.cpp:1:
./uppsrc/Core/SIMD_NEON.h: In function 'bool Upp::AllTrue(i16x8)':
./uppsrc/Core/SIMD_NEON.h:135:71: note: use '-flax-vector-conversions' to permit conversions between vectors with differing element types or numbers of subparts
  135 | force_inline bool   AllTrue(i16x8 a)   { return cmask16__(a.data) == cmask_all__; }
      | ~~~~~~~~~~^~~~~~~~
./uppsrc/Core/SIMD_NEON.h:135:74: error:

cannot convert 'Upp::int16x8_t' to 'Upp::uint16x8_t'
  135 | force_inline bool   AllTrue(i16x8 a)   { return cmask16__(a.data) == cmask_all__; }
      | ~~^~~~
      | |
      | Upp::int16x8_t
./uppsrc/Core/SIMD_NEON.h:6:29: note: initializing argument 1 of 'Upp::uint64 Upp::cmask16__(uint16x8_t)'
    6 | uint64 cmask16__(uint16x8_t mask) {
      | ~~~~~~~~~~~^~~~
./uppsrc/Core/SIMD_NEON.h: In function 'bool Upp::AnyTrue(i16x8)':
./uppsrc/Core/SIMD_NEON.h:136:74: error: cannot convert 'Upp::int16x8_t' to 'Upp::uint16x8_t'
  136 | force_inline bool   AnyTrue(i16x8 a)   { return cmask16__(a.data); }
      | ~~^~~~
      | |
      | Upp::int16x8_t
./uppsrc/Core/SIMD_NEON.h:6:29: note: initializing argument 1 of 'Upp::uint64 Upp::cmask16__(uint16x8_t)'
    6 | uint64 cmask16__(uint16x8_t mask) {
      | ~~~~~~~~~~~^~~~
./uppsrc/Core/SIMD_NEON.h: In function 'int Upp::CountTrue(i16x8)':
./uppsrc/Core/SIMD_NEON.h:137:86: error: cannot convert 'Upp::int16x8_t' to 'Upp::uint16x8_t'
  137 | force_inline int   CountTrue(i16x8 a)   { return CountBits64(cmask16__(a.data)) >> 3; }
      | ~~^~~~
      | |
      | Upp::int16x8_t
./uppsrc/Core/SIMD_NEON.h:6:29: note: initializing argument 1 of 'Upp::uint64 Upp::cmask16__(uint16x8_t)'
    6 | uint64 cmask16__(uint16x8_t mask) {
      | ~~~~~~~~~~~^~~~
./uppsrc/Core/SIMD_NEON.h: In function 'int Upp::FirstTrue(i16x8)':
./uppsrc/Core/SIMD_NEON.h:138:98: error: cannot convert 'Upp::int16x8_t' to 'Upp::uint16x8_t'

```
  138 | force_inline int    FirstTrue(i16x8 a)             { return
CountTrailingZeroBits64(cmask16__(<font color="#C01C28"><b>a.data</b></font>)) &gt;&gt; 3; }
      |                                                                <font
color="#C01C28"><b>~~^~~~</b></font>
      |                                                                 <font
color="#C01C28"><b>|</b></font>
      |                                                                 <font
color="#C01C28"><b>Upp::int16x8_t</b></font>
<b>./uppsrc/Core/SIMD_NEON.h:6:29:</b> <font color="#2AA1B3"><b>note: </b></font>
initializing argument 1 of '<b>Upp::uint64 Upp::</b><font
color="#26A269"><b>cmask16__</b></font>(uint16x8_t)'
    6 | uint64 cmask16__(<font color="#2AA1B3"><b>uint16x8_t mask</b></font>) {
      |                  <font color="#2AA1B3"><b>~~~~~~~~~~~~^~~~</b></font>
<b>./uppsrc/Core/SIMD_NEON.h:</b> In function '<b>int Upp::</b><font
color="#26A269"><b>FirstFalse</b></font>(i16x8)':
<b>./uppsrc/Core/SIMD_NEON.h:139:99:</b> <font color="#C01C28"><b>error:
</b></font>cannot convert '<b>Upp::int16x8_t</b>' to '<b>Upp::uint16x8_t</b>'
  139 | force_inline int    FirstFalse(i16x8 a)            { return
CountTrailingZeroBits64(~cmask16__(<font color="#C01C28"><b>a.data</b></font>)) &gt;&gt; 3;
}
      |                                                               <font
color="#C01C28"><b>~~^~~~</b></font>
      |                                                                <font
color="#C01C28"><b>|</b></font>
      |                                                                <font
color="#C01C28"><b>Upp::int16x8_t</b></font>
<b>./uppsrc/Core/SIMD_NEON.h:6:29:</b> <font color="#2AA1B3"><b>note: </b></font>
initializing argument 1 of '<b>Upp::uint64 Upp::</b><font
color="#26A269"><b>cmask16__</b></font>(uint16x8_t)'
    6 | uint64 cmask16__(<font color="#2AA1B3"><b>uint16x8_t mask</b></font>) {
      |                  <font color="#2AA1B3"><b>~~~~~~~~~~~~^~~~</b></font>
<b>./uppsrc/Core/SIMD_NEON.h:</b> In function '<b>bool Upp::</b><font
color="#26A269"><b>IsTrue</b></font>(i16x8, int)':
<b>./uppsrc/Core/SIMD_NEON.h:140:74:</b> <font color="#C01C28"><b>error:
</b></font>cannot convert '<b>Upp::int16x8_t</b>' to '<b>Upp::uint16x8_t</b>'
  140 | force_inline bool   IsTrue(i16x8 a, int i)         { return cmask16__(<font
color="#C01C28"><b>a.data</b></font>) &amp; ((uint64)1 &lt;&lt; (i &lt;&lt; 3)); }
      |                                                     <font color="#C01C28"><b>~~^~~~</b></font>
      |                                                      <font color="#C01C28"><b>|</b></font>
      |                                                      <font
color="#C01C28"><b>Upp::int16x8_t</b></font>
<b>./uppsrc/Core/SIMD_NEON.h:6:29:</b> <font color="#2AA1B3"><b>note: </b></font>
initializing argument 1 of '<b>Upp::uint64 Upp::</b><font
color="#26A269"><b>cmask16__</b></font>(uint16x8_t)'
    6 | uint64 cmask16__(<font color="#2AA1B3"><b>uint16x8_t mask</b></font>) {
      |                  <font color="#2AA1B3"><b>~~~~~~~~~~~~^~~~</b></font>
</pre>
```