```
*********************************************************
   4764 Wed Nov 26 19:55:51 2014
new/usr/src/head/complex.h
5367 complex.h /* #if !defined(__cplusplus) */ comment foils gcc fixincludes
*********************************************************
   1 /*
   2  * CDDL HEADER START
   3  *
   4  * The contents of this file are subject to the terms of the
   5  * Common Development and Distribution License (the "License").
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  16  * fields enclosed by brackets "[]" replaced with your own identifying
  17  * information: Portions Copyright [yyyy] [name of copyright owner]
  18  *
  19  * CDDL HEADER END
  20  */
  21 /*
  22  * Copyright 2011 Nexenta Systems, Inc.  All rights reserved.
  23  */
  24 /*
  25  * Copyright 2004 Sun Microsystems, Inc.  All rights reserved.
  26  * Use is subject to license terms.
  27  */

  29 #ifndef _COMPLEX_H
  30 #define _COMPLEX_H

  32 #ifdef  __cplusplus
  33 extern "C" {
  34 #endif

  36 /* #if !defined(__cplusplus) */

  36 /*
  37  * Compilation environments for Solaris must provide the _Imaginary datatype
  38  * and the compiler intrinsics _Complex_I and _Imaginary_I
  39  */
  40 #if defined(__SUNPRO_C)
  41 #define _Complex_I      _Complex_I
  42 #define _Imaginary_I    _Imaginary_I
  43 #else
  44 #define _Complex_I      1.0fi
  45 #define _Imaginary_I    1.0fi
  46 #endif
  47 #define complex         _Complex
  48 #define imaginary       _Imaginary
  49 #undef  I
  50 #define I               _Imaginary_I

  52 extern float cabsf(float complex);
  53 extern float cargf(float complex);
  54 extern float cimagf(float complex);
  55 extern float crealf(float complex);
  56 extern float complex cacosf(float complex);
  57 extern float complex cacoshf(float complex);
  58 extern float complex casinf(float complex);
  59 extern float complex casinhf(float complex);
```

```
  60 extern float complex catanf(float complex);
  61 extern float complex catanhf(float complex);
  62 extern float complex ccosf(float complex);
  63 extern float complex ccoshf(float complex);
  64 extern float complex cexpf(float complex);
  65 extern float complex clogf(float complex);
  66 extern float complex conjf(float complex);
  67 extern float complex cpowf(float complex, float complex);
  68 extern float complex cprojf(float complex);
  69 extern float complex csinf(float complex);
  70 extern float complex csinhf(float complex);
  71 extern float complex csqrtf(float complex);
  72 extern float complex ctanf(float complex);
  73 extern float complex ctanhf(float complex);

  75 extern double cabs(double complex);
  76 extern double carg(double complex);
  77 extern double cimag(double complex);
  78 extern double creal(double complex);
  79 extern double complex cacos(double complex);
  80 extern double complex cacosh(double complex);
  81 extern double complex casin(double complex);
  82 extern double complex casinh(double complex);
  83 extern double complex catan(double complex);
  84 extern double complex catanh(double complex);
  85 extern double complex ccos(double complex);
  86 extern double complex ccosh(double complex);
  87 extern double complex cexp(double complex);
  88 #if defined(__PRAGMA_REDEFINE_EXTNAME)
  89 #pragma redefine_extname clog __clog
  90 #else
  91 #undef  clog
  92 #define clog     __clog
  93 #endif
  94 extern double complex clog(double complex);
  95 extern double complex conj(double complex);
  96 extern double complex cpow(double complex, double complex);
  97 extern double complex cproj(double complex);
  98 extern double complex csin(double complex);
  99 extern double complex csinh(double complex);
 100 extern double complex csqrt(double complex);
 101 extern double complex ctan(double complex);
 102 extern double complex ctanh(double complex);

 104 extern long double cabsl(long double complex);
 105 extern long double cargl(long double complex);
 106 extern long double cimagl(long double complex);
 107 extern long double creall(long double complex);
 108 extern long double complex cacoshl(long double complex);
 109 extern long double complex cacosl(long double complex);
 110 extern long double complex casinhl(long double complex);
 111 extern long double complex casinl(long double complex);
 112 extern long double complex catanhl(long double complex);
 113 extern long double complex catanl(long double complex);
 114 extern long double complex ccoshl(long double complex);
 115 extern long double complex ccosl(long double complex);
 116 extern long double complex cexpl(long double complex);
 117 extern long double complex clogl(long double complex);
 118 extern long double complex conjl(long double complex);
 119 extern long double complex cpowl(long double complex, long double complex);
 120 extern long double complex cprojl(long double complex);
 121 extern long double complex csinhl(long double complex);
 122 extern long double complex csinl(long double complex);
 123 extern long double complex csqrtl(long double complex);
 124 extern long double complex ctanhl(long double complex);
 125 extern long double complex ctanl(long double complex);
```

```
 129 /* #endif */    /* !defined(__cplusplus) */
 127 #ifdef  __cplusplus
 128 }
 129 #endif

 130 #endif  /* _COMPLEX_H */
```