

Meaning of prefixes

S - REAL	C - COMPLEX
Z - DOUBLE PRECISION	Z - COMPLEX*16
(this may not be supported by all machines)	

For the Level 2 BLAS a set of extended-precision routines with the prefixes ES, ED, EC, EZ may also be available.

Level 1 BLAS

In addition to the listed routines there are two further extended-precision dot product routines DQDOT and DQDOTA.

Level 2 and Level 3 BLAS

Matrix types:			
GE - General	GB - General Band		
SY - Symmetric	SB - Sym. Band	SP - Sum. Packed	
HE - Hermitian	HB - Herm. Band	HP - Herm. Packed	
TR - Triangular	TB - Triang. Band	TP - Triang. Packed	

Level 2 and Level 3 BLAS Options

Dummy options arguments are declared as CHARACTER*1 and may be passed as character strings.

TRANS = 'No transpose', 'Transpose',	
'Conjugate transpose' (X^* , X^T , X^H)	
UPLO = 'Upper triangular', 'Lower triangular'	
DIAG = 'Non-unit triangular', 'Unit triangular'	
SIDE = 'Left', 'Right' (A or op(A) on the left, or A or op(A) on the right)	

For real matrices, TRANS = 'T' and TRANS = 'C' have the same meaning.

For Hermitian matrices, TRANS = 'T' is not allowed.

For complex symmetric matrices, TRANS = 'H' is not allowed.

References

C. Lawson, R. Hanson, D. Kincaid, and F. Krogh, "Basic Linear Algebra Subprograms for Fortran Usage," *ACM Trans. on Math. Soft.* 5 (1979) 308-325

J.J. Dongarra, J. DuCroz, S. Hammarling, and R. Hanson, "An Extended Set of Fortran Basic Linear Algebra Subprograms," *ACM Trans. on Math. Soft.* 14,1 (1988) 1-32

J.J. Dongarra, J. Duff, J. DuCroz, and S. Hammarling, "A Set of Level 3 Basic Linear Algebra Subprograms," *ACM Trans. on Math. Soft.* (1989)

Obtaining the Software via netlib@ornl.gov

To receive a copy of the single-precision software, type in a mail message:

send sbblas from blas
send sbblas2 from blas
send sbblas3 from blas

To receive a copy of the double-precision software, type in a mail message:

send dbblas from blas
send dbblas2 from blas
send dbblas3 from blas

To receive a copy of the complex single-precision software, type in a mail message:

send cblas from blas
send cblas2 from blas
send cblas3 from blas

To receive a copy of the complex double-precision software, type in a mail message:

send zblas from blas
send zblas2 from blas
send zblas3 from blas

Send comments and questions to lapack@cs.utk.edu .

Basic

Linear

Algebra

Subprograms

A Quick Reference Guide

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