

Common Language-independent Procedure Call - Fortran Binding

CHARACTER*16 LANG

CHARACTER*32 ROUTIN

INTEGER RDESC(5), PDESC1(26), ..., PDESCn(26)

INTEGER IALIEN

REAL RALIEN

DOUBLE PRECISION DALIEN, D

CHARACTER*? CALIEN, C

...

CALL ALIEN (LANG, ROUTIN, RDESC, P1, PDESC1, ..., Pn, PDESCn)

or

I = IALIEN (LANG, ROUTIN, RDESC, P1, PDESC1, ..., Pn, PDESCn)

R = RALIEN (LANG, ROUTIN, RDESC, P1, PDESC1, ..., Pn, PDESCn)

D = DALIEN (LANG, ROUTIN, RDESC, P1, PDESC1, ..., Pn, PDESCn)

C = CALIEN (LANG, ROUTIN, RDESC, P1, PDESC1, ..., Pn, PDESCn)

where

RDESC (1) = 0 if the alien routine is a procedure
1 function

RDESC (2) = the number of parameters of the alien routine

RDESC (3)-(5) are irrelevant if the alien routine is a procedure

RDESC (3) = 0 if the alien function is of type BIT
1 CHARACTER
2 LONGCHAR
3 FIXED
4 FLOAT

RDESC (4) = n if the result type is BIT(n), CHARACTER(n),
LONGCHAR(n), FIXED(n,s) or FLOAT(n,s)

RDESC (5) = s if the result type is FIXED(n,s) or FLOAT(n,s),
irrelevant otherwise

PDESCi (1) = 0 if Pi is an IN parameter
 1 OUT parameter
 2 INOUT parameter
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PDESCi (2) = 0 if Pi is to be converted to/from type BIT
 1 CHARACTER
 2 LONGCHAR
 3 FIXED
 4 FLOAT

PDESCi (3) = n if the above type is BIT(n), CHARACTER(n),
 LONGCHAR(n), FIXED(n,s) or FLOAT(n,s)

PDESCi (4) = s if the above type is FIXED(n,s) or FLOAT(n,s),
 irrelevant otherwise

PDESCi (5) = 0 if the Fortran Pi is of a simple type
 p a p-dimensional array

PDESCi (6)-(5+p) are the p dimension sizes of the Fortran Pi

PDESCi (6+p) = 0 if the alien Pi is of a simple type
 q a q-dimensional array

PDESCi (7+p)-(6+p+q) are the q dimension sizes of the alien Pi