NAG Library Routine Document

F06HBF

Note: before using this routine, please read the Users' Note for your implementation to check the interpretation of ***bold italicised*** terms and other implementation-dependent details.

1 Purpose

F06HBF broadcasts a complex scalar into a complex vector.

2 Specification

```
SUBROUTINE F06HBF (N, CON, X, INCX)
INTEGER                 N, INCX
COMPLEX (KIND=nag_wp) CON, X(*)
```

3 Description

F06HBF performs the operation

$$x \leftarrow (\alpha, \alpha, \ldots, \alpha)^{\mathrm{T}},$$

where x is an n-element complex vector scattered with stride INCX.

4 References

None.

5 Arguments

1: N – INTEGER *Input*

On entry: n, the number of elements in x.

2: CON – COMPLEX (KIND=nag_wp) *Input*

On entry: the scalar α.

3: X$(*)$ – COMPLEX (KIND=nag_wp) array *Output*

Note: the dimension of the array X must be at least $\max(1, 1 + (\mathrm{N} - 1) \times \mathrm{INCX})$.

On exit: the vector x, x_i is stored in X$(1 + (i-1) \times \mathrm{INCX})$, for $i = 1, 2, \ldots, \mathrm{N}$.

Intermediate elements of X are unchanged.

4: INCX – INTEGER *Input*

On entry: the increment in the subscripts of X between successive elements of x.

Constraint: INCX > 0.

6 Error Indicators and Warnings

None.

7 Accuracy

Not applicable.

8 Parallelism and Performance

F06HBF is not threaded in any implementation.

9 Further Comments

None.

10 Example

None.