

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

$$x \leftarrow (\alpha, \alpha, \dots, \alpha)^T,$$

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

4 References

None.

5 Arguments

- | | | |
|----|--|---------------|
| 1: | N – INTEGER | <i>Input</i> |
| | <i>On entry:</i> n , the number of elements in x . | |
| 2: | CON – COMPLEX (KIND=nag_wp) | <i>Input</i> |
| | <i>On entry:</i> the scalar α . | |
| 3: | X(*) – COMPLEX (KIND=nag_wp) array | <i>Output</i> |
| | Note: the dimension of the array X must be at least $\max(1, 1 + (N - 1) \times \text{INCX})$. | |
| | <i>On exit:</i> the vector x , x_i is stored in $X(1 + (i - 1) \times \text{INCX})$, for $i = 1, 2, \dots, N$. | |
| | Intermediate elements of X are unchanged. | |
| 4: | INCX – INTEGER | <i>Input</i> |
| | <i>On entry:</i> the increment in the subscripts of X between successive elements of x . | |
| | <i>Constraint:</i> $\text{INCX} > 0$. | |

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.
