

# NAG Library Routine Document

## F06KFF

**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

F06KFF copies a real vector to a complex vector.

### 2 Specification

```
SUBROUTINE F06KFF (N, X, INCX, Y, INCY)
  INTEGER          N, INCX, INCY
  REAL (KIND=nag_wp) X(*)
  COMPLEX (KIND=nag_wp) Y(*)
```

### 3 Description

F06KFF performs the operation

$$y \leftarrow x$$

where  $x$  is an  $n$ -element real vector, and  $y$  is an  $n$ -element complex vector scattered with stride INCX and INCY respectively.

### 4 References

None.

### 5 Arguments

- 1: N – INTEGER *Input*  
*On entry:*  $n$ , the number of elements in  $x$  and  $y$ .
- 2: X(\*) – REAL (KIND=nag\_wp) array *Input*  
**Note:** the dimension of the array X must be at least  $\max(1, 1 + (N - 1) \times |INCX|)$ .  
*On entry:* the  $n$ -element vector  $x$ .  
 If  $INCX > 0$ ,  $x_i$  must be stored in  $X(1 + (i - 1) \times INCX)$ , for  $i = 1, 2, \dots, N$ .  
 If  $INCX < 0$ ,  $x_i$  must be stored in  $X(1 - (N - i) \times INCX)$ , for  $i = 1, 2, \dots, N$ .  
 Intermediate elements of X are not referenced.
- 3: INCX – INTEGER *Input*  
*On entry:* the increment in the subscripts of X between successive elements of  $x$ .
- 4: Y(\*) – COMPLEX (KIND=nag\_wp) array *Output*  
**Note:** the dimension of the array Y must be at least  $\max(1, 1 + (N - 1) \times |INCY|)$ .  
*On exit:* the vector  $y$ .  
 If  $INCY > 0$ ,  $y_i$  will be stored in  $Y(1 + (i - 1) \times INCY)$ , for  $i = 1, 2, \dots, N$ .  
 If  $INCY < 0$ ,  $y_i$  will be stored in  $Y(1 - (N - i) \times INCY)$ , for  $i = 1, 2, \dots, N$ .

Intermediate elements of  $Y$  are unchanged.

5: INCY – INTEGER

*Input*

*On entry:* the increment in the subscripts of  $Y$  between successive elements of  $y$ .

## 6 Error Indicators and Warnings

None.

## 7 Accuracy

Not applicable.

## 8 Parallelism and Performance

F06KFF is not threaded in any implementation.

## 9 Further Comments

None.

## 10 Example

None.

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