

NAG Library Routine Document

F06GCF (ZAXPY)

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

F06GCF (ZAXPY) adds a scaled complex vector to an unscaled complex vector.

2 Specification

```
SUBROUTINE F06GCF(N, ALPHA, X, INCX, Y, INCY)
  INTEGER          N, INCX, INCY
  complex*16      ALPHA, X(*), Y(*)
```

The routine may be called by its BLAS name *zaxpy*.

3 Description

F06GCF (ZAXPY) performs the operation

$$y \leftarrow \alpha x + y$$

where x and y are n element complex vectors, and α is a complex scalar.

4 References

None.

5 Parameters

- | | | |
|----|--|---------------------|
| 1: | N – INTEGER | <i>Input</i> |
| | <i>On entry:</i> n , the number of elements in x and y . | |
| 2: | ALPHA – complex*16 | <i>Input</i> |
| | <i>On entry:</i> the scalar α . | |
| 3: | X(*) – complex*16 array | <i>Input</i> |
| | Note: the dimension of the array X must be at least $1 + (N - 1) \text{INCX} $. | |
| | <i>On entry:</i> the incremented array X must contain the n element vector x . | |
| 4: | INCX – INTEGER | <i>Input</i> |
| | <i>On entry:</i> the increment in the subscripts of X between successive elements of x . | |
| 5: | Y(*) – complex*16 array | <i>Input/Output</i> |
| | Note: the dimension of the array Y must be at least $1 + (N - 1) \text{INCY} $. | |
| | <i>On entry:</i> the incremented array Y must contain the n element vector y . | |
| | <i>On exit:</i> the updated vector y . | |
| 6: | INCY – INTEGER | <i>Input</i> |
| | <i>On entry:</i> the increment in the subscripts of Y between successive elements of y . | |

6 Error Indicators and Warnings

None.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

None.
