NAG Fortran Library Chapter Introduction

X03 – Inner Products

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1 Scope of the Chapter

This chapter is concerned with the calculation of innerproducts required by other routines within the Library.

2 Background to the Problems

Some Library routines require to calculate the innerproduct

$$c + \sum_i x_i y_i,$$

preferably in additional precision, but, if this is unavailable or prohibitively expensive, then in basic precision. These routines call Chapter X03 so that machine dependencies of this type can be isolated to this chapter.

3 Recommendations on Choice and Use of Available Routines

Note: refer to the Users' Note for your implementation to check that a routine is available.

Although these routines are primarily intended for use by other Library routines they may be accessed directly by the user:

X03AAF Calculates the innerproduct for real values c, x_i and y_i,

X03ABF Calculates the innerproduct for complex values c, x_i and y_i,

4 Routines Withdrawn or Scheduled for Withdrawal

None.