Function

vDSP_normalize

Computes single-precision mean and standard deviation, and then calculates new elements to have a zero mean and a unit standard deviation.

iOS 6.0+ | iPadOS 6.0+ | Mac Catalyst 13.1+ | macOS 10.8+ | tvOS | visionOS 1.0+ | watchOS 2.0+

```
extern void vDSP_normalize(const float * __A, vDSP_Stride __IA, float * __C, vDSP
_Stride __IC, float * __Mean, float * __StandardDeviation, vDSP_Length __N);
```

Parameters

__A
Single-precision input vector.

__IA
Stride for A.

__C
Single-precision output vector, or NULL (see Discussion below).

__IC
Stride for C.

__Mean
Single-precision mean of the elements of A.

__StandardDeviation
Single-precision standard deviation of the elements of A.

`__N`
Number of elements in `A`.

Discussion

The function calculates values for `Mean` and `StandardDeviation`, then calculates new values for `A` to have a zero mean and unit standard deviation.

For iOS 9.0 and later or macOS 10.11 and later, the production of new elements may be omitted by passing `NULL` for `C`. In this case `A` remains unchanged.

See Also

Normalization Functions

`vDSP_normalizeD`
Computes double-precision mean and standard deviation, and then calculates new elements to have a zero mean and a unit standard deviation.