

GoFast® for Z80/Z180/64180**Features**

- Fast
- ROMable
- Conforms to IEEE 754
- Includes single and double precision
- Includes test programs

Description

GOFAST for Z80 was carefully designed for high performance operation on Z80 and Z180 architectures. The product optimizes for a balance of space and speed.

Speed

Timings for some functions follow. These sample microsecond timings are based on a 6 MHz Z80.

Approximate Timings in Microseconds

(Typical - Maximum)

Functions	Single	Double
add	163-227	550-950
multiply	693-817	3350-3567
divide	905-1267	5583-8000
sin/cos	6667	42667
ln	7167	37000
sqrt	2500	20333

Floating Point Technology

GOFAST for Z80 is based on U S Software's proven floating point algorithms the company has been developing for over a decade. The algorithms have been thoroughly tested using automated methods. GOFAST was specifically optimized and integrated for high performance on Z80 processors.

Functionality

GOFAST for Z80 implements a floating point accumulator (FAC) in read-write memory. Operations and functions are performed using the value in FAC.

GOFAST for Z80 is not naturally reentrant. However, reentrancy can be achieved by saving/restoring the FAC and other GOFAST temporaries during a context switch. An application note included with the product describes the procedure.

- + - * /
- comparison operations
- sqrt
- sin, cos, tan
- atan
- ln, log
- exp, xtoi
- Integer to/from Float conversions
- ASCII to/from Float conversions

GOFAST Support

U S Software maintains a test lab where comprehensive confidence tests are performed on GOFAST in each target environment. A demonstration test program is included with your product delivery, and you are encouraged to run it on your own target hardware to verify system operation. Phone and fax support are provided with the product. Extended support is also available.