

**NAME**

drand48\_r, erand48\_r, lrand48\_r, nrand48\_r, mrand48\_r, jrand48\_r, srand48\_r, seed48\_r, lcong48\_r – generate uniformly distributed pseudo-random numbers reentrantly

**LIBRARY**

Standard C library (*libc*, *-lc*)

**SYNOPSIS**

```
#include <stdlib.h>

int drand48_r(struct drand48_data *restrict buffer,
             double *restrict result);
int erand48_r(unsigned short xsubi[3],
             struct drand48_data *restrict buffer,
             double *restrict result);

int lrand48_r(struct drand48_data *restrict buffer,
             long *restrict result);
int nrand48_r(unsigned short xsubi[3],
             struct drand48_data *restrict buffer,
             long *restrict result);

int mrand48_r(struct drand48_data *restrict buffer,
             long *restrict result);
int jrand48_r(unsigned short xsubi[3],
             struct drand48_data *restrict buffer,
             long *restrict result);

int srand48_r(long int seedval, struct drand48_data *buffer);
int seed48_r(unsigned short seed16v[3], struct drand48_data *buffer);
int lcong48_r(unsigned short param[7], struct drand48_data *buffer);
```

Feature Test Macro Requirements for glibc (see **feature\_test\_macros(7)**):

All functions shown above:

```
/* glibc >= 2.19: */ _DEFAULT_SOURCE
|| /* glibc <= 2.19: */ _SVID_SOURCE || _BSD_SOURCE
```

**DESCRIPTION**

These functions are the reentrant analogs of the functions described in **drand48(3)**. Instead of modifying the global random generator state, they use the supplied data *buffer*.

Before the first use, this struct must be initialized, for example, by filling it with zeros, or by calling one of the functions **srand48\_r()**, **seed48\_r()**, or **lcong48\_r()**.

**RETURN VALUE**

The return value is 0.

**ATTRIBUTES**

For an explanation of the terms used in this section, see **attributes(7)**.

Interface	Attribute	Value
<b>drand48_r()</b> , <b>erand48_r()</b> , <b>lrand48_r()</b> , <b>nrand48_r()</b> , <b>mrnd48_r()</b> , <b>jrand48_r()</b> , <b>srand48_r()</b> , <b>seed48_r()</b> , <b>lcong48_r()</b>	Thread safety	MT-Safe race:buffer

**STANDARDS**

These functions are GNU extensions and are not portable.

**SEE ALSO**

**drand48(3)**, **rand(3)**, **random(3)**