

StreamDevice: mbbi Records

Normal Operation

Depending on the format type, different record fields are used for output and input. The variable x stands for the written or read value.

DOUBLE format (e.g. %f):
Not allowed.

LONG format (e.g. %i):

If any of ZRVL ... FFVL is set (is not 0):

Output: $x=RVAL\&MASK$

Input: $RVAL=x\&MASK$

Note that the record shifts RVAL right by SHFT bits, compares the result with all of ZRVL ... FFVL, and sets VAL to the index of the first match. MASK is initialized to NOBT 1-bits shifted left by SHFT.

If MASK==0 (because NOBT was not set) it is ignored, i.e. $x=RVAL$ and $RVAL=x$.

If none of ZRVL ... FFVL is set (all are 0):

Output: $x=VAL$

Input: $VAL=x$

ENUM format (e.g. %{}):

Output: $x=VAL$

Input: $VAL=x$

STRING format (e.g. %s):

Output: Depending on VAL, one of ZRST or FFST is written. VAL must be in the range 0 ... 15.

Input: If input is equal one of ZRST ... FFST, VAL is set accordingly. Other input strings are not accepted.

Initialization

During initialization, the @init handler is executed, if present. All format converters work like in normal operation.

aai aao ai ao bi bo mbbo mbbiDirect mbboDirect longin longout stringin stringout waveform calcout scalcout

Dirk Zimoch, 2005