SBFX

Signed Bitfield Extract copies a bitfield of <width> bits starting from bit position <lsb> in the source register to the least significant bits of the destination register, and sets destination bits above the bitfield to a copy of the most significant bit of the bitfield.

This is an alias of [SBFM](#). This means:

- The encodings in this description are named to match the encodings of [SBFM](#).
- The description of [SBFM](#) gives the operational pseudocode, any constrained unpredictable behavior, and any operational information for this instruction.

31 30	29	28 27 26 25 24 23 22	21	20 19 18 17 16 15	14 13 12 11 10	9 8 7 6 5	4 3 2 1 0
sf	0 0	1 0 0 1 1 0	N	immr	imms	Rn	Rd

opc

32-bit (sf == 0 && N == 0)

```
SBFX <Wd>, <Wn>, #<lsb>, #<width>
```

is equivalent to

```
SBFM <Wd>, <Wn>, #<lsb>, #(<lsb>+<width>-1)
```

and is the preferred disassembly when BFXPreferred(sf, opc<1>, imms, immr).

64-bit (sf == 1 && N == 1)

```
SBFX <Xd>, <Xn>, #<lsb>, #<width>
```

is equivalent to

```
SBFM <Xd>, <Xn>, #<lsb>, #(<lsb>+<width>-1)
```

and is the preferred disassembly when BFXPreferred(sf, opc<1>, imms, immr).

Assembler Symbols

<Wd>   Is the 32-bit name of the general-purpose destination register, encoded in the "Rd" field.

<Wn>   Is the 32-bit name of the general-purpose source register, encoded in the "Rn" field.

\<Xd\>	Is the 64-bit name of the general-purpose destination register, encoded in the "Rd" field.
\<Xn\>	Is the 64-bit name of the general-purpose source register, encoded in the "Rn" field.
\<lsb\>	For the 32-bit variant: is the bit number of the lsb of the source bitfield, in the range 0 to 31.
	For the 64-bit variant: is the bit number of the lsb of the source bitfield, in the range 0 to 63.
\<width\>	For the 32-bit variant: is the width of the bitfield, in the range 1 to 32-\<lsb\>.
	For the 64-bit variant: is the width of the bitfield, in the range 1 to 64-\<lsb\>.

Operation

The description of [SBFM](#) gives the operational pseudocode for this instruction.

Operational information

If PSTATE.DIT is 1:

- The execution time of this instruction is independent of:
  - The values of the data supplied in any of its registers.
  - The values of the NZCV flags.
- The response of this instruction to asynchronous exceptions does not vary based on:
  - The values of the data supplied in any of its registers.
  - The values of the NZCV flags.