STUMAXH, STUMAXLH

Atomic unsigned maximum on halfword in memory, without return, atomically loads a 16-bit halfword from memory, compares it against the value held in a register, and stores the larger value back to memory, treating the values as unsigned numbers.

- `STUMAXH` does not have release semantics.
- `STUMAXLH` stores to memory with release semantics, as described in *Load-Acquire, Store-Release*.

For information about memory accesses see *Load/Store addressing modes*.

This is an alias of LDUMAXH, LDUMAXAH, LDUMAXALH, LDUMAXLH. This means:

- The encodings in this description are named to match the encodings of LDUMAXH, LDUMAXAH, LDUMAXALH, LDUMAXLH.
- The description of LDUMAXH, LDUMAXAH, LDUMAXALH, LDUMAXLH gives the operational pseudocode, any constrained unpredictable behavior, and any operational information for this instruction.

Integer
(FEAT_LSE)

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
0	1	1	1	1	0	0	0	0	R	1	Rs					0	1	1	0	0	0	Rn					1	1	1	1	1
size								A									opc										Rt				

No memory ordering (R == 0)

```
STUMAXH <Ws>, [<Xn|SP>]
```

is equivalent to

```
LDUMAXH <Ws>, WZR, [<Xn|SP>]
```

and is always the preferred disassembly.

Release (R == 1)

```
STUMAXLH <Ws>, [<Xn|SP>]
```

is equivalent to

```
LDUMAXLH <Ws>, WZR, [<Xn|SP>]
```

and is always the preferred disassembly.

Assembler Symbols

<Ws>	Is the 32-bit name of the general-purpose register holding the data value to be operated on with the contents of the memory location, encoded in the "Rs" field.
<Xn|SP>	Is the 64-bit name of the general-purpose base register or stack pointer, encoded in the "Rn" field.

Operation

The description of LDUMAXH, LDUMAXAH, LDUMAXALH, LDUMAXLH gives the operational pseudocode for this instruction.

Operational information

If PSTATE.DIT is 1, the timing of this instruction is insensitive to the value of the data being loaded or stored.

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