

## TB8 Outline

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16-bit External Address Bus

8-bit External Data Bus

6-bit Transport Address Bus

8-bit Transport Data Bus

Load instructions pull data from transport bus or immediate into buffer.

Store instructions push data from buffer onto transport bus.

| <b>bit</b> | <b>7</b> | <b>6</b> | <b>5..0</b> |
|------------|----------|----------|-------------|
| ld         | 0        | 0        | source      |
| ldi        | 0        | 1        | immediate   |
| st         | 1        | 0        | destination |
| stc        | 1        | 1        | destination |

ld: Load data from source location into transport buffer

ldi: Load data from 6-bit immediate into transport buffer

st: Store data from transport buffer into destination location

stc: Store data from transport buffer into destination location **if** ALU comparator is true

### Control Registers

| <b>type</b> | <b>7..6</b>   | <b>5..4</b>  | <b>3</b> | <b>2</b> | <b>1</b> | <b>0</b> |
|-------------|---|--|----------|----------|----------|----------|
| ALU         | Comparator Control<br>00: =<br>01: ><br>10: <<br>11: bit(s) set | Carry/M Control<br>00: Forced on<br>01: Forced off<br>10: Looped<br>11: M mode | S3       | S2       | S1       | S0       |

Carry flag is latched on ALU result load, allowing carry input on subsequent operations in loop mode.