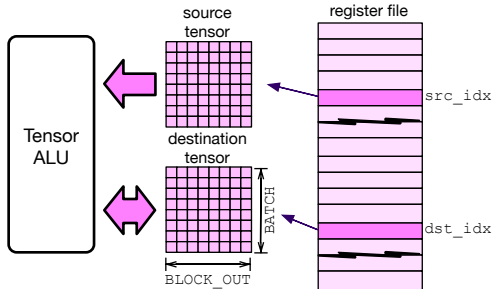


Tensor ALU Micro-Ops

Micro-Op Semantics

MIN(x, y)	$R[x] = R[x] < R[y] ? R[x] : R[y]$
MAX(x, y)	$R[x] = R[x] > R[y] ? R[x] : R[y]$
ADDI(x, C)	$R[x] = R[x] + C$
ADD(x, y)	$R[x] = R[x] + R[y]$
MULI(x, C)	$R[x] = R[x].lo * C$
MUL(x, y)	$R[x] = R[x].lo * R[y].lo$
SHLI(x, C)	$R[x] = R[x] \ll C$
SHRI(x, C)	$R[x] = R[x] \gg C$



ALU Instruction Pseudo-Code:

```

for i0 in range(0, end0):
    for i1 in range(0, end1):
        for uop_idx in range(uop_bgn, uop_end):
            x, y = decode_alu_indices(uop_buffer[upc])
            dst_idx = i0 * x0 + i1 * x1 + x
            stc_idx = i0 * y0 + i1 * y1 + y
            if USE_IMM:
                reg_file[dst_idx] = OP(reg_file[dst_idx], IMM)
            else:
                reg_file[dst_idx] = OP(reg_file[dst_idx], reg_file[src_idx])

```

