## L1 dTLBs

**4KB pages**: 64-entry, 4-way set-associative L1 TLB;
1 cycle access;
9 cycle miss penalty.

**2MB pages**: 32-entry, 4-way set-associative L1 TLB;
1 cycle access;
9 cycle miss penalty.

1GB pages: 4-entry, fullyassociative L1 TLB; 1 cycle access; 9 cycle miss penalty.

## L1 iTLBs

**4KB pages**: 128-entry, 8-way set-associative L1 TLB; 1 cycle access; 9 cycle miss penalty.

**2MB pages**: 16-entry, fully-associative L1 TLB; 1 cycle access; 9 cycle miss penalty.

## **PTWs**

Supports 4 concurrent TLB misses.

# **Unified L2 TLBs**

**4KB/2MB pages**: 1536-entry, 12-way set associative L2 TLB; 14 cycle access.

**1GB pages**: 16-entry, 4-way set- associative L2 TLB;
1 cycle access;
9 cycle miss penalty.

# **Others**

MMU \$: 32-entry, fully-associative; 1 cycle access.

nTLB: 16-entry, fullyassociative; 1 cycle access (from microbenchmark).