The proposed pattern-matching engine achieves distance-measure adaptability through pattern encoding and can therefore cover a wide range of high-performance real-time applications. Key to short nearest-match times is a compact fully-parallel associative-memory core. The performance of a 9.75mm² test-circuit in 0.6μm CMOS technology is about equivalent to a 32bit computer with 1TOPS. The test-circuit suggests possible pattern length ≥768 equivalent bit, >10⁷ pattern/sec throughput, <1.13% winner-input-distance error and <1.35mW power dissipation per reference pattern.