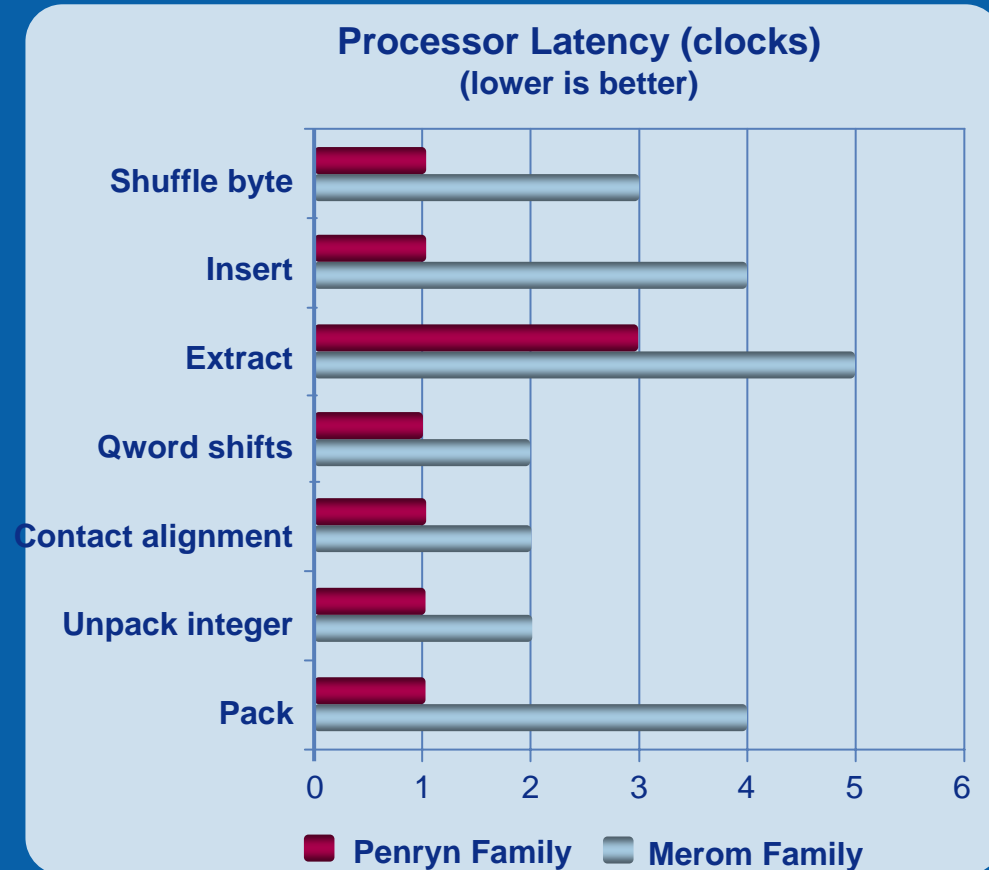


# Super Shuffle Engine

- Shuffle operations required for SSE data formatting operations
  - Unpacking
  - Packing
  - Align concatenated sources
  - Wide shifts
  - Insertion and extraction
  - Setup for horizontal arithmetic functions
- Key enabling capability for SSE4
- Penryn super shuffle engine performs 128 bit operations in a single cycle
- No software changes required



**2X Faster SSE Shuffle Instruction Execution**