Memristor Crossbar Layout

Layer-by-Layer Mapping

Layer 0: 2×40 = 80 memristors

Layer 1: 40×60 = 2400 memristors

Layer 2: 60×40 = 2400 memristors

Layer 3: 40×1 = 40 memristors

TOTAL: 4920 memristors

Circuit Components

Memristors: 4920

Neurons/Activations: 141

Input Encoders: 2

Output Decoders: 1

Implementation:

- Crossbar: 4920 programmable synapses
- Neurons: RC circuits + comparators
- Technology: Can use ReRAM, PCM, or ECRAM