

To read the MCM68764 EPROM in a device or reader configured for the 2764, you'll need a passive 24-pin to 28-pin adapter (no active circuitry required, unlike programming). This assumes your reader sets standard read-mode voltages for the 2764: VCC = 5V, Vpp = 5V, !PGM high, !CE low, and !OE low during data access. The MCM68764's read mode is enabled by pulling its E/Vpp pin (pin 20) low, with no separate !OE or !PGM pins.

The adapter plugs into the 28-pin 2764 socket, and the MCM68764 plugs into the adapter's 24-pin socket. Use the following pin mappings, which align the address, data, power, and ground pins while handling the control differences.

### **Pin Mapping (2764 Socket Pin to MCM68764 Pin)**

- 2764 pin 1 (Vpp) → Not connected (NC); during read, this is 5V but not needed by the MCM68764.
- 2764 pin 2 (A12) → MCM68764 pin 21 (A12)
- 2764 pin 3 (A7) → MCM68764 pin 1 (A7)
- 2764 pin 4 (A6) → MCM68764 pin 2 (A6)
- 2764 pin 5 (A5) → MCM68764 pin 3 (A5)
- 2764 pin 6 (A4) → MCM68764 pin 4 (A4)
- 2764 pin 7 (A3) → MCM68764 pin 5 (A3)
- 2764 pin 8 (A2) → MCM68764 pin 6 (A2)
- 2764 pin 9 (A1) → MCM68764 pin 7 (A1)
- 2764 pin 10 (A0) → MCM68764 pin 8 (A0)
- 2764 pin 11 (DQ0) → MCM68764 pin 9 (DQ0)
- 2764 pin 12 (DQ1) → MCM68764 pin 10 (DQ1)
- 2764 pin 13 (DQ2) → MCM68764 pin 11 (DQ2)
- 2764 pin 14 (GND) → MCM68764 pin 12 (GND)
- 2764 pin 15 (DQ3) → MCM68764 pin 13 (DQ3)
- 2764 pin 16 (DQ4) → MCM68764 pin 14 (DQ4)

- 2764 pin 17 (DQ5) → MCM68764 pin 15 (DQ5)
- 2764 pin 18 (DQ6) → MCM68764 pin 16 (DQ6)
- 2764 pin 19 (DQ7) → MCM68764 pin 17 (DQ7)
- 2764 pin 20 (!CE) → MCM68764 pin 20 (E/Vpp); this enables the chip when low.
- 2764 pin 21 (A10) → MCM68764 pin 19 (A10)
- 2764 pin 22 (!OE) → NC; the MCM68764 has no separate output enable—outputs are active whenever E/Vpp is low.
- 2764 pin 23 (A11) → MCM68764 pin 18 (A11)
- 2764 pin 24 (A9) → MCM68764 pin 22 (A9)
- 2764 pin 25 (A8) → MCM68764 pin 23 (A8)
- 2764 pin 26 (NC) → NC
- 2764 pin 27 (!PGM) → NC; tie to VCC (5V) if your reader requires it high to avoid accidental program mode, but typically not necessary for read-only.
- 2764 pin 28 (VCC) → MCM68764 pin 24 (VCC)

## **Design and Construction Notes**

- **Physical Layout:** Use a 28-pin DIP header or plug as the base (to insert into the 2764 socket). Mount a 24-pin DIP socket on top, offset by 2 pins toward the higher-numbered side. This allows direct overlap for most address and data pins (e.g., 2764 pins 3–13 align with MCM68764 pins 1–11). Wire the non-overlapping pins (e.g., A8, A9, A10, A11, A12, E/Vpp, VCC) using jumper wires or traces on a protoboard/PCB.
- **Components:** No transistors, resistors, or other active parts needed—just wires/solder for connections. A small perfboard or custom PCB can hold the sockets and wires neatly.
- **Compatibility:** This works because the MCM68764's read mode is simpler (combined chip/output enable). Most EPROM readers/programmers hold !CE and !OE low during batch reads/verifies, so tying enable solely to !CE is sufficient. If your specific reader pulses !OE independently while holding !CE high, you may need to modify: connect both !CE and !OE to E/Vpp via a logic OR gate (e.g., using diodes or a 74HC32) so E/Vpp is low only when both are low.
- **Testing:** Insert the adapter, power on at 5V only, and verify data readout matches known contents (e.g., all 0xFF if erased). Avoid programming mode in your reader to prevent accidental high-voltage application.
- **Limitations:** This is for reading only. For programming, add the switching circuit described previously.

If your reader supports the MCM68764 natively, use that instead—no adapter needed.