

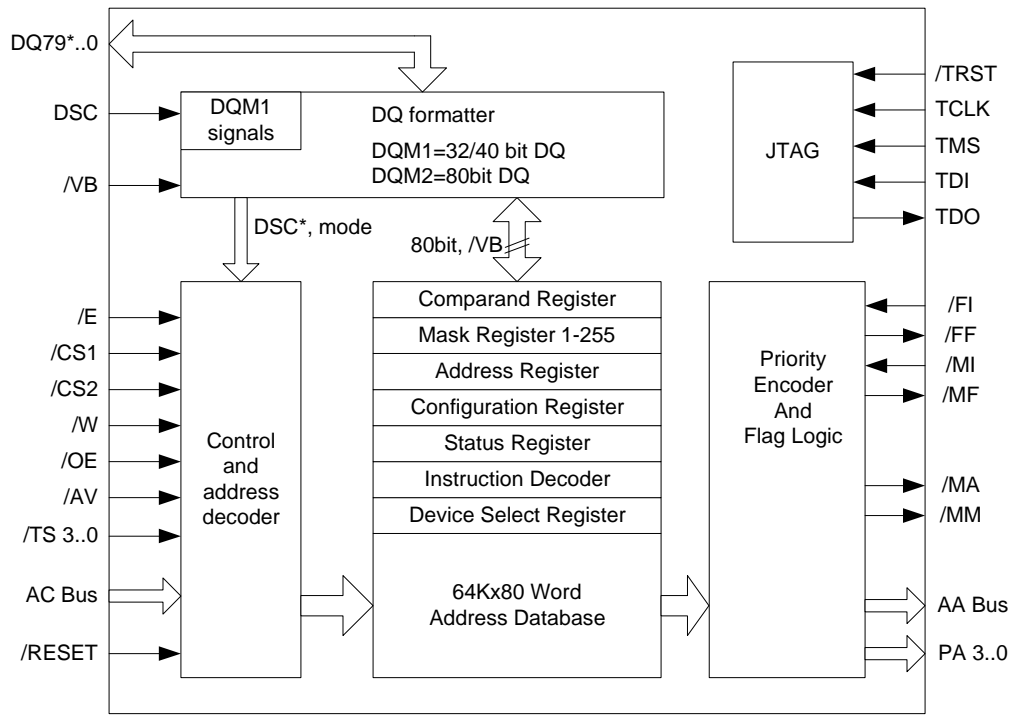
# FLEXHARRP 64K80

## APPLICATION BENEFITS

- High performance Content Addressable Memory
- Performs lookups at every communication layer (2-7)
- Enables 10Gb Ethernet IPv6 protocol at wirespeed
- 5 ports 10Gb Ethernet IPv4CIDR lookups. Using the enhanced features this number can extend up to 10 ports of 10Gb Ethernet lookups at wire speed
- Supports concurrent lookup across 4 separate tables
- Energy saving methods for lowest power solution
- Simple instruction set, supporting a myriad of applications (even non networking)
- User selectable interface width (32bit/40bit or 80bit wide)
- Cascadable up to 16 devices for increased depth
- Low latency match address output port (< 4ns)
- Asynchronous device (low latency, low power)

## DISTINCTIVE CHARACTERISTICS

- 5Mbit CAM (65536 entries of 80-bit wide )
- Ternary or binary compares on selectable widths (40/80 bit base width)
- 12 ns deterministic compare cycle
- Supports 4 tables
- Flexible word width (up to 20Kbit wide words)
- Address/Control bus directly controls device operations for faster operation and higher throughput
- 16-bit Match Address Output port
- 63 selectable Mask Registers
- JTAG interface
- 15x15mm BGA package
- 1.2 Volt Core Voltage, 2.5V IO (3.3V tolerant)
- Total Power Consumption continuous compares at full speed < 3 Watt



\* Depending on selected DQ mode

**Figure 1: Device Block Diagram**

## FlexHarrp top view

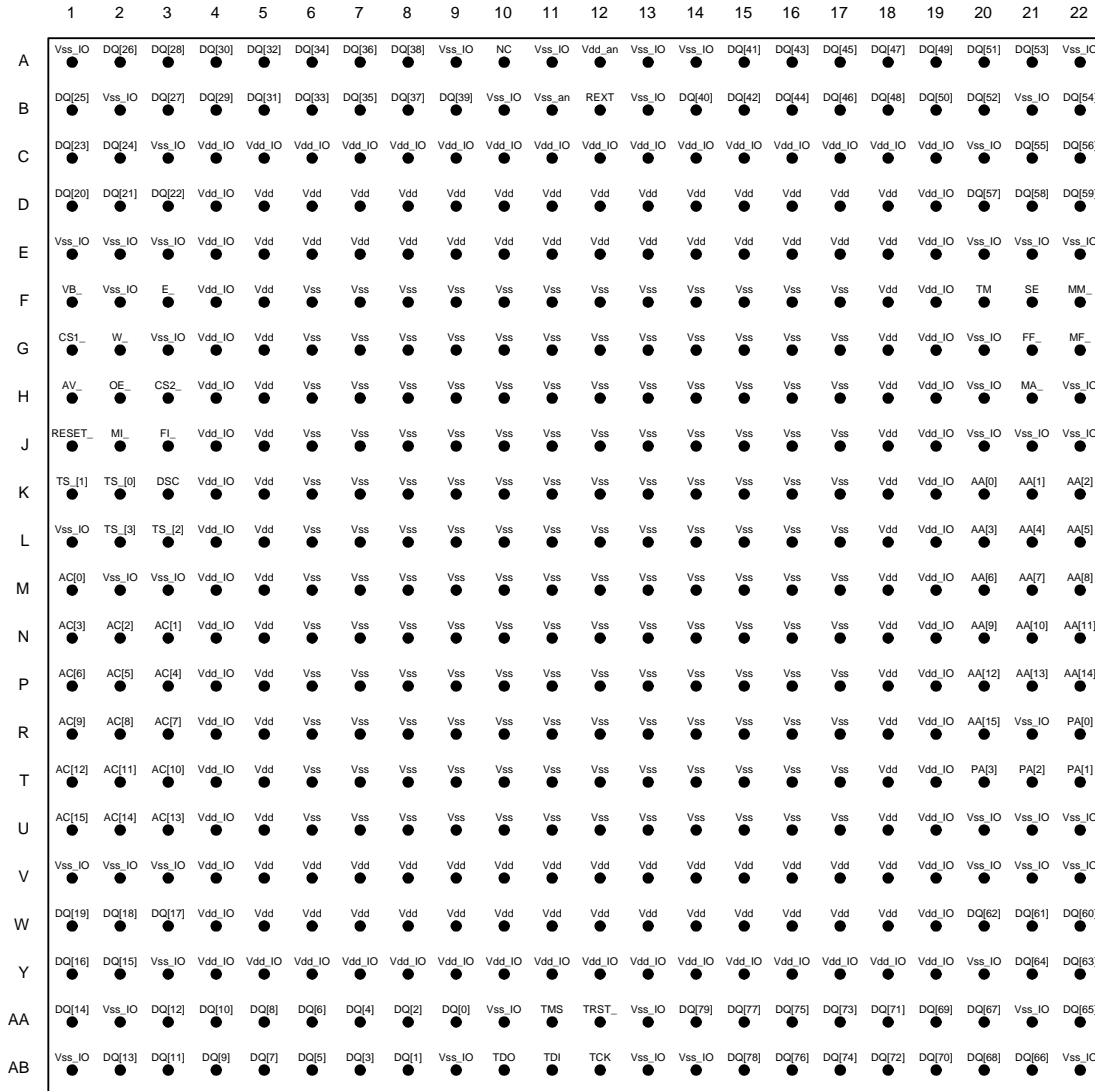


Figure 2: 484pin BGA pinout (15x15mm 0.5mm pitch)

Group	Pin	Comment	count
Power	Vdd / Vss	1.2V Core supply voltage	224 (80 + 144)
	Vdd_IO / Vss_IO	2.5V-3.3V IO supply voltage	114 (64 +50)
	Vdd_an / Vss_an	1.2V analog supply voltage (Reference voltage)	2
Analog	Rext	External 1% Resistor	1
Digital	Inputs / Outputs	IO pins (flexible configurations) 2.5-3.3V tolerant	143

Table 1: Preliminary pin details