

# 8 GB DDR3L SDRAM – AS4Cxxx SERIE

## EIGENSCHAFTEN

- » VDD = VDDQ = 1.35V (1.283–1.45V)
- » Backward compatible to VDD = VDDQ = 1.5V ±0.075V
- » Differential bidirectional data strobe
- » 8n-bit prefetch architecture
- » Differential clock inputs (CK, CK#)
- » 8 internal banks
- » Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals
- » Programmable CAS (READ) latency (CL)
- » Programmable posted CAS additive latency (AL)
- » Programmable CAS (WRITE) latency (CWL)
- » Fixed burst length (BL) of 8 and burst chop (BC) of 4 (via the mode register set [MRS])
- » Selectable BC4 or BL8 on-the-fly (OTF)
- » Self refresh mode
- » TC of 0°C to +95°C
  - 64ms, 8192-cycle refresh at 0°C to +85°C
  - 32ms at +85°C to +95°C
- » Self refresh temperature (SRT)
- » Automatic self refresh (ASR)
- » Write leveling
- » Multipurpose register
- » Output driver calibration

Der **DDR3 SDRAM** ist ein Hochgeschwindigkeits-CMOS DRAM. Er ist intern konfiguriert als 8-Bank DRAM, ≤ 1.5V.

**AS4C2GM4D3L – 256 Meg x 4 x 8 banks**

**AS4C1GM8D3L – 128 Meg x 8 x 8 banks**

**AS4C512M16D3L – 64 Meg x 16 x 8 banks**

## OPTIONEN

- » Configuration
  - 2 Gig x 4 2G4
  - 1 Gig x 8 1G8
  - 512 Meg x 16 512M16
- » FBGA package (Pb-free) – x4, x8
  - 78-ball (9mm x 13.2mm) B
- » FBGA package (Pb-free) – x16
  - 96-ball (9mm x 14mm) B
- » Timing – cycle time
  - 938 ps @ CL = 14 (DDR3-2133) -09
  - 1.07ns @ CL = 13 (DDR3-1866) -10
  - 1.25ns @ CL = 11 (DDR3-1600) -12
- » Operating temperature
  - Commercial (0°C ≤ TC ≤ +95°C) C
  - Industrial (–40°C ≤ TC ≤ +95°C) I

## MARKING

## BESTELLINFORMATIONEN

TEILEBEZEICHNUNG	TAKTFREQUENZ	DATEN RATE	BETRIEBSTEMPERATUR	GEHÄUSE	SPANNUNGSVERSORGUNG
AS4C2GM4D3L-12BCN	800 MHz	1600	Commercial	78-ball (9mm×13.2mm) FBGA	1.35 V (1.283 V ... 1.45 V)
AS4C2GM4D3L-12BIN	800 MHz	1600	Industrial	78-ball (9mm×13.2mm) FBGA	1.35 V (1.283 V ... 1.45 V)
AS4C1GM8D3L-12BCN	800 MHz	1600	Commercial	78-ball (9mm×13.2mm) FBGA	1.35 V (1.283 V ... 1.45 V)
AS4C1GM8D3L-12BIN	800 MHz	1600	Industrial	78-ball (9mm×13.2mm) FBGA	1.35 V (1.283 V ... 1.45 V)
AS4C512GM16D3L-12BCN	800 MHz	1600	Commercial	96-ball (9mm×14mm) FBGA	1.35 V (1.283 V ... 1.45 V)
AS4C512GM16D3L-12BIN	800 MHz	1600	Industrial	96-ball (9mm×14mm) FBGA	1.35 V (1.283 V ... 1.45 V)