

旺宏推荐选型



旺宏电子—创新型非易失半导体存储器解决方案的领导者，是世界上ROM和串行NOR Flash产品的最大供应商，同时也生产并行NOR Flash和安全Flash，为用户提供了低价格、高性能和高可靠性的Flash产品。

并行NOR Flash有多种电压可选，容量从4Mb到512Mb不等，每种型号都有多种封装可选。此外，针对4Mb和8Mb的产品，旺宏电子还提供了4mm×6mm的BGA封装，非常适合对空间要求严格的场合。

并行NOR Flash

| Part number | Density | Organization | Access Times(ns) | Package | Vcc |
|------------------|---------|--------------|------------------|--|------|
| 5V标准读访问 | | | | | |
| MX29F200CT/B | 2Mb | × 8/ × 16 | 70/90 | 44-SOP,48-TSOP | 5V |
| MX29F040C | 4Mb | × 8 | 70/90 | 32-TSOP,32-PLCC | 5V |
| MX29F400CT/B | 4Mb | × 8/ × 16 | 70/90 | 48-TSOP ,44-SOP | 5V |
| MX29F800CT/B | 8Mb | × 8/ × 16 | 70/90 | 44-SOP,48-TSOP, 48-TFBGA | 5V |
| 3V标准读访问 | | | | | |
| MX29LV004CT/B | 4Mb | × 8 | 55R/70/90 | 32-TSOP,32-PLCC | 3V |
| MX29LV040C | 4Mb | × 8 | 55R/70/90 | 32-TSOP,32-PLCC | 3V |
| MX29LV400CT/B | 4Mb | × 8/ × 16 | 55R/70/90 | 48-SOP,48-TSOP,48-WFBGA,48-TFBGA,48-LFBGA,48-XFLGA | 3V |
| MX29LV800CT/B | 8Mb | × 8/ × 16 | 55R/70/90 | 48-SOP,48-TSOP,48-WFBGA,48-TFBGA,48-LFBGA,48-XFLGA | 3V |
| MX29LV160DT/B | 16Mb | × 8/ × 16 | 55R/70/90 | 48-SOP,48-TSOP,48-WFBGA,48-TFBGA,48-LFBGA,48-XFLGA | 3V |
| MX29LV161DT/B | 16Mb | × 16 | 90 | 48-TSOP, 48-WFBGA, 48-TFBGA, 48-XFLGA | 3V |
| MX29LV320ET/B | 32Mb | × 8/ × 16 | 70 | 48-TSOP, 48-TFBGA, 48-LFBGA, 44-SOP | 3V |
| MX29LV321DT/B | 32Mb | × 16 | 90 | 48-TSOP, 48-TFBGA | 3V |
| MX29LV640ET/B | 64Mb | × 8/ × 16 | 70 | 48-TSOP, 48-LFBGA | 3V |
| MX29LV128DT/B | 128Mb | × 8/ × 16 | 90/120 | 48-TSOP, 56-TSOP, 70-SSOP | 3V |
| 1.8V标准读访问 | | | | | |
| MX29SL402CT/B | 4Mb | × 8/ × 16 | 90 | 48-TSOP, 48-WFBGA, 48-TFBGA, 48-LFBGA | 1.8V |
| MX29SL800CT/B | 8Mb | × 8/ × 16 | 90 | 48-TSOP, 48-WFBGA, 48-TFBGA, 48-LFBGA | 1.8V |
| 页模式读访问 | | | | | |
| MX29GL320EH/L | 32Mb | × 8/ × 16 | 70 | 56-TSOP, 64-FBGA | 3V |
| MX29GL320ET/B | 32Mb | × 8/ × 16 | 70 | 48-TSOP, 48-LFBGA | 3V |
| MX29GL640EH/L | 64Mb | × 8/ × 16 | 90 | 56-TSOP, 64-FBGA | 3V |
| MX29GL640ET/B | 64Mb | × 8/ × 16 | 90 | 48-TSOP, 48-LFBGA | 3V |
| MX29GL128EH/L | 128Mb | × 8/ × 16 | 90 | 56-TSOP, 64-FBGA,70-SSOP | 3V |
| MX29GL128EU/D | 128Mb | × 8/ × 16 | 110 | 56-TSOP, 64-FBGA | 3V |
| MX29GL256EH/L | 256Mb | × 8/ × 16 | 90R | 56-TSOP, 64-FBGA,70-SSOP | 3V |
| MX29GL256EU/D | 256Mb | × 8/ × 16 | 110 | 56-TSOP, 64-FBGA | 3V |
| MX29GL512EH/L** | 512Mb | × 8/ × 16 | 110R | 56-TSOP, 64-FBGA,70-SSOP | 3V |

旺宏提供业界标准串行NOR Flash产品，容量从512Kb至256Mb，并提供和以前产品兼容的MXSMIO™系列和MXSMIO™ Duplex(DTR)系列产品。

串行NOR Flash

| Interface | Part number | Density | Organization | I/O Bus | Package | Clock Speed(MHZ) |
|-----------|----------------|---------|--------------|---------|---|------------------|
| 3V SPI接口 | 标准SPI接口 | | | | | |
| | MX25L512C | 512Kb | 4Kb/64Kb | 单 | 8-SOP, 8-TSSOP,8-USON(2 × 3mm) | 85 |
| | MX25L1005C | 1Mb | 4Kb/64Kb | 单 | 8-SOP,8-USON(2 × 3mm) | 85 |
| | MX25L2006E | 2 Mb | 4Kb/64Kb | 单/双 | 8-SOP,8-WSON(6 × 5mm) | 86/80 |
| | MX25L4006E | 4 Mb | 4Kb/64Kb | 单/双 | 8-SOP, 8-PDIP,8-WSON(6 × 5mm) | 86/80 |
| | MX25L8006E | 8 Mb | 4Kb/64Kb | 单/双 | 8-SOP, 8-PDIP,8-WSON(6 × 5mm),8-USON(4 × 4mm) | 86/80 |
| | MX25L1606E | 16 Mb | 4Kb/64Kb | 单/双 | 8-SOP, 8-PDIP, 16-SOP,8-WSON(6 × 5mm),8-USON(4 × 4mm) | 86/80 |
| | MX25L3206E | 32 Mb | 4Kb/64Kb | 单/双 | 8-SOP, 8-PDIP, 16-SOP,8-WSON(6 × 5mm),8-USON(4 × 4mm) | 86/80 |
| | MX25L6406E | 64 Mb | 4Kb/64Kb | 单/双 | 8-SOP,16-SOP,8-WSON(8 × 6mm) | 86/80 |
| | 默认写保护 | | | | | |
| | MX25L1025C | 1Mb | 4Kb/64Kb | 单 | 150mil 8-SOP | 85 |
| | MX25L2026E | 2Mb | 4Kb/64Kb | 单 | 150mil 8-SOP | 85 |
| | MX25L2026C | 2Mb | 4Kb/64Kb | 单 | 150mil 8-SOP | 85 |
| | MX25L4026E | 4Mb | 4Kb/64Kb | 单 | 150mil 8-SOP | 85 |
| | MX25L3225D | 32Mb | 4Kb/64Kb | 单/双/多 | 200mil 8-SOP | 104/75/75 |

旺宏推荐选型



| Interface | Part number | Density | Organization | I/O Bus | Package | Clock Speed(MHz) |
|---------------|----------------------------|---------------|---------------|-------------------------|---------------------------------------|------------------|
| 3V SPI接口 | MXSMIO™ & MXSMIO™ Duplex系列 | | | | | |
| | MX25L1635E | 16Mb | 4Kb/64Kb | 单/双/多 | 8-SOP, 16-SOP, 8-WSON(6×5mm) | 104/150/300 |
| | MX25L1636D | 16Mb | 4Kb/64Kb | 单/双/多 | 8-SOP, 16-SOP | 86/150/300 |
| | MX25L1636E | 16Mb | 4Kb/64Kb | 单/双/多 | 8-SOP, 16-SOP | 133/133/133 |
| | MX25L3235D | 32Mb | 4Kb/64Kb | 单/双/多 | 8-SOP, 16-SOP, 8-WSON(6×5mm) | 104/150/300 |
| | MX25L3236D | 32Mb | 4Kb/64Kb | 单/双/多 | 8-SOP | 104/150/300 |
| | MX25L3237D | 32Mb | 4Kb/64Kb | 单/双/多 | 16-SOP, 8-WSON(6×5mm) | 86/150/300 |
| | MX25L6436E | 64Mb | 4Kb/32Kb/64Kb | 单/双/多 | 8-SOP | 104/140/280 |
| | MX25L6445E | 64Mb | 4Kb/32Kb/64Kb | 单/双/多/DTR | 8-SOP, 16-SOP, 8-WSON(8×6mm) | 104/140/280/400 |
| | MX25L12836E | 128Mb | 4Kb/32Kb/64Kb | 单/双/多 | 16-SOP | 104/140/280 |
| MX25L12845E | 128Mb | 4Kb/32Kb/64Kb | 单/双/多/DTR | 16-SOP, 8-WSON**(8×6mm) | 104/140/280/400 | |
| MX25L25635E** | 256Mb | 4Kb/32Kb/64Kb | 单/双/多 | 16-SOP | 80/140/280 | |
| 2.5V SPI接口 | 标准SPI接口 | | | | | |
| | MX25V512C | 512Kb | 4KB / 64KB | 单 | 8-USON(2×3mm),8-TSSOP | 50 |
| | MX25V4005C | 4Mb | 4KB / 64KB | 单 | 8-SOP,8-WSON(6×5mm) | 50 |
| | MX25V4006E | 4Mb | 4KB / 64KB | 单 | 8-SOP,8-WSON(6×5mm) | 75/70 |
| | MX25V8005 | 8 Mb | 4KB / 64KB | 单 | 8-SOP,8-WSON(6×5mm) | 50 |
| | 多端输入、多端输出 | | | | | |
| | MX25V4035 | 4Mb | 4Kb/32Kb/64Kb | 单/双/多 | 8-SOP, 8-WSON(6×5mm) | 66/100/200 |
| MX25V8035 | 8Mb | 4Kb/32Kb/64Kb | 单/双/多 | 8-SOP, 8-WSON(6×5mm) | 66/100/200 | |
| 1.8V SPI接口 | MXSMIO™系列 | | | | | |
| | MX25U4035 | 4Mb | 4Kb/32Kb/64Kb | 单/双/多 | 8-SOP, 8-WSON(6x5mm) **, 8USON(4×4mm) | 40/80/132 |
| | MX25U8035 | 8Mb | 4Kb/32Kb/64Kb | 单/双/多 | 8-SOP, 8-WSON(6x5mm) **, 8USON(4×4mm) | 40/80/132 |
| | MX25U1635E** | 16Mb | 4Kb/32Kb/64Kb | 单/双/多 | 8-SOP, 8-USON(4×4mm) | 104/168/416 |
| | MX25U3235E** | 32Mb | 4Kb/32Kb/64Kb | 单/双/多 | 8-SOP, 8-WSON(6×5mm) | 104/168/416 |
| MX25U6435E** | 64Mb | 4Kb/32Kb/64Kb | 单/双/多 | 8-WSON(6×5mm) | 84/168/336 | |

为了保护用户数据不被恶意读取，旺宏电子提供了安全Flash产品。它们通常用于机顶盒、数字电视以及其它对代码要求严格的场合。

安全Flash

| Part number | Density | Organization | Access Time(ns) | Package | Vcc |
|--------------------|---------|--------------|-----------------|------------------------------------|-----|
| 标准读访问(串行NOR Flash) | | | | | |
| MX25L1608D | 16Mb | ×1/×2 | 86/50 | 8-SOP,16-SOP, 8-PDIP,8-WSON,8-USON | 3V |
| MX25L1608E | 16Mb | ×1/×2 | 86/80 | 8-SOP | 3V |
| MX25L1655D | 16Mb | ×1/×2/×4 | 104/75/75 | 8-SOP | 3V |
| MX25L3208D | 32Mb | ×1/×2 | 86/50 | 8-SOP,16-SOP, 8-PDIP,8-WSON,8-USON | 3V |
| MX25L3208E | 32Mb | ×1/×2 | 86/80 | 8-SOP | 3V |
| MX25L3255D | 32Mb | ×1/×2/×4 | 104/75/75 | 8-SOP,24-BGA | 3V |
| MX25L6408D | 64Mb | ×1/×2 | 86/50 | 16-SOP,8-WSON | 3V |
| MX25L6408E | 64Mb | ×1/×2 | 86/80 | 8-SOP,16-SOP | 3V |
| MX25L6455D | 64Mb | ×1/×2/×4 | 104/70/70 | 16-SOP,24-TFBGA | 3V |
| MX25L12855D | 128Mb | ×1/×2/×4 | 104/70/70 | 16-SOP,24-TFBGA | 3V |
| MX25L25655E | 256Mb | ×1/×2/×4 | 104/70/70 | 16-SOP,24-TFBGA | 3V |
| 标准读访问 | | | | | |
| MX29LA320DHL | 32Mb | ×8/×16 | 70 | 64-FBGA | 3V |
| MX29LA321DHL | 32Mb | ×8/×16 | 70 | 64-FBGA | 3V |
| MX29LA640EHL | 64Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| MX29LA641DHL | 64Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| MX29LA128DT/B | 128Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| MX29LA129DT/B | 128Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| 页模式读访问 | | | | | |
| MX29GA320E H/L | 32Mb | ×8/×16 | 70 | 64-FBGA | 3V |
| MX29GA321E C/F | 32Mb | ×8/×16 | 70 | 64-FBGA | 3V |
| MX29GA321E H/L | 32Mb | ×8/×16 | 70 | 64-FBGA | 3V |
| MX29GA640E H/L | 64Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| MX29GA641E C/F | 64Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| MX29GA641E H/L | 64Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| MX29GA128E H/L | 128Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| MX29GA129E C/F | 128Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| MX29GA129E H/L | 128Mb | ×8/×16 | 90 | 64-FBGA | 3V |
| MX29GA256E H/L | 256Mb | ×8/×16 | 90R | 64-FBGA | 3V |
| MX29GA257E C/F | 256Mb | ×8/×16 | 90R | 64-FBGA | 3V |
| MX29GA257E H/L | 256Mb | ×8/×16 | 90R | 64-FBGA | 3V |

作为掩膜ROM行业的领导者，旺宏电子继续为客户提供最先进的掩膜ROM产品。在过去8年，旺宏是掩膜ROM行业最大的供应商，并将继续为用户提供高品质的产品。

ROM

| Part number | Density | Organization | Package | Access Time(ns) |
|-------------|----------|--------------|---------------------------------|-----------------|
| 并行ROM | | | | |
| MX23L1610 | 16M bit | 2M×8/1M×16 | 42-PDIP,44-SOP, 44-TSOP,48-TSOP | 70 |
| MX23L1611 | 16M bit | 2M×8/1M×16 | 42-PDIP,44-SOP, 48-TSOP | 100 |
| MX23L6410A | 64M bit | 8M×8/4M×16 | 48-TSOP | 70 |
| MX23L6423A | 64M bit | 8M×8/4M×16 | 48-TSOP | 90 |
| MX23L12810A | 128M bit | 16M×8/8M×16 | 48-TSOP | 100 |
| MX23L12823A | 128M bit | 16M×8/8M×16 | 56-TSOP | 100 |
| 串行ROM | | | | |
| MX23L1654 | 16Mb | 16M×1 | 16-SOP | 20 |
| MX23L3254 | 32Mb | 32M×1 | 16-SOP | 20 |
| MX23L6454 | 64Mb | 64M×1 | 16-SOP | 20 |
| MX23L12854 | 128Mb | 128M×1 | 16-SOP | 20 |