

CYPRESS PRODUCT SELECTOR GUIDE

MEMORIES

SEPTEMBER 2009

AUTOMOTIVE • CAPSense™ CAPACITIVE TOUCH SENSING • CLOCKS AND BUFFERS • LIGHTING AND POWER CONTROL • MEMORIES • OPTICAL AND IMAGE SENSING • PHYSICAL LAYER DEVICE • PSoC® PROGRAMMABLE SYSTEM-ON-CHIP • TRUETOUCH™ TOUCH SCREEN SOLUTIONS • USB SOLUTIONS • WEST BRIDGE® PERIPHERAL CONTROLLERS • WIRELESS/RF



MEMORIES

SYNCHRONOUS SRAMS

Cypress designs and markets a broad portfolio of high-speed SRAMs used in wireless, networking, military, medical, and imaging applications. Cypress boasts the highest density leading-edge SRAM technology.

Standard Synchronous SRAMs

Optimized for long series of Read and Write sequences. Typically, these SRAMs can double the performance of a typical Fast Asynchronous SRAM in the same application. Standard Synchronous SRAMs come in three different flavors: Pipelined Single-Cycle Deselect, Pipelined Double-Cycle Deselect, and Flow-Through.

NoBL™ SRAMs

The performance of a Standard Synchronous SRAM in applications that have frequent WRITE to READ transitions is limited. NoBL™ was invented in order to increase bandwidth in applications, like networking, that make this transition frequently.

QDR™ SRAMs

QDR™ SRAMs are high performance SRAM architectures targeted for high-speed wireless and networking applications requiring data rates of greater than 250 MHz.

QDR-II devices have an added source synchronous clocking technique to enable a higher frequency of operation. These higher frequencies are enabled by an on-chip Delay Lock Loop, or DLL.

QDR-II+ offers speeds up to 50% faster than QDR-II and supports both 2 and 2.5 cycle read latencies.

DDR SRAMs

The DDR family comes in DDR-I, DDR-II/II+ Separate IO, and DDR-II/II+ Common IO versions. The differences between DDR-I, DDR-II, and DDR-II+ are similar to that of QDR-I, QDR-II, and QDR-II+.

Note: QDR™ and DDR™ are trademarks of the QDR Consortium. Please visit www.qdrconsortium.org for more information.

Standard Synchronous SRAMs

Part Number	Status	Architecture	Density (Mb)	Organization	Vcc (V)	Package	Speeds Available (MHz)
CY7C1297H	In Production	Flow-Through	1	64 Kb x 18	3.3	100 TQFP	133
CY7C1324H	In Production	Flow-Through	2	128 Kb x 18	3.3	100 TQFP	133
CY7C1325G	In Production	Flow-Through	4	256 Kb x 18	3.3	100 TQFP	100, 133
CY7C1327G	In Production	Pipeline Single Cycle Deselect	4	256 Kb x 18	3.3	100 TQFP	133, 166
CY7C1328G	In Production	Pipeline Double Cycle Deselect	4	256 Kb x 18	3.3	100 TQFP	133
CY7C1329H	In Production	Pipeline Single Cycle Deselect	2	64 Kb x 32	3.3	100 TQFP	133, 166
CY7C1338G	In Production	Flow-Through	4	128 Kb x 32	3.3	100 TQFP/WAFER	100, 133
CY7C1339G	In Production	Pipeline Single Cycle Deselect	4	128 Kb x 36	3.3	100 TQFP/119 BGA	100, 133
CY7C1345G	In Production	Flow-Through	4	128 Kb x 36	3.3	100 TQFP/119 BGA	100, 133
CY7C1346H	In Production	Pipeline Single Cycle Deselect	2	64 Kb x 36	3.3	100 TQFP	166
CY7C1347G	In Production	Pipeline Single Cycle Deselect	4	128 Kb x 36	3.3	100 TQFP/119 BGA	133, 166, 200, 250
CY7C1360C	In Production	Pipeline Single Cycle Deselect	9	256 Kb x 36	3.3	100 TQFP/119 BGA/165 FBGA	166, 200
CY7C1361C	In Production	Flow-Through	9	256 Kb x 36	3.3	100 TQFP/119 BGA	100, 133
CY7C1362C	In Production	Pipeline Single Cycle Deselect	9	512 Kb x 8	3.3	100 TQFP	166, 200
CY7C1363C	In Production	Flow-Through	9	512 Kb x 18	3.3	100 TQFP	133
CY7C1366C	In Production	Pipeline Double Cycle Deselect	9	256 Kb x 36	3.3	100 TQFP/119 BGA	166
CY7C1367C	In Production	Pipeline Double Cycle Deselect	9	512 Kb x 18	3.3	100 TQFP	166
CY7C1368C	In Production	Pipeline Double Cycle Deselect	9	256 Kb x 32	3.3	100 TQFP	166
CY7C1380D	In Production	Pipeline Single Cycle Deselect	18	512 Kb x 36	3.3	100 TQFP/165 FBGA	167, 200, 250
CY7C1380F	In Production	Pipeline Single Cycle Deselect	18	512 Kb x 36	3.3	119 BGA	167
CY7C1381D	In Production	Flow-Through	18	512 Kb x 36	3.3	100 TQFP/165 FBGA	100, 133
CY7C1381F	In Production	Flow-Through	18	512 Kb x 36	3.3	119 BGA	133
CY7C1382D	In Production	Pipeline Single Cycle Deselect	18	1 Mb x 18	3.3	100 TQFP	167, 200
CY7C1383D	In Production	Flow-Through	18	1 Mb x 18	3.3	100 TQFP	133
CY7C1386D	In Production	Pipeline Double Cycle Deselect	18	512 Kb x 36	3.3	100 TQFP	167, 200
CY7C1387D	In Production	Pipeline Double Cycle Deselect	18	1 Mb x 18	3.3	100 TQFP	167
CY7C1440AV33	In Production	Pipeline Single Cycle Deselect	36	1 Mb x 36	3.3	100 TQFP/165 FBGA	167, 250
CY7C1441AV33	In Production	Flow-Through	36	1 Mb x 36	3.3	100 TQFP/165 FBGA	133
CY7C1444AV33	In Production	Pipeline Double Cycle Deselect	36	1 Mb x 36	3.3	100 TQFP	167
CY7C1480BV25	In Production	Pipeline Single Cycle Deselect	72	2 Mb x 36	2.5	100 TQFP/165 FBGA	167, 200
CY7C1480BV33	In Production	Pipeline Single Cycle Deselect	72	2 Mb x 36	3.3	100 TQFP/165 FBGA	167, 200, 250
CY7C1480V25	In Production	Pipeline Single Cycle Deselect	72	2 Mb x 36	2.5	165 FBGA	200
CY7C1480V33	In Production	Pipeline Single Cycle Deselect	72	2 Mb x 36	3.3	100 TQFP/165 FBGA	167, 200, 250

NoBL

Part Number	Status	Architecture	Density (Mb)	Organization	Vcc (V)	Package	Speeds Available (MHz)
CY7C1231H	In Production	Flow-Through	2	128 Kb x 18	3.3	100 TQFP	133
CY7C1334H	In Production	Pipeline	2	64 Kb x 32	3.3	100 TQFP	166
CY7C1350G	In Production	Pipeline	4	128 Kb x 36	3.3	100 TQFP/119 BGA	100, 166, 200, 250
CY7C1351G	In Production	Flow-Through	4	128 Kb x 36	3.3	100 TQFP	100, 133
CY7C1352G	In Production	Pipeline	4	256 Kb x 18	3.3	100 TQFP	133
CY7C1353G	In Production	Flow-Through	4	256 Kb x 18	3.3	100 TQFP	100
CY7C1354C	In Production	Pipeline	9	256 Kb x 36	3.3	100 TQFP/119 BGA/165 FBGA	166, 200
CY7C1354CV25	In Production	Pipeline	9	256 Kb x 36	2.5	100 TQFP/165 FBGA	166, 200
CY7C1354DV25	In Production	Pipeline	9	256 Kb x 36	2.5	165 FBGA	200
CY7C1355C	In Production	Flow-Through	9	256 Kb x 36	3.3	100 TQFP/119 BGA	100, 133
CY7C1356C	In Production	Pipeline	9	512 Kb x 8	3.3	100 TQFP/119 BGA	166, 200, 250
CY7C1356CV25	In Production	Pipeline	9	512 Kb x 8	2.5	100 TQFP	166, 200
CY7C1357C	In Production	Flow-Through	9	512 Kb x 8	3.3	100 TQFP/165 FBGA	100, 133
CY7C1370D	In Production	Pipeline	18	512 Kb x 36	3.3	100 TQFP/119 BGA/165 FBGA	167, 200, 250
CY7C1370DV25	In Production	Pipeline	18	512 Kb x 36	2.5	100 TQFP/165 FBGA	167, 200, 250
CY7C1370V25	In Production	Pipeline	18	512 Kb x 36	2.5	165 FBGA	200
CY7C1371D	In Production	Flow-Through	18	512 Kb x 36	3.3	100 TQFP/119 BGA	100, 133
CY7C1372D	In Production	Pipeline	18	1 Mb x 18	3.3	100 TQFP/119 BGA	167, 200
CY7C1372DV25	In Production	Pipeline	18	1 Mb x 18	2.5	100 TQFP	167
CY7C1373D	In Production	Flow-Through	18	1 Mb x 18	3.3	100 TQFP	100
CY7C1460AV25	In Production	Pipeline	36	1 Mb x 36	2.5	100 TQFP/165 FBGA	167, 200, 250
CY7C1460AV33	In Production	Pipeline	36	1 Mb x 36	3.3	100 TQFP/165 FBGA/WAFER	167, 200, 250
CY7C1461AV33	In Production	Flow-Through	36	1 Mb x 36	3.3	100 TQFP	133
CY7C1462AV25	In Production	Pipeline	36	2 Mb x 18	2.5	100 TQFP/165 FBGA	167, 200
CY7C1462AV33	In Production	Pipeline	36	2 Mb x 18	3.3	100 TQFP	167
CY7C1463AV33	In Production	Flow-Through	36	2 Mb x 18	3.3	100 TQFP	133
CY7C1464AV25	In Production	Pipeline	36	512 Kb x 72	2.5	209 BGA	167
CY7C1464AV33	In Production	Pipeline	36	512 Kb x 72	3.3	209 BGA	167
CY7C1470BV25	In Production	Pipeline	72	2 Mb x 36	2.5	100 TQFP/165 FBGA	167, 200, 250
CY7C1470BV33	In Production	Pipeline	72	2 Mb x 36	3.3	100 TQFP/165 FBGA	167, 200, 250
CY7C1470V25	In Production	Pipeline	72	2 Mb x 36	2.5	100 TQFP/165 FBGA	167, 200
CY7C1470V33	In Production	Pipeline	72	2 Mb x 36	3.3	100 TQFP/165 FBGA	167, 200
CY7C1471BV25	In Production	Flow-Through	72	2 Mb x 36	2.5	100 TQFP	133
CY7C1471BV33	In Production	Flow-Through	72	2 Mb x 36	3.3	100 TQFP	117, 133
CY7C1471V25	In Production	Flow-Through	72	2 Mb x 36	2.5	100 TQFP	133
CY7C1471V33	In Production	Flow-Through	72	2 Mb x 36	3.3	100 TQFP	117, 133
CY7C1472BV25	In Production	Pipeline	72	4 Mb x 18	2.5	100 TQFP/165 FBGA	167, 200, 250
CY7C1472BV33	In Production	Pipeline	72	4 Mb x 18	3.3	100 TQFP/165 FBGA	167, 200
CY7C1472V25	In Production	Pipeline	72	4 Mb x 18	2.5	100 TQFP/165 FBGA	200, 250
CY7C1472V33	In Production	Pipeline	72	4 Mb x 18	3.3	100 TQFP	167, 200
CY7C1473BV33	In Production	Flow-Through	72	4 Mb x 18	3.3	100 TQFP	133
CY7C1474BV25	In Production	Pipeline	72	1 Mb x 72	2.5	209 BGA	167, 200
CY7C1474BV33	In Production	Pipeline	72	1 Mb x 72	3.3	209 BGA	167, 200
CY7C1474V25	In Production	Pipeline	72	1 Mb x 72	2.5	209 BGA	167, 200
CY7C1474V33	In Production	Pipeline	72	1 Mb x 72	3.3	209 BGA	200

QDR

Part Number	Status	Architecture	Density (Mb)	Organization	Vcc (V)	Package	Speeds Available (MHz)
CY7C1302DV25	In Production	BURST OF 2	9	512 Kb x 18	2.5	165 FBGA	167
CY7C1303BV25	In Production	BURST OF 2	18	1 Mb x 18	2.5	165 FBGA	167
CY7C1305BV25	In Production	BURST OF 4	18	1 Mb x 18	2.5	165 FBGA	167
CY7C1306CV25	In Production	BURST OF 2	18	512 Kb x 36	2.5	165 FBGA	167

DDR

Part Number	Status	Architecture	Density (Mb)	Organization	Vcc (V)	Package	Speeds Available (MHz)
CY7C1308DV25C	In Production	BURST OF 4	9	256 Kb x 36	2.5	165 FBGA	167

QDRII

Part Number	Status	Architecture	Density (Mb)	Organization	Vcc (V)	Package	Speeds Available (MHz)
CY7C1292DV18	In Production	BURST OF 2	9	512 Kb x 18	1.8	165 FBGA	167
CY7C1294DV18	In Production	BURST OF 2	9	256 Kb x 36	1.8	165 FBGA	167
CY7C1311CV18	In Production	BURST OF 4	18	2 Mb x 8	1.8	165 FBGA	200, 250
CY7C1312BV18	In Production	BURST OF 2	18	1 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1312CV18	In Production	BURST OF 2	18	1 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1313BV18	In Production	BURST OF 4	18	1 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1313CV18	In Production	BURST OF 4	18	1 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1314BV18	In Production	BURST OF 2	18	512 Kb x 36	1.8	165 FBGA	167, 200, 250
CY7C1314CV18	In Production	BURST OF 2	18	512 Kb x 36	1.8	165 FBGA	167, 200, 250
CY7C1314JV18	In Production	BURST OF 2	18	512 Kb x 36	1.8	165 FBGA	250
CY7C1315BV18	In Production	BURST OF 4	18	512 Kb x 36	1.8	165 FBGA	167, 200, 250
CY7C1315CV18	In Production	BURST OF 4	18	512 Kb x 36	1.8	165 FBGA	167, 200, 250
CY7C1315JV18	In Production	BURST OF 4	18	512 Kb x 36	1.8	165 FBGA	300
CY7C1411BV18	In Production	BURST OF 4	36	4 Mb x 8	1.8	165 FBGA	250
CY7C1412AV18	In Production	BURST OF 2	36	2 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1412BV18	In Production	BURST OF 2	36	2 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1413AV18	In Production	BURST OF 4	36	2 Mb x 18	1.8	165 FBGA	200, 250
CY7C1413BV18	In Production	BURST OF 4	36	2 Mb x 18	1.8	165 FBGA	200, 250
CY7C1413JV18	In Production	BURST OF 4	36	2 Mb x 18	1.8	165 FBGA	200, 250, 300
CY7C1414AV18	In Production	BURST OF 2	36	1 Mb x 36	1.8	165 FBGA	167, 200, 250
CY7C1414BV18	In Production	BURST OF 2	36	1 Mb x 36	1.8	165 FBGA	167, 200, 250
CY7C1414JV18	In Production	BURST OF 2	36	1 Mb x 36	1.8	165 FBGA	267
CY7C1415AV18	In Production	BURST OF 4	36	1 Mb x 36	1.8	165 FBGA	167, 200, 250
CY7C1415BV18	In Production	BURST OF 4	36	1 Mb x 36	1.8	165 FBGA	167, 200, 250
CY7C1415JV18	In Production	BURST OF 4	36	1 Mb x 36	1.8	165 FBGA	250
CY7C1425AV18	In Production	BURST OF 2	36	4 Mb x 9	1.8	165 FBGA	200
CY7C1425BV18	In Production	BURST OF 2	36	4 Mb x 9	1.8	165 FBGA	200
CY7C1425JV18	In Production	BURST OF 2	36	4 Mb x 9	1.8	165 FBGA	250, 267
CY7C1426AV18	In Production	BURST OF 4	36	4 Mb x 9	1.8	165 FBGA	250
CY7C1426JV18	In Production	BURST OF 4	36	4 Mb x 9	1.8	165 FBGA	300
CY7C1512AV18	In Production	BURST OF 2	72	4 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1512JV18	In Production	BURST OF 2	72	4 Mb x 18	1.8	165 FBGA	267
CY7C1512V18	In Production	BURST OF 2	72	4 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1513AV18	In Production	BURST OF 4	72	4 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1513JV18	In Production	BURST OF 4	72	4 Mb x 18	1.8	165 FBGA	250, 300
CY7C1513V18	In Production	BURST OF 4	72	4 Mb x 18	1.8	165 FBGA	200, 250
CY7C1514AV18	In Production	BURST OF 2	72	2 Mb x 36	1.8	165 FBGA/WAFER	167, 200, 250
CY7C1514JV18	In Production	BURST OF 2	72	2 Mb x 36	1.8	165 FBGA	250
CY7C1514V18	In Production	BURST OF 2	72	2 Mb x 36	1.8	165 FBGA	167, 200, 250
CY7C1515AV18	In Production	BURST OF 4	72	2 Mb x 36	1.8	165 FBGA	167, 200, 250
CY7C1515JV18	In Production	BURST OF 4	72	2 Mb x 36	1.8	165 FBGA	167, 300
CY7C1515V18	In Production	BURST OF 4	72	2 Mb x 36	1.8	165 FBGA	167, 200, 250
CY7C1525JV18	In Production	BURST OF 2	72	8 Mb x 9	1.8	165 FBGA	250
CY7C1525V18	In Production	BURST OF 2	72	8 Mb x 9	1.8	165 FBGA	200
CY7C1911JV18	In Production	BURST OF 4	18	2 Mb x 9	1.8	165 FBGA	300

DDRII CIO

Part Number	Status	Architecture	Density (Mb)	Organization	Vcc (V)	Package	Speeds Available (MHz)
CY7C1318BV18	In Production	BURST OF 2	18	1 Mb x 18	1.8	165 FBGA	167, 200, 250, 278
CY7C1318CV18	In Production	BURST OF 2	18	1 Mb x 18	1.8	165 FBGA	167, 200, 250, 278
CY7C1318JV18	In Production	BURST OF 2	18	1 Mb x 18	1.8	165 FBGA	300
CY7C1319CV18	In Production	BURST OF 4	18	1 Mb x 18	1.8	165 FBGA	250
CY7C1320BV18	In Production	BURST OF 2	18	512K x 36	1.8	165 FBGA	167, 200, 250
CY7C1320CV18	In Production	BURST OF 2	18	512K x 36	1.8	165 FBGA	167, 200, 250
CY7C1320JV18	In Production	BURST OF 2	18	512K x 36	1.8	165 FBGA	250, 300
CY7C1321CV18	In Production	BURST OF 4	18	512K x 36	1.8	165 FBGA	167
CY7C1418AV18	In Production	BURST OF 2	36	2 Mb x 18	1.8	165 FBGA	167, 250, 267
CY7C1418BV18	In Production	BURST OF 2	36	2 Mb x 18	1.8	165 FBGA	167, 250, 267
CY7C1418JV18	In Production	BURST OF 2	36	2 Mb x 18	1.8	165 FBGA	300
CY7C1420AV18	In Production	BURST OF 2	36	1 Mb x 36	1.8	165 FBGA	167, 200, 250
CY7C1420BV18	In Production	BURST OF 2	36	1 Mb x 36	1.8	165 FBGA	200, 250
CY7C1420JV18	In Production	BURST OF 2	36	1 Mb x 36	1.8	165 FBGA	300
CY7C1518AV18	In Production	BURST OF 2	72	4 Mb x 18	1.8	165 FBGA	167, 250
CY7C1518JV18	In Production	BURST OF 2	72	4 Mb x 18	1.8	165 FBGA	250, 300, 312
CY7C1518V18	In Production	BURST OF 2	72	4 Mb x 18	1.8	165 FBGA	167, 200, 250
CY7C1520AV18	In Production	BURST OF 2	72	2 Mb x 36	1.8	165 FBGA	200, 250
CY7C1520JV18	In Production	BURST OF 2	72	2 Mb x 36	1.8	165 FBGA	300
CY7C1520V18	In Production	BURST OF 2	72	2 Mb x 36	1.8	165 FBGA	167, 200, 250

DDR-II SIO

Part Number	Status	Architecture	Density (Mb)	Organization	Vcc (V)	Package	Speeds Available (MHz)
CY7C1392CV18	In Production	BURST OF 2	18	2 Mb x 8	1.8	165 FBGA	200, 250
CY7C1393BV18	In Production	BURST OF 2	18	1 Mb x 18	1.8	165 FBGA	167, 250, 278
CY7C1393CV18	In Production	BURST OF 2	18	1 Mb x 18	1.8	165 FBGA	250
CY7C1393JV18	In Production	BURST OF 2	18	1 Mb x 18	1.8	165 FBGA	300
CY7C1423AV18	In Production	BURST OF 2	36	2 Mb x 18	1.8	165 FBGA	167, 250, 267
CY7C1423BV18	In Production	BURST OF 2	36	2 Mb x 18	1.8	165 FBGA	250
CY7C1423JV18	In Production	BURST OF 2	36	2 Mb x 18	1.8	165 FBGA	250, 267
CY7C1424AV18	In Production	BURST OF 2	36	1 Mb x 36	1.8	165 FBGA	250
CY7C1523AV18	In Production	BURST OF 2	72	4 Mb x 18	1.8	165 FBGA	200, 250

FAST ASYNCHRONOUS SRAMs

Fast Asynchronous SRAMs are made using Cypress's high performance CMOS technology. The applications for the Fast Asynchronous SRAMs range from switches and routers to IP phones, IC-testers, DSLAM cards and automotive electronics.

Fast Asynchronous SRAMs

Part Number	Status	Density	Organization	Vcc (V)	Comments	Org	Package	Speed	Operating Range
CY7C149	Active	4 Kb	4 Kb x4	5	In Production	x4	18 PDIP	45 ns	0C to +70C
CY7C148	Active	4 Kb	4 Kb x4	5	In Production	x4	18 PDIP	35 ns	0C to +70C
CY7C192	Active	256 Kb	64 Kb x4	5V	In Production	x4	28 SOJ	15 ns	0C to +70C
CY7C1399BN	Active	256 Kb	32 Kb x8	3.3	Includes additional Nitride Seal Masking step for enhanced reliability	x8	28 SOJ	12 ns, 15ns	0C to +70C
CY7C166	Active	64 Kb	16 Kb x4	5	In Production	x4	24 SOJ	15 ns	0C to +70C
CY7C194BN	Active	256 Kb	64 Kb x4	5	Includes additional Nitride Seal Masking step for enhanced reliability	x4	24 PDIP	15 ns	0C to +70C
CY7C197N	Active	256 Kb	256 Kb x1	5	Includes additional Nitride Seal Masking step for enhanced reliability	x1	24 PDIP	25 ns	0C to +70C
CY7C199D	Active	256 Kb	32 Kb x8	5	In Production	x8	28 SOJ	10 ns	-40C to +85C
CY7C1020D	Active	512 Kb	32 Kb x16	5	In Production	x16	44 TSOP II	10 ns	-40C to +85C
CY7C1020DV33	Active	512 Kb	256 Kb x16	3.3	In Production	x16	44 TSOP II	10 ns	-40C to +85C
CY7C109D	Active	1 Mb	128 Kb x8	5	In Production	x8	32 SOJ	10 ns	-40C to +85C
CY7C1021D	Active	1 Mb	64 Kb x16	5	In Production	x16	44 TSOP II	10 ns	-40C to +85C
CY7C1021DV33	Active	1 Mb	64 Kb x16	3.3	In Production	x16	44 TSOP	10 ns	-40C to +85C
CY7C1010DV33	Active	2 Mb	256 Kb x8	3.3	In Production	x8	44 TSOP II, 36 SOJ	10 ns	-40C to +85C
CY7C1011DV33	Active	2 Mb	128 Kb x16	3.3	In Production	x16	44 TSOP II	10 ns	-40C to +85C
CY7C1024DV33	Active	3 Mb	128 Kb x24	3.3	In Production	x24	119 BGA	10 ns	-40C to +85C
CY7C1034DV33	Active	6 Mb	256 Kb x24	3.3	In Production	x24	119 BGA	10 ns	-40C to +85C
CY7C1041D	Active	4 Mb	256 Kb x16	5	In Production	x16	44 TSOP II	10 ns	-40C to +85C
CY7C1041DV33	Active	4 Mb	256 Kb x16	3.3	In Production	x16	48 VFBGA	10 ns	-40C to +85C
CY7C1046BN	Active	4 Mb	1 Mb x4	5	Use C9FD equivalent part CY7C1046D	x4	32 SOJ	15 ns	0C to +70C
CY7C1046D	Active	4 Mb	1 Mb x4	5	In Production	x4	32 SOJ	10 ns	-40C to +85C
CY7C1046DV33	Active	4 Mb	1 Mb x4	3.3	In Production	x4	32 SOJ	10 ns	-40C to +85C
CY7C1049D	Active	4 Mb	512 Kb x8	5	In Production	x8	32 SOJ	10 ns	-40C to +85C
CY7C1049DV33	Active	4 Mb	512 Kb x8	3	In Production	x8	36 SOJ, 44 TSOP II	10 ns	-40C to +85C
CY7C1051DV33	Active	8 Mb	512 Kb x16	3.3	In Production	x16	44 TSOP II, 48 BGA	10 ns	-40C to +85C
CY7C1059DV33	Active	8 Mb	1 Mb x8	3.3	In Production	x8	44 TSOP II, 48 BGA — Offered under NSO	10 ns	-40C to +85C
CY7C1012AV33	Active	12 Mb	512 Kb x24	3.3V	In Production	x24	119 BGA	8 ns	0C to +70C
CY7C1012DV33	Active	12 Mb	512 Kb x24	3.3V	In Production	x24	119 BGA	10 ns	-40C to +85C
CY7C1061AV33	Active	16 Mb	1 Mb x16	3.3	Use CY7C1061DV	x16	48 FBGA	10 ns	0C to +70C
CY7C1061DV33	Active	16 Mb	1 Mb x16	3.3	In Production	x16	48 FBGA, 54 TSOP II	10 ns	-40C to +85C
CY7C10612DV33	Active	16 Mb	1 Mb x16	3.3	In Production (Single /CE Option)	x16	54 TSOP II	10 ns	-40C to +85C
CY7C1062AV33	NRND	16 Mb	512 Kb x32	3.3	Use CY7C1062DV33	x32	119 BGA	10 ns	0C to +70C
CY7C1062DV33	Active	16 Mb	512 Kb x32	3.3	In Production	x32	119 BGA	10 ns	-40 to +85C
CY7C1069AV33	Active	16 Mb	2 Mb x8	3.3	Use CY7C1069DV33	x8	54 TSOP II	10 ns	0C to +70C
CY7C1069DV33	Active	16 Mb	2 Mb x8	3.3	In Production	x8	48 FBGA, 54 TSOP II	10 ns	-40C to +85C
CY7C1071DV33	Samples (Single/CE Option)	32 Mb	2 Mb x16	3.3	MP — November 2009	x16	48 BGA	10 ns	-40C to +85C
CY7C1079DV33	Samples (Single/CE Option)	32 Mb	4 Mb x8	3.3	MP — November 2009	x8	48 BGA	10 ns	-40C to +85C
Wafer/Die	All		All		Available				All

NRND = Not Recommended for New Designs

CY7C1024DV33/CY7C1034DV33 3- AND 6-MBIT FAST ASYNCHRONOUS SRAMS

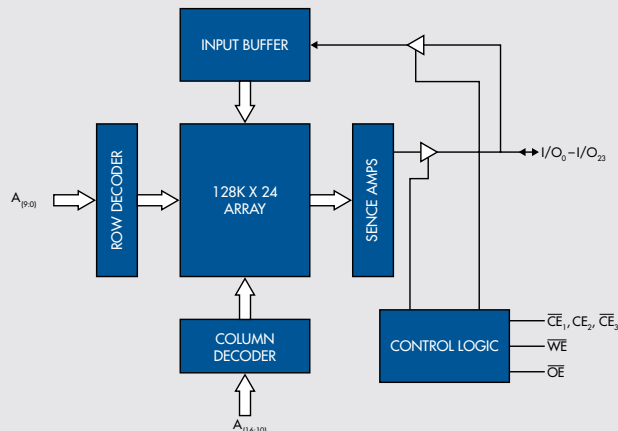
Features:

- 128K x 24 & 256K x 24 configurations
- 10-ns access time
- RoHS-compliant 119-BGA package
- Based on 90-nanometer C9™ CMOS technology

The CY7C1024DV33 3-Mbit SRAM and CY7C1034DV33 6-Mbit SRAM are in production and available today

Key Applications: Wireless and networking applications

Learn more at www.cypress.com/go/36sram



MICROPOWER SRAMs

Cypress MoBL™ SRAMs offer best-in-class access times (45 ns) with the industry's lowest standby power dissipation, making them the ideal high performance, high battery life memory solutions for mobile phones, PDAs, Point of Sale (POS) terminals, handheld radio sets/gaming machines, automotive audio, ECU, navigation and telematics systems. Cypress's MoBL SRAMs can be designed-in with a battery and a memory controller, to be used as super-fast nonvolatile-SRAMs for security circuitry, with a nonvolatile memory life of 7 to 9 years. MicroPower SRAMs are offered in industry standard packaging options (RoHS-compliant), in industrial and automotive temperature ranges.

Key Applications: Mobile phones, PDAs, Point of Sale (POS) terminals, handheld radio sets/gaming machines, automotive audio, ECU, navigation and telematics systems

Standard MicroPower

Part Number	Status	Density	Organization	Power	Vcc (V)	Voltage Range	Comments	Org	Package	Speed	Operating Range
CY6264	Active	64 Kb	8 Kb x8	L	5.0	4.5 to 5.5	In Production	x8	28 SNC	55 ns	-40C to +85C
CY62256VNL	Active	256 Kb	32 Kb x8	LL	3.0	2.7 to 3.6V	In Production	x8	28 SNIC, 28 TSOP I, 28 Reverse TSOP I	70 ns	-40C to +85C
CY62256NLL	Active	256 Kb	32 Kb x8	LL	5.0	4.5 to 5.5V	In Production	x8	28 DIP, 28 Reverse TSOP I, 28 SNIC	70 ns	-40C to +85C
CY62126ESL	Active	1Mb	64 Kbx16	LL	Wide voltage range	2.2V to 3.6V and 4.5V to 5.5V	In Production	X16	44 TSOP II	45ns	-40C to +85C
CY62128E	Active	1 Mb	128 Kb x8	LL	5.0	4.5 to 5.5	In Production	x16	32 SOIC	45 ns	-40C to +85C
CY62128EV30	Active	1 Mb	128 Kb x8	LL	3.0	2.2 to 3.6	In Production	x8	32 SOIC	45 ns	-40C to +85C
CY62136EV30	Active	2 Mb	128 Kb x16	LL	3.0	2.2 to 3.6	In Production	x16	44 TSOP II	45 ns	-40C to +85C
CY62136ESL	Active	2Mb	128 Kbx16	LL	Wide voltage range	2.2V to 3.6V and 4.5V to 5.5V	In Production	X16	44 TSOP II	45ns	-40C to +85C
CY62136FV30	Active	2 Mb	128 Kb x16	LL	3.0	2.2 to 3.6	In Production	x16	48 VFBGA	45 ns	-40C to +85C
CY62137EV30	Active	2 Mb	128 Kb x16	LL	3.0	2.2 to 3.6	In Production	x16	48 VFBGA	45 ns	-40C to +85C
CY62137FV18	Active	2 Mb	128 Kb x16	LL	1.8	1.65 to 2.25	In Production	x16	48 VFBGA	45 ns	-40C to +85C
CY62137FV30	Active	2 Mb	128 Kb x16	LL	3.0	2.2 to 3.6	In Production	x16	48 VFBGA	45 ns	-40C to +85C
CY62138EV30	Active	2 Mb	256 Kb x8	LL	3.0	2.2 to 3.6	In Production	x8	48 VFBGA	45 ns	-40C to +85C
CY62138F	Active	2 Mb	256 Kb x8	LL	5.0	4.5 to 5.5	In Production	x8	32 SOIC	45 ns	-40C to +85C
CY62138FV30	Active	2 Mb	256 Kb x8	LL	3.0	2.2 to 3.6	In Production	x8	36 VFBGA	45 ns	-40C to +85C
CY62146E	Active	4 Mb	256 Kb x16	LL	5.0	4.5 to 5.5	In Production	x16	44 TSOP II	45 ns	-40C to +85C
CY62146ESL	Active	4 Mb	256 Kb x16	LL	Wide voltage range	2.2V to 3.6V and 4.5V to 5.5V	In Production	x16	44 TSOP II	45 ns	-40C to +85C
CY62146EV30	Active	4 Mb	256 Kb x16	LL	3.0	2.2 to 3.6	In Production	x16	48 VFBGA	45 ns	-40C to +85C
CY62147EV18	Active	4 Mb	256 Kb x16	LL	1.8	1.65 to 2.25	In Production	x16	48 VFBGA	55 ns	-40C to +85C
CY62147EV30	Active	4 Mb	256 Kb x16	LL	3.0	2.2 to 3.6	In Production with 2/CE option	x16	48 VFBGA	45 ns	-40C to +85C
CY62148E	Active	4 Mb	512 Kb x8	LL	5.0	4.5 to 5.5	In Production	x8	32 TSOP II	45 ns	-40C to +85C
CY62148EV30	Active	4 Mb	512 Kb x8	LL	3.0	2.2 to 3.6	In Production	x8	36 VFBGA	45 ns	-40C to +85C

NRND = Not Recommended for New Designs

Standard MicroPower (Continued)

Part Number	Status	Density	Organization	Power	Vcc (V)	Voltage Range	Comments	Org	Package	Speed	Operating Range
CY62158E	Active	8 Mb	1 Mb x8	LL	5.0	4.5 to 5.5	In Production	x8	44 TSOP II	45 ns	-40C to +85C
CY62157E	Active	8 Mb	512 Kb x16	LL	5.0	4.5 to 5.5	In Production	x16	44 TSOP II	45 ns	-40C to +85C
CY62157ESL	Active	8 Mb	512 Kb x16	LL	3.0	Wide voltage range	In Production	x16	44 TSOP II	45 ns	-40C to +85C
CY62157EV18	Active	8 Mb	512 Kb x16	LL	1.8	1.65 to 2.25	In Production	x16	48 VFBGA	55 ns	-40C to +85C
CY62157EV30	Active	8 Mb	512 Kb x16	LL	3.0	2.2 to 3.6	In Production	x16	48 VFBGA	45 ns	-40C to +85C
CY62158EV30	Active	8 Mb	1 Mb x8	LL	3.0	2.2 to 3.6	In Production	x8	48 VFBGA	45 ns	-40C to +85C
CY62167DV18	Active	16 Mb	1024 Kb x16	LL	1.8	1.65 to 1.95	In Production	x16	48 VFBGA	55 ns	-40C to +85C
CY62167DV30	Active	16 Mb	1024 Kb x16	LL	3.0	2.2 to 3.6	Use CY62167EV30	x16	48 TSOP I	45 ns	-40C to +85C
CY62167E	Active	16 Mb	1024 Kb x16	LL	5.0	4.5 to 5.5	In Production	x16	48 TSOP I	45 ns	-40C to +85C
CY62167EV18	Active	16 Mb	1024 Kb x16	LL	1.8	1.65 to 2.25	In Production	x16	48 VFBGA	55 ns	-40C to +85C
CY62167EV30	Active	16 Mb	1024 Kb x16	LL	3.0	2.2 to 3.6	In Production	x16	48 VFBGA, 48 TSOP I	45 ns	-40C to +85C
CY62168DV30	Active	16 Mb	2048 Kb x8	LL	3.0	2.2 to 3.6	In Production	x8	48 VFBGA	55 ns	-40C to +85C
CY62168EV30	Active	16 Mb	2048 Kb x8	LL	3.0	2.2 to 3.6	In Production	x8	48 VFBGA	45 ns	-40C to +85C
CY62177DV30	Active	32 Mb	2048 Kb x16	LL	3.0	2.2 to 3.6	Use CY62177EV30	x16	48 FBGA	55 ns	-40C to +85C
CY62177EV30	In-Design	32 Mb	2048 Kb x16	LL	3.0	2.2 to 3.6	MP—November 2009	x16	48 FBGA, 48 TSOP I	55 ns	-40C to +85C
CY62187EV30	In-Design	64 Mb	4 Mb x16	LL	3.0	2.2 to 3.6	MP—November 2009	x16	48 BGA	70 ns	-40C to +85C
Wafer/Die		All	All		All		Available	All	NA	All	-40C to +85C

NRND = Not Recommended for New Designs

CY62187EV30LL 64MB MOBL SRAM THE MARKET'S HIGHEST-DENSITY LOW-POWER SRAM

Features:

- 4M x 16 configuration
- 8 μ A ultra-low standby current
- 55 ns access time (taa)
- RoHS-compliant 48-BGA package with a footprint of 8.0 x 9.5 x 1.4 mm, the smallest package option for a device of this density.

The CY62187EV30LL 64-Mbit MoBL SRAM is currently sampling, with production expected in June 2009.

Key Applications: High-end point-of-sale terminals, gaming applications, VoIP phones, handheld consumer, and medical devices

Learn more at www.cypress.com/go/64MOBL.



NON VOLATILE MEMORY

Cypress nvSRAMs use time-tested technology to produce the world's fastest non-volatile SRAMs. Cleverly architected, the devices use a one-to-one pairing of a non-volatile bit and a fast SRAM bit in each memory cell. In standard operation, the devices behave exactly like standard fast SRAM and can be easily interfaced to existing microprocessors and microcontrollers. When power is disrupted or lost, the event is detected, and in one quick array write, every SRAM bit is saved into a nonvolatile bit (in under 13ms) using the saved energy in a small capacitor. Data is automatically recalled from non-volatile to SRAM in every cell on power restore, providing seamless non-volatility through power cycles.

Cypress offers two families of nvSRAM devices. For customers needing high access speed, and parallel interfaces, Parallel I/F devices ranging from 64K-8M density are an option. For designs that need low I/O serial interface, Our Serial nvSRAM devices featuring a high speed SPI interface are an ideal option. RTC options are available on both device types.

Key Applications: Storage/networking, industrial controls, automotive, military and data communication.

Parallel nvSRAMs

Part Number	Status	Organization	Vcc (V)	Density	Features	Speed	Temperature (°C)	Package
CY14B101K	In Production, NRND	128 Kb x 8	2.7 to 3.6 V	1 Mb	RTC	25/35/45 ns	0 to 70, -40 to 85	48 SSOP
CY14B101KA	In Production	128 Kb x 8	2.7 to 3.6 V	1 Mb	RTC	25/45 ns	-40 to 85	44 TSOP II, 48 SSOP
CY14B101L	In Production, NRND	128 Kb x 8	2.7 to 3.6 V	1 Mb		25/35/45 ns	0 to 70, -40 to 85	48 SSOP, 32 SOIC
CY14B101LA	In Production	128 Kb x 8	2.7 to 3.6 V	1 Mb		20(1)/25/45 ns	-40 to 85	44 TSOP II, 48 SSOP, 32 SOIC
CY14B101MA	In Production	64 Kb x 16	2.7 to 3.6 V	1 Mb	RTC	25/45 ns	-40 to 85	54 TSOP II
CY14B101NA	In Production	64 Kb x 16	2.7 to 3.6 V	1 Mb		20(1)/25/45 ns	-40 to 85	44/54 TSOP II
CY14B104K	In Production	512 Kb x 8	2.7 to 3.6 V	4 Mb	RTC	25/45 ns	-40 to 85	44 TSOP II
CY14B104L	In Production, NRND	512 Kb x 8	2.7 to 3.6 V	4 Mb		20(1)/25/45 ns	0 to 70, -40 to 85	44 TSOP II, 48 FBGA
CY14B104LA	In Production	512 Kb x 8	2.7 to 3.6 V	4 Mb		20(1)/25/45 ns	-40 to 85	44 TSOP II, 48 FBGA
CY14B104M	In Production	256 Kb x 16	2.7 to 3.6 V	4 Mb	RTC	25/45 ns	-40 to 85	54 TSOP II
CY14B104N	In Production, NRND	256 Kb x 16	2.7 to 3.6 V	4 Mb		20(1)/25/45 ns	0 to 70, -40 to 85	44 TSOP II, 48 FBGA
CY14B104NA	In Production	256 Kb x 16	2.7 to 3.6 V	4 Mb		20(1)/25/45 ns	-40 to 85	44/54 TSOP II, 48 FBGA
CY14B108K	Sampling	1 Mb x 8	2.7 to 3.6 V	8 Mb	RTC	25/45 ns	-40 to 85	44 TSOP II
CY14B108L	Sampling	1 Mb x 8	2.7 to 3.6 V	8 Mb		20(1)/25/45 ns	-40 to 85	44 TSOP II, 48 FBGA
CY14B108M	Sampling	512 Kb x 16	2.7 to 3.6 V	8 Mb	RTC	25/45 ns	-40 to 85	54 TSOP II
CY14B108N	Sampling	512 Kb x 16	2.7 to 3.6 V	8 Mb		20(1)/25/45 ns	-40 to 85	54 TSOP II, 48 FBGA
CY14B256K	In Production, NRND	32 Kb x 8	2.7 to 3.6 V	256 Kb	RTC	25/35/45 ns	0 to 70, -40 to 85	48 SSOP
CY14B256KA	Sampling	32 Kb x 8	2.7 to 3.6 V	256 Kb	RTC	25/45 ns	-40 to 85	48 SSOP, 44 TSOP II
CY14B256L	In Production, NRND	32 Kb x 8	2.7 to 3.6 V	256 Kb		25/35/45 ns	0 to 70, -40 to 85	48 SSOP, 32 SOIC
CY14B256LA	Sampling	32 Kb x 8	2.7 to 3.6 V	256 Kb		25/45 ns	-40 to 85	48 SSOP, 32 SOIC
CY14B256NA	Sampling	16 Kb x 16	2.7 to 3.6 V	256 Kb		25/45 ns	-40 to 85	44 TSOP II
CY14E101LA	Sampling	128 Kb x 8	4.5 to 5.5 V	1 Mb		25/45 ns	-40 to 85	44 TSOP II
CY14E256L	In Production, NRND	32 Kb x 8	4.5 to 5.5 V	256 Kb		25/35/45 ns	0 to 70, -40 to 85	32 SOIC
CY14E256LA	Sampling	32 Kb x 8	4.5 to 5.5 V	256 Kb		25/45 ns	-40 to 85	44 TSOP II, 32 SOIC
STK11C68	In Production, NRND	8 Kb x 8	4.5 to 5.5 V	64 Kb		25/35/45 ns	0 to 70, -40 to 85	28 SOIC, 28 CDIP, 28 LCC
STK11C68-5	In Production	8 Kb x 8	4.5 to 5.5 V	64 Kb		35/45/55 ns	-55 to 125	28 CDIP, 28 LCC
STK11C88	In Production, NRND	32 Kb x 8	4.5 to 5.5 V	256 Kb		25/45 ns	0 to 70, -40 to 85	28 SOIC [300 & 350mil]
STK12C68	In Production, NRND	8 Kb x 8	4.5 to 5.5 V	64 Kb		25/35/45 ns	0 to 70, -40 to 85	28 SOIC, 28 PDIP [300 & 600mil], 28 CDIP, 28 LCC
STK12C68-5	In Production	8 Kb x 8	4.5 to 5.5 V	64 Kb		35/55 ns	-55 to 125	28 CDIP, 28 LCC
STK14C88	In Production, NRND	32 Kb x 8	4.5 to 5.5 V	256 Kb		25/35/45 ns	0 to 70, -40 to 85	32 SOIC, 32 CDIP
STK14C88-3	In Production, NRND	32 Kb x 8	3.0 to 3.6 V	256 Kb		35/45 ns	0 to 70, -40 to 85	32 SOIC, 32 PDIP
STK14C88-5	In Production	32 Kb x 8	4.5 to 5.5 V	256 Kb		35/45 ns	-55 to 125	32 CDIP, 32 LCC
STK14CA8	In Production, NRND	128 Kb x 8	2.7 to 3.6 V	1 Mb		25/35/45 ns	0 to 70, -40 to 85	48 SSOP, 32 SOIC
STK14D88	In Production, NRND	32 Kb x 8	2.7 to 3.6 V	256 Kb		25/35/45 ns	0 to 70, -40 to 85	48 SSOP, 32 SOIC
STK15C88	In Production, NRND	32 Kb x 8	4.5 to 5.5 V	256 Kb		25/45 ns	0 to 70, -40 to 85	28 SOIC [300 & 350mil]
STK16C88	In Production, NRND	32 Kb x 8	4.5 to 5.5 V	256 Kb		25/45 ns	0 to 70, -40 to 85	28 PDIP

NRND = Not Recommended for New Designs

Part Number	Status	Organization	Vcc (V)	Density	Features	Speed	Temperature (°C)	Package
STK16C88-3	In Production, NRND	32 Kb x 8	3.0 to 3.6 V	256 Kb		35 ns	0 to 70, -40 to 85	28 PDIP
STK17T88	In Production, NRND	32 Kb x 8	2.7 to 3.6 V	256 Kb	RTC	25/45 ns	0 to 70, -40 to 85	48 SSOP
STK17TA8	In Production, NRND	128 Kb x 8	2.7 to 3.6 V	1 Mb	RTC	25/45 ns	0 to 70, -40 to 85	48 SSOP
STK22C48	In Production, NRND	2 Kb x 8	4.5 to 5.5 V	16 Kb		25/45 ns	0 to 70, -40 to 85	28 SOIC [300 & 350mil]

NRND = Not Recommended for New Designs

Serial nvSRAMs

Part Number	Status	Organization	Vcc (V)	Density	Features	Speed	Temperature (°C)	Package
CY14B101P	Sampling	SPI	2.7 to 3.6 V	1 Mb	RTC	40 MHz	-40 to 85	16 SOIC
CY14B101Q	Sampling	SPI	2.7 to 3.6 V	1 Mb		40 MHz	-40 to 85	8 DFN, 16 SOIC
CY14B256P	Sampling	SPI	2.7 to 3.6 V	256 Kb	RTC	40 MHz	-40 to 85	16 SOIC
CY14B256Q	Sampling	SPI	2.7 to 3.6 V	256 Kb		40 MHz	-40 to 85	8 DFN, 16 SOIC
CY14B512P	Sampling	SPI	2.7 to 3.6 V	512 Kb	RTC	40 MHz	-40 to 85	16 SOIC
CY14B512Q	Sampling	SPI	2.7 to 3.6 V	512 Kb		40 MHz	-40 to 85	8 DFN, 16 SOIC

NRND = Not Recommended for New Designs

DUAL PORT INTERCONNECTS

Cypress's high-density dual ports are the ideal solutions for interprocessor communication in a wide range of industrial applications ranging from cellular base stations to image processing equipment.

- Densities: 8 Kb up to 36 Mb
- Voltage options: 5V, 3.3V, 1.8V, and 1.5V
- Operation: Synchronous and asynchronous architectures
- Bus width: x8, x9, x16, x18, x36, and x72 configurations
- Distinguishing features: Variable Impedance Matching (VIM), Deterministic Access Control (DAC), SDR mode, echo clocks, selectable I/O standards, and up to 200 MHz speeds

Download the Multiport's Cross Reference Guide at www.cypress.com/go/MultiPortCRG.

Key Applications: Communication, industrial, military, avionics, medical imaging, consumer

FullFlex™ Dual-Port Interconnects

Part Number	Status	Speed	Bus Width	Density	Depth	Features	Package	Pins/Ball	Operating Range	Type	Vcc (V)
CYD02S36V18	Active	167 MHz	x36	2M	64K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	FBGA	256	0C to +70C	Synchronous	1.8V/1.5V
CYD02S36VA	Active	167 MHz	x36	2M	64K	Byte Selectability, Master Reset, Mailbox	FBGA	256	0C to +70C	Synchronous	3.3V
CYD09S18V18	Active	200 MHz	x18	9M	512K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	FBGA	256	-40C to +85C	Synchronous	1.8V/1.5V
CYD09S18V18	Active	200 MHz	x18	9M	512K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	FBGA	256	0C to +70C	Synchronous	1.8V/1.5V
CYD09S36V18	Active	200 MHz	x36	9M	256K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	FBGA	256	-40C to +85C	Synchronous	1.8V/1.5V
CYD09S36V18	Active	200 MHz	x36	9M	256K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	FBGA	256	-40C to +85C	Synchronous	1.8V/1.5V
CYD09S72V18	Active	200 MHz	x72	9M	128K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	PBGA	484	-40C to +85C	Synchronous	1.8V/1.5V
CYD18S18V18	Active	167 MHz	x18	18M	1M	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	FBGA	256	-40C to +85C	Synchronous	1.8V/1.5V
CYD18S36V18	Active	167 MHz	x36	18M	512K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	FBGA	256	-40C to +85C	Synchronous	1.8V/1.5V
CYD18S36V18	Active	200 MHz	x36	18M	512K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	FBGA	256	-40C to +85C	Synchronous	1.8V/1.5V
CYD18S72V18	Active	200 MHz	x72	18M	256K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	PBGA	484	-40C to +85C	Synchronous	1.8V/1.5V
CYD18S72V18	Active	167 MHz	x72	18M	256K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	PBGA	484	-40C to +85C	Synchronous	1.8V/1.5V
CYD36S18V18	Active	133 MHz	x18	36M	2M	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	PBGA	484	0C to +70C	Synchronous	1.8V/1.5V
CYD36S36V18	Active	200 MHz	x36	36M	1M	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	PBGA	484	0C to +70C	Synchronous	1.8V/1.5V
CYD36S72V18	Active	200 MHz	x72	36M	512K	90nm, Interrupt, Burst, Variable Z Matching, Arbitration, Echo Clocks	PBGA	484	0C to +70C	Synchronous	1.8V/1.5V

PCI Dual Port Controller

Part Number	Status	Speed	Bus Width	Density	Depth	Features	Package	Pins/Ball	Operating Range	Type	Vcc (V)
CY7C09449PVA	Active	50 MHz	x32	128K	4K	128K Dual Port RAM with PCI Bus Controller	TQFP	160	0C to +70C	Synchronous	3.3V

Standard Asynchronous Dual-Port Interconnects

Part Number	Status	Speed	Bus Width	Density	Depth	Features	Package	Pins/Ball	Operating Range	Type	Vcc (V)
CY7C006A	Active	20 ns	x8	128K	16K	Busy, Interrupt, Master/Slave Pin, Semaphore	TQFP	64	0C to +70C	Asynchronous	5V
CY7C006AV	NRND	25 ns	x8	128K	16K	Busy, Interrupt, Master/Slave Pin, Semaphore	TQFP	64	0C to +70C	Asynchronous	3.3V
CY7C007A	NRND	20 ns	x8	256K	32K	Busy, Interrupt, Master/Slave Pin, Semaphore	PLCC	68	0C to +70C	Asynchronous	5V
CY7C008	NRND	15 ns	x8	512K	64K	Busy, Dual Chip Enables, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	5V
CY7C008V	NRND	25 ns	x8	512K	64K	Busy, Dual Chip Enables, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	3.3V
CY7C009	Active	15 ns	x9	512K	64K	Busy, Dual Chip Enables, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	5V
CY7C009V	NRND	15 ns	x8	1M	128K	Busy, Dual Chip Enables, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	3.3V
CY7C019V	NRND	25 ns	x9	1M	128K	Busy, Dual Chip Enables, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	3.3V
CY7C024	Active	55 ns	x16	64K	4K	Busy, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	5V
CY7C0241	Active	15 ns	x18	64K	4K	Busy, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	5V
CY7C024AV	Active	25 ns	x16	64K	4K	Busy, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	3.3V
CY7C025	Active	25 ns	x16	128K	8K	Busy, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	5V
CY7C0251	Active	15 ns	x18	128K	8K	Busy, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	5V
CY7C025AV	Active	25 ns	x16	128K	8K	Busy, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	3.3V
CY7C026A	Active	20 ns	x16	256K	16K	Busy, Interrupt, Master/Slave Pin, Semaphore	TQFP	100	0C to +70C	Asynchronous	5V
CY7C131	Active	55	x8	8K	1K		PLCC	52	-40C to +85C	Asynchronous	5V
CY7C136	Active	25	x16	16K	2K		PLCC	52	-40C to +85C	Asynchronous	5V
CY7C138	Active	25 ns	x8	32K	4K	Busy, Interrupt, Master/Slave Pin, Semaphore	PLCC	52	-40C to +85C	Asynchronous	5V
CY7C144	Active	25	x8	64K	8K		TQFP	64	-40C to +85C	Asynchronous	3.3V
Dual Port <1/4 Mb	NRND	55 ns	x8	16K	2K	Busy, Interrupt, Master	PLCC	52	-40C to +85C	Asynchronous	5V

NRND = Not Recommended for New Designs

Standard Synchronous Dual-Port Interconnects

Part Number	Status	Speed	Bus Width	Density	Depth	Features	Package	Pins/Ball	Operating Range	Type	Vcc (V)
CY7C0831AV	Active	133 MHz	x18	2M	128K	Burst Mode, Byte Selectability, Counter Wraparound	BGA	144	-40C to +85C	Synchronous	3.3V
CY7C0832AV	Active	133 MHz	x18	4M	256K	Burst Mode, Byte Selectability, Counter Wraparound	TQFP	120	-40C to +85C	Synchronous	3.3V
CY7C0833V	Active	100 MHz	x18	9M	512K	Byte Selectability, Master Reset, Mailbox	FBGA	144	-40C to +85C	Synchronous	3.3V
CY7C0851AV	Active	167 MHz	x36	2M	64K	Burst Mode, Dual Chip Enable, Master Reset, Mailbox	FBGA	172	0C to +70C	Synchronous	3.3V
CY7C0851AV	Active	133 MHz	x36	2M	64K	Burst Mode, Dual Chip Enable, Master Reset, Mailbox	FBGA	172	-40C to +85C	Synchronous	3.3V
CY7C0851V	Active	167 MHz	x36	2M	64K	Burst Mode, Byte Selectability, Counter Wraparound	BGA	172	0C to +70C	Synchronous	3.3V
CY7C0852AV	Active	133 MHz	x36	4M	128K	Burst Mode, Dual Chip Enable, Master Reset, Mailbox	FBGA	172	0C to +70C	Synchronous	3.3V
CY7C0852AV	Active	133 MHz	x36	4M	128K	Burst Mode, Dual Chip Enable, Master Reset, Mailbox	FBGA	172	-40C to +85C	Synchronous	3.3V
CY7C0852V	Active	133 MHz	x36	4M	128K	Burst Mode, Byte Selectability, Counter Wraparound	BGA	172	0C to +70C	Synchronous	3.3V
CY7C0853	Active	133 MHz	x36	9M	256K		BGA	172	-40C to +85C	Synchronous	3.3V
CY7C0853AV	Active	100 MHz	x36	9M	256K	Burst Mode, Dual Chip Enable, Master Reset, Mailbox	FBGA	172	-40C to +85C	Synchronous	3.3V
CY7C0853V	Active		x36	9M	256K	Byte Selectability, Master Reset, Mailbox	BGA			Synchronous	3.3V
CY7C0853V	Active	133 MHz	x36	9M	256K	Byte Selectability, Master Reset, Mailbox	BGA	172	0C to +70C	Synchronous	3.3V
CY7C09089	Active	12		512K	64K		TQFP	100	-40C to +85C	Synchronous	3.3V
CY7C09089V	Active	50 MHz	x8	512K	64K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100		Synchronous	3.3V
CY7C09089V	Active	50 MHz	x8	512K	64K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09099V	Active	6 ns	x8	1M	128K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	-40C to +85C	Synchronous	3.3V
CY7C09159AV	Active	12 ns	x9	64K	8K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09179V	Active	12 ns	x9	256K	32K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09199V	Active	6 ns	x9	1M	128K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09269V	Active	12 ns	x16	256K	16K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09279V	Active	83 MHz	x16	512K	32K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09279V	Active	7 ns	x16	512K	32K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09289V	Active	9 ns	x16	1M	64K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09349AV	Active	9 ns	x18	64K	4K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09359AV	Active	9 ns	x18	128K	8K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09369V	Active	12 ns	x18	256K	8K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09379V	Active	12 ns	x18	512K	32K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09389V	Active	9 ns	x18	1M	64K	Burst Counter, Dual-Chip Enables, Flow-Through/Pipeline Select on Both Ports	TQFP	100	0C to +70C	Synchronous	3.3V
CY7C09569V	Active	100 MHz	x36	512K	16K	Burst Mode, Bus Matching, Byte Selectability, Master/Slave Pin	BGA	172	0C to +70C	Synchronous	3.3V
CY7C09579V	Active	83 MHz	x36	1M	32K	Burst Mode, Bus Matching, Byte Selectability, Master/Slave Pin	TQFP	144	0C to +70C	Synchronous	3.3V
CYD02536V	Active	167 MHz	x36	2M	64K	Byte Selectability, Master Reset, Mailbox	FBGA	256	0C to +70C	Synchronous	3.3V
CYD04518V	Active	167 MHz	x18	4M	256K	Burst Mode, Dual Chip Enable, Master Reset, Mailbox	FBGA	256	0C to +70C	Synchronous	3.3V
CYD04572V	Active	167 MHz	x72	4M	64K	Byte Selectability, Master Reset, Mailbox	FBGA	484	0C to +70C	Synchronous	3.3V
CYD09572V	Active	167 MHz	x72	9M	128K	Byte Selectability, Master Reset, Mailbox	FBGA	484	0C to +70C	Synchronous	3.3V
CYD18572V	Active	100 MHz	x72	18M	256K	Byte Selectability, Master Reset, Mailbox	FBGA	484	0C to +70C	Synchronous	3.3V

FIFOs

Cypress's high performance FIFO products provide the ideal solution to interconnect problems such as flow control, rate matching, and bus matching.

Download the FIFOs cross reference guide at www.cypress.com/go/FIFOCRG.

Key Applications: Communication, industrial, military, avionics, medical imaging, consumer

3.3V Synchronous FIFOs

Part Number	Status	Bus Width	Density	Depth	Directional	Speed	Features	ICC (mA)	Package	Pins/Ball	Operating Range	Type	Voltage (V)
CY7C4201V	Active	x9	2K	256	Unidirectional	67 MHz	Full/Empty/OutputEnable/ ProgrammableAlmostFull/AlmostEmpty	20	TQFP	32	0C to +70C	Synchronous	3.3V
CY7C4211V	Active	x9	4K	512	Unidirectional	67 MHz	Full/Empty/OutputEnable/ ProgrammableAlmostFull/AlmostEmpty	20	TQFP	32	-40C to +85C	Synchronous	3.3V
CY7C4215V	Active	x18	8K	512	Unidirectional	67 MHz	Full/Empty/OutputEnable/ ProgrammableAlmostFull/AlmostEmpty	45	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4221V	Active	x9	16K	1K	Unidirectional	67 MHz	Full/Empty/OutputEnable/ ProgrammableAlmostFull/AlmostEmpty	45	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4225	Active	x18	16K	1K	Unidirectional	67 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	45	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4225V	Active	x18	16K	1K	Unidirectional	67 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	45	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4231	Active	x9	16K	2K	Unidirectional	67 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	PLCC	32	0C to +70C	Synchronous	3.3V
CY7C4231V	NRND	x9	16K	2K	Unidirectional	33 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	TQFP	32	0C to +70C	Synchronous	3.3V
CY7C4235V	Active	x18	32K	2K	Unidirectional	15 ns	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	TQFP	32	0C to +70C	Synchronous	3.3V
CY7C4241	Active	x9	32K	4K	Unidirectional	100 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	TQFP	32	0C to +70C	Synchronous	3.3V
CY7C4241V	Active	x9	32K	4K	Unidirectional	67 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	TQFP	32	0C to +70C	Synchronous	3.3V
CY7C4245	Active	x18	64K	4K	Unidirectional	67 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	45	PLCC	64	0C to +70C	Synchronous	3.3V
CY7C4245V	Active	x18	64K	4K	Unidirectional	67 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	45	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4251V	Active	x9	64K	8K	Unidirectional	67 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	TQFP	32	0C to +70C	Synchronous	3.3V
CY7C4255V	Active	x18	128K	8K	Unidirectional	100 MHz	Full/Empty/Half Full/Out En/Prog Almost Full/Almost Empty/2IndFIFOs	30	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4255V	Active	x18	128K	8K	Unidirectional	67 MHz	Full/Empty/Half Full/Out En/Prog Almost Full/Almost Empty/2IndFIFOs	30	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4255V	Active	x18	128K	8K	Unidirectional	67 MHz	Full/Empty/Half Full/IndTemp/ Out En/Prog Almost Full/Almost Empty/2 Ind FIFOs	30	TQFP	64	-40C to +85C	Synchronous	3.3V
CY7C4255V	Active	x18	128K	8K	Unidirectional	100 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	30	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4261V	Active	x9	128K	16K	Unidirectional	67 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	PLCC	32	0C to +70C	Synchronous	3.3V
CY7C4265	Active	x18	256K	16K		15			TQFP	64	-40C to +85C	Synchronous	3.3V

NRND = Not Recommended for New Designs

3.3V Synchronous FIFOs (Continued)

Part Number	Status	Bus Width	Density	Depth	Directional	Speed	Features	ICC (mA)	Package	Pins/Ball	Operating Range	Type	Voltage (V)
CY7C4265V	Active	x18	256K	16K	Unidirectional	67 MHz	Full/Empty/HalfFull/OutEn/ProgAlmostFull/AlmostEmpty/2IndFIFOs	30	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4271V	Active	x9	256K	32K	Unidirectional	100 MHz	Full/Empty/OutputEnable/ProgrammableAlmostFull/AlmostEmpty	20	PLCC	32	0C to +70C	Synchronous	3.3V
CY7C4275V	Active	x18	512K	32K	Unidirectional	67 MHz	Full/Empty/HalfFull/OutEn/ProgAlmostFull/AlmostEmpty/2IndFIFOs	30	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4281V	Active	x9	512K	64K	Unidirectional	100 MHz	Full/Empty/HalfFull/OutEn/ProgAlmostFull/AlmostEmpty/2IndFIFOs	35	PLCC	32	0C to +70C	Synchronous	3.3V
CY7C4285V	Active	x18	1M	64K	Unidirectional	100 MHz	Full/Empty/Half Full/Out En/Prog Almost Full/Almost Empty/2IndFIFOs	30	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4285V	Active	x18	1M	64K	Unidirectional	67 MHz	Full/Empty/Half Full/Out En/Prog Almost Full/Almost Empty/2IndFIFOs	30	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4285V	Active	x18	1M	64K	Unidirectional	67 MHz	Full/Empty/Half Full/IndTemp/Out En/Prog Almost Full/Almost Empty/2 Ind FIFOs	30	TQFP	64	-40C to +85C	Synchronous	3.3V
CY7C4285V	Active	x18	1M	64K	Unidirectional	67 MHz	Full/Empty/HalfFull/OutEn/ProgAlmostFull/AlmostEmpty/2IndFIFOs	30	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4291V	Active	x9	1M	128K	Unidirectional	67 MHz	Full/Empty/OutputEnable/ProgrammableAlmostFull/AlmostEmpty	25	PLCC	32	0C to +70C	Synchronous	3.3V
CY7C4292V	Active	x9	1M	128K	Unidirectional	100 MHz	Full/Empty/OutputEnable/ProgrammableAlmostFull/AlmostEmpty	25	TQFP	64	0C to +70C	Synchronous	3.3V

NRND = Not Recommended for New Designs

5V Synchronous FIFOs

Part Number	Status	Bus Width	Density	Depth	Directional	Speed	Features	ICC (mA)	Package	Pins/Ball	Operating Range	Type	Voltage (V)
CY7C4205	Active	x18	4K	256	Unidirectional	67 MHz	Full/Empty/OutputEnable/ProgrammableAlmostFull/AlmostEmpty	45	TQFP	64	0C to +70C	Synchronous	5V
CY7C4211	Active	x9	4K	512	Unidirectional	67 MHz	Full/Empty/OutputEnable/ProgrammableAlmostFull/AlmostEmpty	20	TQFP	32	0C to +70C	Synchronous	3.3V
CY7C4215	Active	x18	8K	512	Unidirectional	67 MHz	Full/Empty/OutputEnable/ProgrammableAlmostFull/AlmostEmpty	45	TQFP	64	-40C to +85C	Synchronous	5V
CY7C4221	Active	x9	16K	1K	Unidirectional	67 MHz	Full/Empty/OutputEnable/ProgrammableAlmostFull/AlmostEmpty	45	TQFP	64	0C to +70C	Synchronous	3.3V
CY7C4251	Active	x9	64K	8K	Unidirectional	100 MHz	Full/Empty/HalfFull/OutEn/ProgAlmostFull/AlmostEmpty/2IndFIFOs	20	TQFP	32	-40C to +85C	Synchronous	5V
CY7C4261	NRND	x9	128K	16K	Unidirectional	100 MHz	Full/Empty/HalfFull/OutEn/ProgAlmostFull/AlmostEmpty/2IndFIFOs	20	PLCC	32	-40C to +85C	Synchronous	5V
CY7C4265	Active	x18	256K	16K	Unidirectional	100 MHz	Full/Empty/HalfFull/OutEn/ProgAlmostFull/AlmostEmpty/2IndFIFOs	30	TQFP	64	-40C to +85C	Synchronous	5V
CY7C4271	Active	x9	256K	32K	Unidirectional	67 MHz	Full/Empty/OutputEnable/ProgrammableAlmostFull/AlmostEmpty	35	TQFP	32	0C to +70C	Synchronous	5V

5V Asynchronous FIFOs

Part Number	Status	Bus Width	Density	Depth	Directional	Speed	Features	ICC (mA)	Package	Pins/Ball	Operating Range	Type	Voltage (V)
CY7C421	Active	x9	512b	512	Unidirectional	33 MHz	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	TQFP	32	0C to +70C	Asynchronous	5V
CY7C421	Active	x9	4K	512	Unidirectional	20 MHz	Full/Empty/HalfFull/1 TEMP/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	PLCC	32	-40C to +85C	Asynchronous	5V
CY7C425	NRND	x9	8K	1K	Unidirectional	10 ns	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	TQFP	32	0C to +70C	Asynchronous	5V
CY7C429	NRND	x9	16K	2K	Unidirectional	10 ns	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	TQFP	32	0C to +70C	Asynchronous	5V
CY7C433	NRND	x9	32K	4K	Unidirectional	10 ns	Full/Empty/HalfFull/ OutEn/ProgAlmostFull/ AlmostEmpty/2IndFIFOs	20	PLCC	32	0C to +70C	Asynchronous	5V

NRND = Not Recommended for New Designs

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