ZigBee™ TECHNOLOGY PRODUCTS

TRANSCEIVERS

- Supply Voltage: 2.0 to 3.4V
- Supply Current @ 1% Duty Cycle: 1mA
- Standby Current: 500 µA
- Frequency: 2.4 to 2.5GHz
- Control Interface: SPI
- Data Rate: 250kbps
- Package: 32-QFN

SYSTEM IN A PACKAGE

- Supply Voltage: 2.0 to 3.4V
- Supply Current @ 1% Duty Cycle, CPU @ 20MHz: 31.1mA TX, 38.1mA RX
- Standby Current: 0.2 to 0.675mA
- Frequency: 2.4 to 2.5GHz
- Sensitivity @ 1% PER: -92 dBm
- Data Rate: 250kbps
- TX/RX Switch: Yes
- Core: HCS08
- Interfaces and Peripherals: I2C, SCI (2), Timer/Pwm(2), KBI,8-Ch., 10-bit ADC, Up to 32 GPIO
- Package: 71-LGA

RoHS Compliant Available

NXP Semiconductor draws on extensive radio frequency (RF) and wireless experience accumulated from more than 50 years of developing semiconductor products. To help you determine the best fit of transceiver and MCU, the products summary offers a matrix of ZigBee™ technology transceivers which may be paired with the NXP 8-bit or 32-bit MCU's for system solutions.

MC13212 - 2KB RAM, 32KB Flash (Intended for 802.15.4 Standard compliant applications and Freescale 802.15.4 MAC)

MC13213 - 4KB RAM, 60KB Flash (Intended for 802.15.4 Standard compliant applications and the Freescale 802.15.4 MAC and fully ZigBee compliant Freescale BeeStack)

Mfg. Part No.	Supply Voltage	Data Rate	Sensitivity	RF / IF Modulation	Stock No.	Price Each 1-9+
LGA-71 Pins, 2.405 GHz to 2.48 GHz						
● MC13212	2 V to 3.4 V	250Kbps	-92dBm	O-QPSK	**81K2749**	---
● MC13213	2 V to 3.4 V	250Kbps	-92dBm	O-QPSK	**81K2751**	---
QFN-32 Pins, 2.405 GHz to 2.48 GHz						
● MC13202FC	2 V to 3.4 V	250Kbps	-92dBm	O-QPSK	**81K2743**	---

Accessories

Mfg. Part No.	For Use With	Stock No.	Price Each 1+
● 1323XDSK	...	**47T9853**	211.44
● 1323XDSK-BDM	...	**47T9854**	296.44
● 1320XRFC	MCU HCS08, S12, Coldfire families	**81K5785**	8.89

PIM_89417

SRAM MEMORY

RoHS Compliant Available

CYPRESS PERFORM

Features:

- High reliability: Soft-Error Rate < 0.1FIT/Mbit
- ERR pin to indicate single-bit errors
- Density options: 4-Mbit, 8-Mbit, 16-Mbit
- Fast access time: 10ns (FAST)
- Ultra-low standby current: 8.7µA (4-Mbit MoBL®)
- Bus-width configurations: x8, x16 and x32
- Wide operating voltage range: 1.8-5.0V
- Industrial and Automotive temperature grades

Asynchronous SRAM

With the performance to serve a wide variety of high reliability industrial, communication, data processing, medical, consumer and military applications, Fast and Micropower (MoBL®) SRAM devices are available with on-chip ECC. These devices are form-fit-function compatible with older generation Asynchronous SRAMs. This allows you to improve system reliability without investing in PCB re-design.

Ordering Code Definitions		
Company ID	CY = Cypress	CY = Cypress
Family Code	7 = SRAM	621 = MoBL SRAM family
Technology Code	C = CMOS	Density: 5 = 8-Mbit Buswidth: 7 = × 16
Part Identifier	1021, 4121, 4141	
Die Revision	K=65nm, D=90nm	D=90nm
Voltage Vdd	V13=1.3V, V33=3.3V	Voltage with "LL" = Low Power
Speed Grade	667 = 667 MHz; 600 = 600 MHz; 10 = 10ns	XX = 45ns, 55ns
Package Type	FC = 361-ball Flip Chip BGA XX = ZS or BV ZS = 44-pin TSOP II BV = 48-ball VFBGA	XX = BV or ZS or Z BV = 48-ball VFBGA ZS = 44-pin TSOP II Z = 48-pin TSOP I
Pb	X = Pb Free	X = Pb Free
Temperature Range:	I = Industrial C = Commercial	I = Industrial A = Automotive-A E = Automotive-E

Mfg. Part No.	Case Style	No. of Pins	Memory Size	Access Time	Stock No.	Price Each 1-9+
128K x 16bit						
● CY7C1011DV33-10ZSXI	TSOP	44 Pins	2 Mbit	10 ns	**19M2842**	4.41
128K x 32bit						
● CY7C1338G-100AXC	TQFP	100 Pins	4 Mbit	8 ns	**19M3269**	5.83
128K x 36bit						
● CY7C1347G-133AXC	TQFP	100 Pins	4 Mbit	4 ns	**19M3296**	---
128K x 8bit						
● CY7C1009D-10VXI	SOJ	32 Pins	1 Mbit	10 ns	**19M2831**	3.08
● CY7C1018DV33-10VXI	SOJ	32 Pins	1 Mbit	10 ns	**19M2850**	---
● CY7C1019D-10VXI	SOJ	32 Pins	1 Mbit	10 ns	**19M2879**	4.00
● CY7C1019DV33-10VXI	SOJ	32 Pins	1 Mbit	10 ns	**19M2882**	4.20
● CY7C1019DV33-10ZSXI	TSOP-II	32 Pins	1 Mbit	10 ns	**19M2883**	---

▶ CONTINUED ▶

SRAM MEMORY (CONT.)

Mfg. Part No.	Case Style	No. of Pins	Memory Size	Access Time	Stock No.	Price Each 1-9+
128K x 8bit						
● CY7C109D-10VXI	SOJ	32 Pins	1 Mbit	10 ns	**19M3184**	3.08
● CY7C109D-10ZXI	TSOP	32 Pins	1 Mbit	10 ns	**19M3185**	2.27
● CY62128ELL-45SXI	SOIC	32 Pins	1 Mbit	45 ns	**19M2395**	3.08
● CY62128EV30LL-45SXI	SOIC	32 Pins	1 Mbit	45 ns	**19M2401**	3.42
● CY62128EV30LL-45ZAXI	TSOP	32 Pins	1 Mbit	45 ns	**19M2403**	1.94
● CY62128EV30LL-45ZXI	TSOP	32 Pins	1 Mbit	45 ns	**19M2405**	---
256K x 18bit						
● CY7C1352G-133AXC	TQFP	100 Pins	4 Mbit	4 ns	**19M3334**	5.76
2M x 36bit						
● CY7C4041KV13-667FCXC	FBGA	361 Pins	72 Mbit	20 ns	**49X8420**	---
2M x 8bit / 1M x 16bit						
CY62167DV30LL-55BVI	BGA	48 Pins	16 Mbit	55 ns	**19M2508**	---
● CY62167EV30LL-45ZXI	TSOP-I	48 Pins	16 Mbit	45 ns	**41M1334**	15.71
32K x 16bit						
● CY7C1020DV33-10ZSXI	TSOP	44 Pins	512 Kbit	10 ns	**19M2910**	4.35
32K x 8bit						
● CY7C1399BN-12ZXC	TSSOP	28 Pins	256 Kbit	12 ns	**19M3555**	---
● CY62256NLL-70SNXC	SOIC	28 Pins	256 Kbit	70 ns	**19M2557**	---
4M x 18bit						
● CY7C4021KV13-667FCXC	FBGA	361 Pins	72 Mbit	50 ns	**49X8419**	---
4M x 36bit						
● CY7C4141KV13-600FCXC	FBGA	361 Pins	144 Mbit	50 ns	**49X8425**	---
● CY7C4141KV13-667FCXC	FBGA	361 Pins	144 Mbit	50 ns	**49X8426**	---
512K x 16bit						
● CY62157ELL-45ZSXI	TSOP	44 Pins	8 Mbit	45 ns	**19M2488**	11.33
● CY62157EV30LL-45BVXI	BGA	48 Pins	8 Mbit	45 ns	**19M2494**	9.98
● CY62157EV30LL-45ZSXI	TSOP	44 Pins	8 Mbit	45 ns	**19M2496**	6.93
● CY62157EV30LL-45ZXI	TSOP	48 Pins	8 Mbit	45 ns	**19M2498**	---
64K x 16bit						
● CY7C1021D-10ZSXI	TSOP-II	44 Pins	1 Mbit	10 ns	**19M3028**	3.08
● CY7C1021DV33-10VXI	SOJ	44 Pins	1 Mbit	10 ns	**19M3030**	---
● CY7C1021DV33-10ZSXI	TSOP	44 Pins	1 Mbit	10 ns	**19M3031**	---
● CY7C1021DV33-10ZSXIT	TSOP	44 Pins	1 Mbit	10 ns	**41M1365**	---
● CY62126EV30LL-45ZSXI	TSOP	44 Pins	1 Mbit	45 ns	**19M2365**	---
8M x 18bit						
● CY7C4121KV13-600FCXC	FBGA	361 Pins	144 Mbit	50 ns	**49X8421**	---
● CY7C4121KV13-667FCXC	FBGA	361 Pins	144 Mbit	50 ns	**49X8422**	---
● CY7C4122KV13-106FCXC	FBGA	361 Pins	144 Mbit	50 ns	**49X8423**	---
● CY7C4122KV13-933FCXC	FBGA	361 Pins	144 Mbit	50 ns	**49X8424**	---
● CY7C4142KV13-106FCXC	FBGA	361 Pins	144 Mbit	50 ns	**49X8427**	---
● CY7C4142KV13-933FCXC	FBGA	361 Pins	144 Mbit	50 ns	**49X8428**	---

PIM_148666

BLUETOOTH MODULES

MICROCHIP

Features

- Fully qualified Class 1 (RN41), Class 2 (RN42), Bluetooth® 2.1 + EDR module
- Bluetooth® SIG qualified
- UART (SPP or HCI) and USB (HCI only) data connection hardware interfaces
- Onboard embedded Bluetooth® stack (no host processor required)
- Supports Bluetooth® data link to iPhone/iPad/iPod Touch
- Supports HID profile for making accessories such as keyboards, mouse, pointing devices
- Programmable low power modes
- Secure communications, 128 bit encryption
- Error correction for guaranteed packet delivery
- UART local and over-the-air RF configuration
- Auto-discovery/pairing requires no software configuration (instant cable replacement)
- Castellated SMT pads for easy and reliable PCB mounting

RN Modules are stand-alone, small form factor and extremely low power complete Bluetooth networking modules used to add Bluetooth capabilities to any embedded design. **Smart modules** are field ready evaluation boards populated with the RN module of you choice.

Mfg. Part No.	Receive Sensitivity	Data Rate	Signal Range	Stock No.	Price Each 1-24+
Bluetooth 2.1 + EDR - Class 1					
● RN41-I/RM	-80dBm	921Kbps	100m	**06W3299**	22.22
Bluetooth 2.1 + EDR - Class 1, Class 2					
RN-41-SM	-80dBm	3Mbps	100m	**27W2084**	---
Bluetooth 2.1 + EDR - Class 2					
● RN42-I/RM	-80dBm	921Kbps	20m	**06W3305**	15.64

PIM_207781