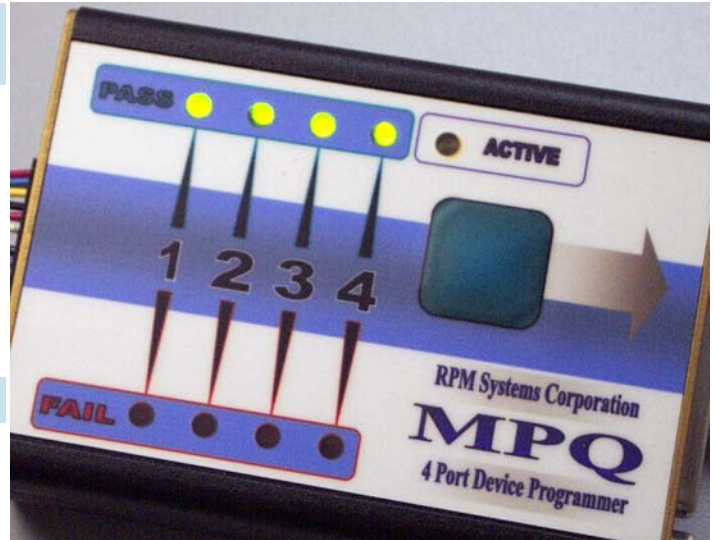


## MPQ-PSoC

### Four Port In-System Programmer for Cypress PSoC/3/5 and enCoRe II/III/V



The MPQ-PSoC is a 4-port, in-circuit manufacturing programmer for Cypress Semiconductor PSoC, PSoC3, CapSense Express, enCoRe II, enCoRe III, enCoRe V and Ovation ONS microcontrollers.

#### Fast and Portable

Up to four different target images can be stored in the programmer's internal Flash memory, allowing faster programming times and standalone operation. In addition, our adaptive programming algorithm provides the fastest programming time for each image, while ensuring the image integrity of each device programmed.

#### Program Four Devices Simultaneously

Four port programming allows each MPQ to program the same image on up to four separate target devices simultaneously, increasing manufacturing throughput fourfold.

#### Stand-alone, ATE-Controlled or PC-Controlled

MPQ-PSoC can be operated stand-alone (just press a button to initiate programming), directly from a host PC using MPManger software, or under the control of your Automated Test Equipment (ATE) system.

#### Full Range of Voltage and Frequency Support

MPQ-PSoC is compatible with the full range of power supply voltages supported by Cypress PSoC devices, from 1.7 to 5.0V.

#### Rugged and Ready for Manufacturing World Wide

Features like an extruded aluminum chassis, universal power supply and extensive electrical protection ensure that MPQ-PSoC will be at home in any manufacturing environment.

#### Powerful Software - Field Upgradable

MPQ-PSoC comes complete with MPManger software to provide programmer configuration and image management, PC-controlled device programming, and more. MPManger also provides the ability to upgrade your MPQ-PSoC programmer on site as support for new devices is released by RPM.

#### Secure Image Management

Secure your programming images, preventing them from being read back from the programmer, and define a maximum number of parts to be programmed from each image. Send your MPQ to CM's anywhere in the world without worry.

#### Autoserialization

MPQ-PSoC supports on-the-fly image modification, allowing each device to be programmed with a unique serial number, MAC address, IP address, etc.

# MPQ-PSoC In-System Programmer

## Full Memory Programming Speeds for Selected Devices

| Verify Method             | CY8C26233<br>(8 Kb) | CY8C27443<br>(16 Kb) |
|---------------------------|---------------------|----------------------|
| Program / Checksum Verify | 4.4 Seconds         | 6.7 Seconds          |
| Program / Read Verify     | 4.6 Seconds         | 7.5 Seconds          |

Reset mode programming, 5.0V Vcc. Times shown are typical times to erase, program and verify four devices using maximum size program images for each device.

## Specifications

|                              |                           |
|------------------------------|---------------------------|
| Target Voltage Range:        | 1.70 to 5.0VDC            |
| Power Supply:                | 100 to 240VAC, 50/60Hz ** |
| Operating Temperature Range: | 0°C to +65°C              |

## Software Support

RPM Systems *MPManager* Software

- Programmer Image Management
- Programmer Configuration
- PC-Controlled Programming
- Windows™ 98, NT, 2000, XP, Win7

**MPQ Programmers are also available for these popular micro-controller families:**

- Atmel AVR
- Atmel AVR32
- Silicon Labs C8051F series
- Zilog Z8 and ZNeo

\*\* MPQ-PS Power Supply included with MPQ-PSoC

## Supported Devices

### PSoC

CY8C20045-24LKXI, CY8C20055-24SXI, CY8C20055-24LKXI, CY8C20224-12LKXI, CY8C20234, CY8C20236A-24LKXI, CY8C20246A-24LKXI, CY8C20266A-24LKXI, CY8C20296A-24LKXI, CY8C20324-12LQXI, CY8C20334, CY8C20336A-24LQXI, CY8C20346A-24LQXI, CY8C20366A-24LQXI, CY8C20396A-24LQXI, CY8C20424-12LKXI, CY8C20434, CY8C20436A-24LQXI, CY8C20446A-24LQXI, CY8C20466A-24LQXI, CY8C20496A-24LQXI, CY8C20524-12PVXI, CY8C20534, CY8C20536A-24PVXI, CY8C20546A-24PVXI, CY8C20566A-24PVXI, CY8C20634, CY8C20636A-24LTXI, CY8C20646A-24LTXI, CY8C20666A-24LTXI, CY8C20746A-24FDXC, CY8C20766A-24FDXC, CY8C210011, CY8C21123, CY8C21223, CY8C21323, CY8C21234, CY8C21334, CY8C21345, CY8C21434, CY8C21534, CY8C21634, CY8C22113, CY8C22213, CY8C22045, CY8C22345, CY8C22545, CY8C23033-24LFXI, CY8C23433-24PVXI, CY8C23533-24LFXI, CY8C24033A, CY8C24094, CY8C24123, CY8C24123A, CY8C24223, CY8C24223A, CY8C24423, CY8C24423A, CY8C24533A, CY8C24633A, CY8C24794, CY8C24894, CY8C24994, CY8C25122, CY8C26233, CY8C26443, CY8C26643, CY8C270021, CY8C27143, CY8C27243, CY8C27443, CY8C27543, CY8C27643, CY8C28000-24PVXI, CY8C28243-24PVXI, CY8C28403-24PVXI, CY8C28413-24PVXI, CY8C28433-24PVXI, CY8C28445, CY8C28513-24AXI, CY8C28533-24AXI, CY8C28452-24PVXI, CY8C28545-24AXI, CY8C28623-24LFXI, CY8C28643-24LFXI, CY8C28645-24LFXI, CY8C29466, CY8C29566, CY8C29666, CY8C29866, CY8C21001, CY8C21002, CY8C24000, CY8C24000A, CY8C27002, CY8C29000, CY8C290001, CY8C41000, CY8C41123, CY8C41223, CY8C42000, CY8C42123, CY8C42223, CY8C42323, CY8C42423, CG6457AM, CG6462AM, CY8CLED01D01-56LTXI, CY8CLED02-8SXI, CY8CLED02-16SXI, CY8CLED02-24LFXI, CY8CLED02D01-56LTXI, CY8CLED03D01-56LTXI, CY8CLED03D02-56LTXI, CY8CLED03G01-56LTXI, CY8CLED04-68, CY8CLED04D01-56LTXI, CY8CLED04D02-56LTXI, CY8CLED04DOCD1-56LTXI, CY8CLED04G01-56LTXI, CY8CLED08-OCD, CY8CLED08-28PVXI, CY8CLED08-48LF/PVXI, CY8CLED16-28, CY8CLED16-48, CY8CLED16P01-28PVXI, CY8CLED16P01-48LFXI, CY8CLED16P01-OCD, CY8CMBR2044-24LKXI, CY8CNP102B, CY8CNP102E, CY8CPLC20-28PVXI, CY8CPLC20-48LFXI, CY8CPLC20-OCD, CY8CTMG100-00LFXI, CY8CTMG100-32LKXI, CY8CTMG110-00LFXI, CY8CTMG110-32LTXI, CY8CTST100-00LFXI, CY8CTST100-32LKXI, CY8CTST110-00PVXI, CY8CTST110-32LTXI, CY8CTST120-56LFXI, CY8CTST120-00PVXI, CY8CTST200A-16LGXI, CY8CTST200A-24LQXI, CY8CTST200A-32LQXI, CY8CTST200A-48LTXI, CY8CTST200A-48PVXI, CY8CTMG120-56LFXI, CY8CTMG120-00AXI, CY8CTMG200A-00LTXI, CY8CTMG200A-16LGXI, CY8CTMG200A-24LQXI, CY8CTMG200A-32LQXI, CY8CTMG200A-48LTXI, CY8CTMG200A-48PVXI, CY8CTMG201-32LQXI, CY8CTMG201A-48LTXI, CY8CTMG201A-48PVXI, CY8CTMA120-56LFXI, CY8CTMA120-00AXI, CY8CTMA300-36LQXI, CY8CTMA300-48LTXI, CY8CTMA300-49FNXI, CY8CTMA300B-36LQXI, CY8CTMA300D-36LQXI, CY8CTMA300D-48LTXI, CY8CTMA300D-48FNXIT, CY8CTMA300E-36LQXI, CY8CTMA300E-48LTXI, CY8CTMA300E-49FNXIT, CY8CTMA301D-36LQXI, CY8CTMA301D-48LTXI, CY8CTMA301E-36LQXI, CY8CTMA301E-48LTXI, CY8CTMA140-LQI-01T, CY8CTMA340H-LQI-17, CY8CTMA340H-LTI-17, CY8CTMA340H-FNI-17, CY8CTMA340-LQI-13, CY8CTMA340-LTI-13, CY8CTMA340-FNI-13, CY8CTMA340-LQI-11, CY8CTMA340-LTI-11, CY8CTMA340-FNI-11, CY8CTMA340-LQI-09, CY8CTMA340-LTI-09, CY8CTMA340-FNI-09, CY8CTMA340-LQI-05, CY8CTMA340-LTI-05, CY8CTMA340-FNI-05, CY8CTMA340-LQI-03, CY8CTMA340-LTI-03, CY8CTMA340-FNI-03, CY8CTMA340-LQI-01, CY8CTMA340-LTI-01, CY8CTMA340-FNI-01, CY8CTST341-LQI-01, CY8CTST341-LTI-01, CY8CTST341-FNI-01, CY8CTMA350-FNI-01, CY8CTMA350-LTI-01, CY8CTMA350-LQI-01, CY8CTMA350-FNI-03, CY8CTMA350-LTI-03, CY8CTMA350-LQI-03, CY8CTMA350H-FNI-07, CY8CTMA350H-LTI-07, CY8CTMA350H-LQI-07

### OvationONS

CYONS2001, CYONS2100, CYONS2101, CYONS2110

### Encore V

CY7C60413-16LKXC, CY7C60445-32LQXC, CY7C60455-48LTXC, CY7C60456-48LTXC, CY7C64300-48LTXC, CY7C64315-16LKXC, CY7C64316-16LKXC, CY7C64343-32LQXC, CY7C64345-32LQXC, CY7C64355-48LTXC, CY7C64356-48LTXC

# MPQ-PSoC In-System Programmer

## Supported Devices (cont'd).

### enCoRe II

CY7C60123PXC, CY7C60123PVXC, CY7C63310, CY7C63310-XC, CY7C63801, CY7C63803, CY7C63813, CY7C63823, CY7C63823-XC, CY7C63833, CY7C63903, CY7C63913, CY7C63923, CY7C63923-XC, CYRF69103, CYRF69213

### enCoRe III

CY7C60323LFXC, CY7C60323PVXC, CY7C60333LFXC, CY7C64215-28, CY7C64215-56

### PSoC3

CY8C3665LTI-002, CY8C3665PVI-003, CY8C3665LTI-004, CY8C3866PVI-005, CY8C3665LTI-006, CY8C3665PVI-007, CY8C3665PVI-008, CY8C3665LTI-009, CY8C3665AXI-010, CY8C3666LTI-011, CY8C3666LTI-012, CY8C3665AXI-013, CY8C3865LTI-014, CY8C3865AXI-015, CY8C3665AXI-016, CY8C3665AXI-017, CY8C3865AXI-018, CY8C3865AXI-019, CY8C3866LTI-020, CY8C3866PVI-021, CY8C3666PVI-022, CY8C3866LTI-023, CY8C3865LTI-024, CY8C3666LTI-025, CY8C3666PVI-026, CY8C3666LTI-027, CY8C3666LTI-028, CY8C3866LTI-029, CY8C3866LTI-030, CY8C3666AXI-031, CY8C3865LTI-032, CY8C3866AXI-033, CY8C3666AXI-034, CY8C3866AXI-035, CY8C3666AXI-036, CY8C3666AXI-037, CY8C3866AXI-038, CY8C3866AXI-039, CY8C3866AXI-040, CY8C3666PVI-041, CY8C3666LTI-042, CY8C3665LTI-043, CY8C3665LTI-044, CY8C3865LTI-045, CY8C3666LTI-046, CY8C3866PVI-047, CY8C3665LTI-048, CY8C3665PVI-049, CY8C3666LTI-050, CY8C3865PVI-051, CY8C3666AXI-052, CY8C3865PVI-053, CY8C3866AXI-054, CY8C3866AXI-055, CY8C3865AXI-056, CY8C3666PVI-057, CY8C3865LTI-058, CY8C3865LTI-059, CY8C3865PVI-060, CY8C3865LTI-061, CY8C3865LTI-062, CY8C3865PVI-063, CY8C3866LTI-064, CY8C3866LTI-065, CY8C3866PVI-066, CY8C3866LTI-067, CY8C3866LTI-068, CY8C3866PVI-069, CY8C3866PVI-070, CY8C3446LTI-071, CY8C3446LTI-072, CY8C3446LTI-073, CY8C3446LTI-074, CY8C3446LTI-075, CY8C3446PVI-076, CY8C3445PVI-077, CY8C3445LTI-078, CY8C3445LTI-079, CY8C3665PVI-080, CY8C3445LTI-081, CY8C3446PVI-082, CY8C3446LTI-083, CY8C3446LTI-084, CY8C3446LTI-085, CY8C3445LTI-086, CY8C3445LTI-087, CY8C3445PVI-088, CY8C3445LTI-089, CY8C3445PVI-090, CY8C3446PVI-091, CY8C3446PVI-092, CY8C3445LTI-093, CY8C3445PVI-094, CY8C3445LTI-095, CY8C3444AXI-096, CY8C3445AXI-097, CY8C3446AXI-098, CY8C3446AXI-099, CY8C3444PVI-100, CY8C3444PVI-101, CY8C3446PVI-102, CY8C3444PVI-103, CY8C3445AXI-104, CY8C3446AXI-105, CY8C3444AXI-106, CY8C3445AXI-107, CY8C3445AXI-108, CY8C3444LTI-109, CY8C3444LTI-110, CY8C3444LTI-111, CY8C3444LTI-112, CY8C3444LTI-113, CY8C3444LTI-114, CY8C3446AXI-115, CY8C3444AXI-116, CY8C3444AXI-117, CY8C3444PVI-118, CY8C3444LTI-119, CY8C3444LTI-120, CY8C3246LTI-121, CY8C3246PVI-122, CY8C3244LTI-123, CY8C3245LTI-124, CY8C3246LTI-125, CY8C3244PVI-126, CY8C3244LTI-127, CY8C3246LTI-128, CY8C3245LTI-129, CY8C3244LTI-130, CY8C3246AXI-131, CY8C3246PVI-132, CY8C3244PVI-133, CY8C3245PVI-134, CY8C3244LTI-135, CY8C3246LTI-136, CY8C3246AXI-137, CY8C3246AXI-138, CY8C3245LTI-139, CY8C3246AXI-140, CY8C3246PVI-141, CY8C3245LTI-142, CY8C3244AXI-143, CY8C3245LTI-144, CY8C3246LTI-145, CY8C3244AXI-146, CY8C3246PVI-147, CY8C3245AXI-148, CY8C3246LTI-149, CY8C3245PVI-150, CY8C3244LTI-151, CY8C3244LTI-152, CY8C3244AXI-153, CY8C3245AXI-154, CY8C3244PVI-155, CY8C3246LTI-156, CY8C3245PVI-157, CY8C3245AXI-158, CY8C3244AXI-159, CY8C3245LTI-160, CY8C3244LTI-161, CY8C3246LTI-162, CY8C3245LTI-163, CY8C3245LTI-164, CY8C3244PVI-165, CY8C3245AXI-166, CY8C3245PVI-167, CY8C3244LTI-168, CY8CTMA395LTI-00, CY8CTMA395LTI-01, CY8CTMA616LTI, CY8CTMA884AI, CY8CTMA884LTI CY8C3245PVI-157, CY8C3245AXI-158, CY8C3244AXI-159, CY8C3245LTI-160, CY8C3244LTI-161 CY8C3246LTI-162, CY8C3245LTI-163, CY8C3245LTI-164, CY8C3244PVI-165, CY8C3245AXI-166, CY8C3245PVI-167, CY8C3244LTI-168, CY8CTMA395LTI-00, CY8CTMA395LTI-01,

(PSoC3 continued on next page)

**Supported Devices (cont'd).**

**PSoC3 (cont'd)**

CY8CTMA616LTI, CY8CTMA616AA-12, CY8CTMA616AE-12, CY8CTMA616AA-13, CY8CTMA616AA-13ES, CY8CTMA616AE-13, CY8CTMA616AE-13ES, CY8CTMA616AA-22, CY8CTMA616AE-22, CY8CTMA616AA-23, CY8CTMA616AA-23ES, CY8CTMA616AE-23, CY8CTMA884AI, CY8CTMA884LTI, CY8CTMA884AA-12, CY8CTMA884AE-12, CY8CTMA884AA-13, CY8CTMA884AA-13ES, CY8CTMA884AE-13, CY8CTMA884AE-13ES, CY8CTMA884AA-22, CY8CTMA884AE-22, CY8CTMA884AA-23, CY8CTMA884AA-23ES, CY8CTMA884AE-23

**PSoC5**

CY8C5248LTI-030, CY8C5248AXI-047, CY8C5247LTI-089, CY8C5247AXI-051, CY8C5246LTI-029, CY8C5246AXI-054, CY8C5368LTI-026, CY8C5368AXI-106, CY8C5367LTI-003, CY8C5367AXI-108, CY8C5366LTI-053, CY8C5366AXI-001, CY8C5365LTI-104, CY8C5365AXI-043, CY8C5468AXI-018, CY8C5468LTI-037, CY8C5467AXI-011, CY8C5467LTI-007, CY8C5466AXI-064, CY8C5466LTI-063, CY8C5568AXI-060, CY8C5568LTI-114, CY8C5567AXI-019, CY8C5567LTI-079, CY8C5566AXI-061, CY8C5566LTI-017