

## MPQ-ARM

### Four Port In-Circuit Programmer for ARM Microcontrollers



The MPQ-ARM is a member of RPM's family of dedicated in-system device programmers. It supports in-circuit programming of ARM Cortex microcontrollers. Like all MPQ's, it is reliable, efficient, flexible and cost effective - all of the features you require in a manufacturing programmer.

#### 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. Our adaptive programming algorithm provides the fastest programming time for each image.

#### Program 4 to 64 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. Up to 16 MPQ's can be interconnected in an array to allow programming of up to 64 devices simultaneously.

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

MPQ 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.

#### Supports SWD Programming

MPQ-ARM provides in-circuit SWD programming, to accommodate the widest range of ARM Cortex devices and customer programming requirements.

#### Rugged and Ready for Manufacturing World Wide

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

#### 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.

#### Powerful Software - Field Upgradable

MPQ-ARM 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-ARM programmer on site as support for new devices is released by RPM.

#### Device Serialization

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

# MPQ-AVR In-System Programmer

## Full Memory Programming Speeds for Selected Devices

Operation	M054xAN (16 Kb)	M0516xAN (64 Kb)	NUC100LE3AN (128 Kb)
Program / Read Verify	2.5s	4.5s	8.5s

Times shown are typical times to erase, program and verify APROM, LDROM and Data Flash on four microcontrollers using maximum size program images for each device.

## Supported Devices

**M05x:** M052LAN, M052ZAN, M054LAN, M054ZAN, M058LAN, M058ZAN, M0516LAN, M0516ZAN, M052LBN, M052ZBN, M054LBN, M054ZBN, M058LBN, M058ZBN, M0516LBN, M0516ZBN

**NUC1xx:** NUC100LD3AN, NUC100LE3AN, NUC100RD3AN, NUC100RE3AN, NUC100VD2AN, NUC100VD3AN, NUC100VE3AN, NUC100LC1BN, NUC100LD1BN, NUC100LD2BN, NUC100RC1BN, NUC100RD1BN, NUC100RD2BN

NUC120LD3AN, NUC120LE3AN, NUC120RD3AN, NUC120RE3AN, NUC120VD2AN, NUC120VD3AN, NUC120VE3AN, NUC120LC1BN, NUC120LD1BN, NUC120LD2BN, NUC120RC1BN, NUC120RD1BN, NUC120RD2BN

NUC130LD3AN, NUC130LE3AN, NUC130RD3AN, NUC130RE3AN, NUC130VD2AN, NUC130VD3AN, NUC130VE3AN, NUC130LC1BN, NUC130LD2BN, NUC130RC1BN, NUC130RD2BN

NUC140LD3AN, NUC140LE3AN, NUC140RD3AN, NUC140RE3AN, NUC140VD2AN, NUC140VD3AN, NUC140VE3AN, NUC140LC1BN, NUC140LD2BN, NUC140RC1BN, NUC140RD2BN

## Specifications

Target Voltage Range:	1.80 to 5.0VDC
Power Supply:	100 to 240VAC, 50/60Hz **
Operating Temperature Range:	0°C to +60°C

## Software Support

RPM Systems **MPManager** Software

- Programmer Image Management
- PC-Controlled Programming
- Programmer Configuration
- Windows™ 98, NT, 2000, XP, Vista, 7

## Ordering Options

- MPQ-ARM

MPQ Programmers are also available for these popular microcontroller families:

- Cypress PSoc/3/5 and enCoReII/III/V
- Silicon Labs C8051F series
- Zilog Z8 Encore! and ZNeo
- Atmel AVR and AVR32

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