# Cyclone


## Overview

Cyclone flash programmers are powerful tools for in-circuit programming, debugging, and testing of MCU devices. They can function in stand-alone mode or be controlled from a PC. Programming may be launched by a single button press without a PC, or automatically from a PC via the automated control SDK.

Cyclone users choose to create either stand-alone programming Images or cloud-connected Jobs. Both are self-contained programming objects that can be delivered locally directly to the Cyclone, but a cloud-connected Job adds the option of delivering the Job securely and remotely via the PEcloud platform. Cloud-connected Jobs can also be stopped and started remotely and their results logged.

Cyclone programmers support thousands of devices and offer security and encryption features to help users protect valuable IP. They are versatile tools that offer on-board storage of programming Images/Jobs, provide power to the target, support manual or automated programming, and have an easy-to-use touchscreen interface. Cyclone programmers can additionally be used as debug probes during development and are supported by many IDEs.

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|---|---|
| Extended Security Features | Anti-tamper Technology<br>Internal memory protection & encryption<br>Optional License for ProCryption Security |
| On-Board Storage | 16MB, up to 8 programming images |
| High-Speed Target Communications | Fast |
| Expandable Storage - SDHC Memory Card Support | none |
| Advanced Hardware Features | none |
| Multiple SAP Images | Onboard Cyclone memory stores up to 8 images |
| Cyclone Control & Automation | Includes Powerful Standard Automation Features<br>Can use Cloud-connected Jobs via the PEcloud platform |
| Advanced Testing Features | none |

## Device Support

### ARM Cortex devices

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|---|---|
| Analog Devices | Wireless |
| AutoChips | MCU |
| CVA Chip | M01 |
| Cypress | CCG2, CCG3PA, EZ-BLE-PSoC-PRoC, FM3, PSoC5 |
| Flagchip as Flagship | FC4150F, FC7240, FC7300 |
| Geehy | APM32 |
| GigaDevice | GD32 |
| indie Semi | ADAS/Autonomous, ASIC, UserExperience |
| Infineon | MOTIX™, PRoC-BLE, PSoC4, PSoC6, Traveo-II, XMC, XMC7000 |
| Maxim Integrated | DARWIN |
| Microchip (Atmel) | PIC32, SAMxxx |
| MindMotion | MM32F, MM32SPIN |
| NordicSemi | nRF51, nRF52, nRF53, nRF91 |
| Nuvoton | Nano, NuMicro |
| NXP | Automotive, iMX RT, Kinetis, LPC, MCX, Sensors,Trimension, Vybrid, Wireless |
| OMNIVISION | OMX14X |
| OnBright | OB90Rxx |
| onsemi | RSL10, Wireless-RF-Transceivers |
| Qorvo | Intelligent Motor Controllers |
| Raspberry Pi | RP2xxx |
| Redpine Signals | WiSeMCU |
| Renesas | RA, SmartBond, Synergy |
| Silergy (Maxim) | AM0x, AM1x, MAX716xx, SY7x2xx |
| Silicon Labs | EFM32, EFR32, SiM3, WiFi |
| STMicroelectronics | Bluetooth, STM32 |
| Texas Instruments | LM3S, LM4, MSP, SimpleLink, TM4C12x |
| Toshiba | TX00, TX03, TX04 |
| WIZnet | W7500x |
| Yuntu | YTM32B1LD0, YTM32B1LE0, YTM32B1MD1 |
| ZHIXIN | MCU |

### 8/16/32 bit devices

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|---|---|
| NXP | S32, ColdFire® V1, ColdFire® V2/V3/V4, Qorivva® (MPC5xxx), DSC, MPC5xx/8xx, ARM Nexus (MAC7xxx), S12Z, HC(S)12(X), HC08, HCS08, RS08 |
| Infineon | TriCore (DAP only - AUDO TC1xx & AURIX TC2xx/ TC3xx) |
| STMicro | SPC5, STM8 |