

VTOS Program™

Everything you need to program all programmable devices on your circuit board

VTOS Program is a low-cost software product that provides everything you need to program all of the programmable devices on your circuit board. VTOS Program can program NOR Flash, NAND Flash, Serial Flash, SD/MMC/eMMC, EEPROM, FPGA, and a growing list of other programmable devices.

The VTOS Program user interface makes programming configuration easy. VTOS Program is a programming tool that also integrates with Kozio's vAccess™ for automated production programming. You can program devices interactively, or generate automated programming sequences that can be executed from NI's TestStand, custom test executives, or other third-party user interfaces.

VTOS Program is loaded into the on-chip memory of the target device. The typical way of loading the VTOS Program firmware object file is over JTAG. Kozio is working with JTAG hardware providers so that VTOS Program can use JTAG hardware for loading, communications, and data transfers.

VTOS Program is a bare-metal application that executes from an MPU's on-chip memory and requires no other software, operating system, or boot loader – making VTOS Program an excellent solution for new boards with no software, or boards that will not boot.

Device Programming

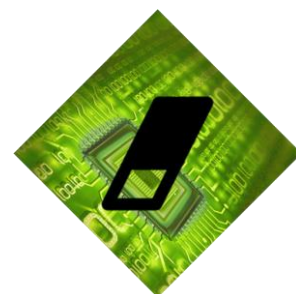
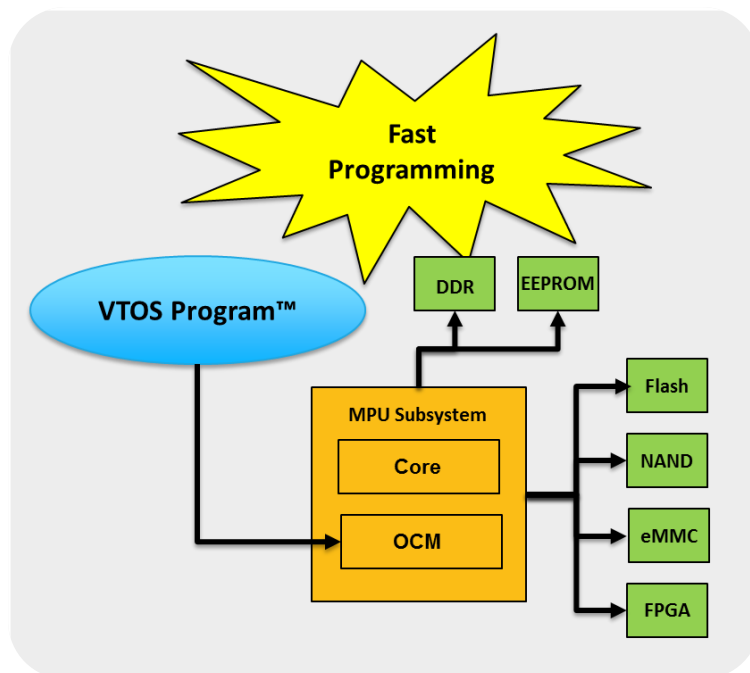
VTOS Program provides fast and safe programming of all programmable devices. The configuration step provides the means to choose your source, destination, transfer path, verification method, compression method, and other options giving you full control of the process. VTOS Program provides a flexible embedded application for reading images from one device, and programming your target device. For example, use VTOS Program to load an application image file from an SD Card and program that image into NAND, saving significant time by not transferring the file over slower interfaces.

VTOS Program provides a rich and comprehensive set of commands that are accessible through an interpreter. New commands are created and executed without code recompiles, loading new software, or restarting the device under test. All commands and tests run at full processor speed.

Fast programming of:

- NOR Flash devices
- NAND Flash devices
- SD/MMC/eMMC devices
- EEPROMs
- FPGAs (Altera & Xilinx)

VTOS Program is a small software executable that runs directly from on-chip memory (OCM). The VTOS Program object file is loaded into OCM using JTAG. Communications to VTOS Program is over a JTAG or UART interface. Because VTOS Program runs from OCM, processor faults and device faults are handled without a system restart.



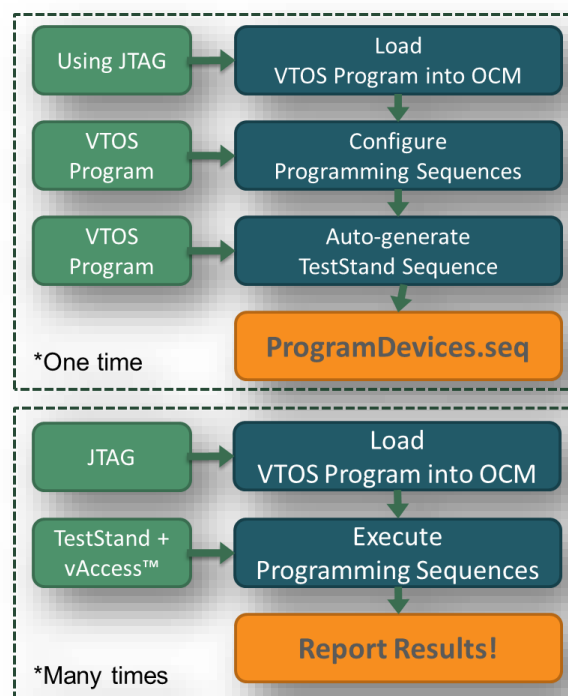
VTOS Program™ Provides

- A friendly, task-focused user interface that walks you through programming setup.
- Programming using the fastest supported speeds of the device.
- Integration with JTAG probes (provides hardware connection from PC to device).
- Flexible file management. Programmable image files can either be transferred from a host PC using a JTAG or UART connection, or read from on-board storage devices such as eMMC and USB flash devices.
- Configurable programming verification modes. Choose between fast and full verification.
- Support for common file formats, including BIN, SREC, ELF, and ISO.
- Automatic sequence generation for NI TestStand and custom test executives.
- Extensible, scriptable programming engine

VTOS Program™ Process Flow

Follow these steps to program any device:

- VTOS Program is ready for use via the Kozio Software Downloads page. A license is required for full product activation.
- Using the VTOS Program UI, configure your desired programming sequence. This step is performed once for a new circuit board design.
- Using the VTOS Program UI, generate a TestStand Sequence or text sequence file.
- For each device under test, load the VTOS Program object file into on-chip memory using JTAG.
- Execute your programming sequence for fast device programming.
- Repeat the previous two steps for each device.



General Features/Benefits

- Simple to use.
- Fast programming.
- No software development required.
- Does not require a boot loader or OS.
- Runs on partial assemblies or fully assembled units. Headless operation requires no video or display hardware

Production Test Benefits

- Extremely fast programming, file reads, or file transfers.
- Flexible API allows for greatest process optimization.
- Generate TestStand (*.seq) or vAccess™ sequence files.

Fast Device Programming

- Transfer and verify file from any source
- Program any device
- Fast or full verification

Additional Product Information

VTOS Program requires a supported processor in working condition, a UART or JTAG communication channel, and at least 32 KiB of on-chip memory (requirement varies by SoC).

For additional information:

- Email sales@kozio.com
- Call +1 303-776-1356 x1