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# Technological Arts Inc.

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## NanoCore12DXC32ST Module, TTL Interface, 32-pin

USD \$49.00



### Product Info

The 32-pin module is the most popular in the family, and this is the lowest-cost version, with square pins and TTL-level serial pins. It's ready to be used with a USB-to-UART board (such as our USB2NCT or any FTDI breakout board), or with your own RS232 level-shifter circuit. Just plug it into your solderless breadboard or a DIP socket in your application circuit, and you're ready to start developing! Free development tools range from the new nqBASIC language (easiest) all the way up to Assembler and C on CodeWarrior (for advanced users).

### **Module Features:**

- based on the 9S12C32 MCU
- includes 8 Mhz crystal
- 24 MHz bus speed (via PLL)
- local 5 Volt low-dropout 100 mA regulator
- **TTL-level signals for RX and TX**
- **compatible with USB2NCT module for use with USB**
- has on-chip Serial Monitor (CodeWarrior-compatible)
- supports standalone operation
- 32K Bytes Flash
- 2K Bytes Ram

- 32-pin DIP form-factor
- low profile (BDM connector omitted)
- **gold-plated 0.025" square pins**
- pinout is super-set of competing 24-pin modules on the market

## Product Details

- supports programming in C, BASIC, Forth, assembler, etc.
- fast in-circuit programming
- small footprint on-chip bootloader/monitor and free uBug12 GUI for quick loading/debugging of user programs on a Windows platform
- Run/Load switch for choice of Standalone or Monitor operation following reset
- compatible with virtually all 9S12 development tools on the market

**Flash-based code development using on-chip debug/monitor** With a 2K Flash-resident debug/monitor program, you'll be able to load your program into the remaining 30K Flash via the serial port using nqBASIC, CodeWarrior, or the uBug12 user interface for Windows. The entire 30K Flash can be programmed in about 3 seconds! To use the monitor for debugging or code-loading, just set the switch to LOAD. To run your standalone program thereafter, leave the switch at RUN. Your code runs from Flash, and interrupts are supported (via Flash-based pseudo vectors, since the monitor resides in the vector space of the MCU). A program you load into Flash this way will run every time you apply power or reset the board in Run Mode.

**Flash-based code development using a BDM pod** If you want to take advantage of a more advanced development tool (such as MicroBDM12LX), the entire 32K Flash can be used, because the Flash-resident bootloader is no longer needed (therefore pseudo-vectors aren't required either). You'll also need to use this method if you are using a non-Windows development platform.

- optional standard 6-pin BDM connector supports full debugging capabilities (with an optional BDM pod)
- ECLK signal is user-accessible (via pad on circuit board)
- pinout is superset of BASICStamp2<sup>Å</sup>®
- access to eight 10-bit analog input or digital I/O port lines (Port AD)
- access to eight digital I/O port lines (Port T)
- up to five PWM timer channels (PT0 - PT4)
- up to eight Input Capture/Output Compare pins (Port T)
- serial peripheral interface (SPI)
- serial communications interface (SCI)
- controller area network (CAN 2.0) (logic-level pins brought out)
- internal programmable pullup and pulldown resistors on most pins
- user access to MCU reset signal

Data sheets, manuals, and all other resources for this product can be found by clicking on the Resources tab above

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[Vendor Information](#)