

NASCOM-2 Replica on ESP32

by Peter Jensen

Specs:

- ESP32 Devkit V1
- VGA Display
- PS/2 Keyboard
- SD card for cassette tape emulation
- Runs all legacy NASCOM-2 software via Z80 emulator

ESP32-WROOM-32 specs:

- Xtensa dual-core32-bit LX6 microprocessor, operating at 160 or 240 MHz
- Ultra low power (ULP) co-processor (handles PS/2 keyboard)
- 512K RAM (roughly 320K available)
- Flash Memory: 4M
- Runs FreeRTOS

Software:

- Microsoft Basic (anno 1978)
- Assemblers/Disassemblers
- Pascal Compiler (12K)
- Forth
- Games

Notes:

- The screen refreshes at 30fps.
- Accurate execution timing requires a ~25ms delay for each frame.
- Idling 75% of the time (25/33).
- The ESP32 has plenty of headroom when emulating a 4MHz Z80.

More Info:

- <https://github.com/PeterJensen/nascom-esp>