

<http://hannoware.com/viewport>

ViewPort is an ANSI C and SPIN development tool for the Propeller. Edit code in a professional editor then debug with breakpoint, line by line stepping, and profiling tools. Real-time graphing, logic state analysis and data logging make it easy to understand what your program is doing.



Features

Editor

Full featured code editor with syntax highlighting, macros, regular expression search/replace, line modifications, bookmarks, outlining, templates etc.

Built-in Compiler and Loader

Press "Run" to convert to compile to binary and upload programs to Propeller.

Debugger

Traditional "Visual Studio" tools to help you debug programs:

Breakpoints: code runs until it hits a breakpoint

Step over/out/in: run code one line at a time

Watch window: track variable values- or change them

Profiler: track how much time is spent in different parts of your program

Command Interpreter: take a set number of steps, run while condition..

Memory Map: View all 32kB of memory in hex and ascii.

High Speed connection to Propeller Memory

ViewPort sends data to your PC at up to 2Mbps. Data can be packaged into frames to allow sampling variables or IO state at 80Msamples/sec. You configure what data should be sent and how to visualize it. No performance impact to your program since data is sent by a separate cog.

Monitor and control variable values

Data is logged into your PC's memory- allowing high resolution and long sample times. ViewPort can change program variables while the program runs. You configure which variables should be "editable". ViewPort provides graphical elements for easy control: dials, sliders, textboxes, etc.

View IO pin activity at up to 80Msps

View the state of the Propeller's 32 I/O pins at up to 80MHz. This helps you troubleshoot communication problem with devices connected to the Propeller. Typically the LSA graph is used to view the individual bits states. Your configuration can label and group the bits to simplify the graph.

Transfer Data to/from the Propeller

Output variable value history to CSV, TXT, Matlab or screenshots. Stream live data to the filesystem, FTP server, or other applications. Load binary or HEX files to Propeller RAM or download from Propeller RAM to PC files.

Real-time graphs

ViewPort's instruments are comparable to real-world instruments with configurable timescales, resolutions, trigger, auto-measurements and more.

Oscilloscope (DSO) graphs a variable's value vs. time with trigger, cursor, auto-measurement.

Logic Analyzer (LSA) graphs a variable's bit states vs. time with bit, pattern and edge triggers, cursors.

Spectrum Analyzer graphs a value's magnitude vs. frequency.

XY graphs the relationship between two variables.

Terminal is an integrated text terminal for interactive input/output

Video displays streaming video from Propeller with marker/brightness tools

Custom visualizations

Use the ViewPort Designer to modify existing views or create your own- as easy as drag-n-drop. Use the Development Kit to create your own widgets- with full access to all of ViewPort. The communication protocol to view and edit variables is fully documented.

Fuzzy Logic

Instead of using complicated formulas coupled with IF statements for every threshold/exception, fuzzy logic just requires you to specify how variables should be mapped onto classes. ViewPort's graphical control panel makes it easy to tune the logic.

Capture Video, apply Vision Filters, View Video

Digitize video into a memory array. Apply vision filters in real time on the video. Stream the video to ViewPort for visual debugging.

Comprehensive Help Manual, Easy Install/Uninstall

Detailed pdf manual and search/browsable help files are available. Well commented tutorial help you get started. Easy to install/uninstall.

Easy to Integrate into your spin program.

ViewPort requires 1 Cog and a serial connection. Get started with just 1 command to share data with ViewPort. Configure your program with ViewPort's graphical wizard. Save the configuration to a file or incorporate into your program.

Port Selector

Manually specify the port of the device you wish to program or let ViewPort automatically find it. In Auto mode, ViewPort will display the current port with an asterix: "COM10*"

Resources

Online Videos tutorials demonstrating how to build solutions with ViewPort

Tutorials: Dozens of commented example programs

Reference: Comprehensive help and manual

All resources here: <http://hannoware.com/viewport/resources.php>