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MiiEIAOD DAPLink

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Model: DAPLink

1. INTRODUCTION

The MiiEIAOD DAPLink Debug Probe is a versatile tool designed for programming and debugging microcontrollers based on ARM Cortex cores. It supports various debug interfaces and tools, making it an essential device for embedded system development.

This manual provides comprehensive instructions for setting up, operating, and maintaining your DAPLink Debug Probe, ensuring optimal performance and longevity.

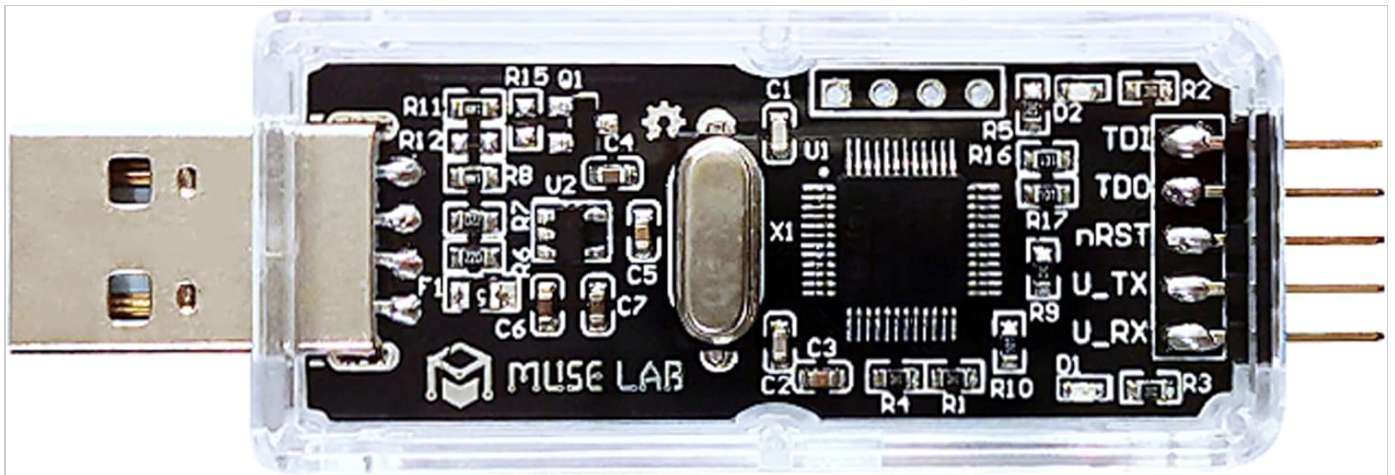


Figure 1: Top view of the MiiEIAOD DAPLink Debug Probe, illustrating the USB connector on the left and the debug pin header on the right. The transparent casing reveals the internal circuitry.

2. PRODUCT SPECIFICATIONS

Feature	Description
Debug Interface	JTAG, SWD, USB Serial Port
Debug Tools Supported	Keil MDK, IAR Workbench, pyOCD, OpenOCD
Supported MCUs	MCUs based on ARM Cortex core (e.g., STM32, GD32, NRF51/52)
Download Speed	Approximately 30KB/s
Operating Systems	Windows, Linux, Mac
Input Voltage	5V (Supplied by USB)
Output Voltage	5V, 3.3V (DAP can supply power for target board)
Product Dimensions	72mm x 24mm x 14mm
Item Weight	10.6 ounces
Connectivity Technology	USB

3. KEY FEATURES

- **Open-source Hardware:** Provides hardware schematics for transparency and customization.
- **Open-source Software:** Includes source code and firmware, allowing for community contributions and modifications.
- **Broad MCU Support:** Compatible with a wide range of ARM Cortex-core based MCUs, including STM32, GD32, and NRF51/52.
- **Multiple Debug Interfaces:** Supports JTAG, SWD, and USB Serial Port for flexible debugging options.
- **Cross-Platform Compatibility:** Operates seamlessly on Windows, Linux, and Mac operating systems.
- **Target Power Supply:** Capable of supplying 5V and 3.3V power to the target board directly from the DAPLink probe.

4. SETUP GUIDE

4.1 Package Contents

Verify that your package contains the following items:

- MiiEIAOD DAPLink Debug Probe
- Any included cables or accessories (not specified in product data).

4.2 Connecting the Probe

1. **Connect to Host PC:** Insert the USB-A connector of the DAPLink Debug Probe into an available USB port on your computer.
2. **Driver Installation (Windows 7):** For Windows 7 users, a specific serial port driver may be required. This can be found at: Windows 7 Serial Driver. For other operating systems, drivers are typically installed automatically.
3. **Connect to Target Board:** Connect the debug pins of the DAPLink probe to the corresponding debug interface (JTAG or SWD) on your target microcontroller board. Ensure correct pin alignment (e.g., VCC, GND, SWDIO, SWCLK for SWD).



Figure 2: Angled view of the DAPLink Debug Probe, highlighting the debug pin header. Proper connection to the target board's debug interface is crucial for functionality.

5. OPERATING INSTRUCTIONS

5.1 Debugging and Programming

The DAPLink Debug Probe can be used with various Integrated Development Environments (IDEs) and debugging tools.

- **Keil MDK:** Configure your project in Keil MDK to use the CMSIS-DAP debugger.
- **IAR Workbench:** Select the CMSIS-DAP debugger in your IAR project settings.
- **OpenOCD:** Utilize OpenOCD for command-line debugging and programming. A script tool for OpenOCD is available at: [OpenOCD Script Tool](#).
- **pyOCD:** For Python-based debugging, pyOCD can be used.

5.2 Drag and Drop Programming

The DAPLink probe supports drag-and-drop programming. When connected to your computer, it may enumerate as a mass storage device. You can simply drag and drop your compiled firmware (.hex or .bin file) onto this drive to program the target MCU.

6. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the probe. Avoid using liquid cleaners or solvents.
- **Storage:** Store the probe in a cool, dry place away from direct sunlight and extreme temperatures.
- **Handling:** Handle the probe with care to prevent damage to the USB connector or debug pins. Avoid excessive force when connecting or disconnecting.
- **Firmware Updates:** Periodically check the official GitHub repository for firmware updates to ensure optimal performance and compatibility: nanoDAP GitHub Repository.

7. TROUBLESHOOTING

- **Probe Not Recognized:**

Ensure the USB cable is securely connected to both the probe and the computer. Try a different USB port or cable. For Windows 7, verify the serial port driver is installed correctly.
- **Target MCU Not Detected:**

Check the connections between the probe and the target board, ensuring correct pinout (VCC, GND, SWDIO, SWCLK/TCK, TMS/IO, etc.). Verify the target board is powered on. Ensure the target MCU is supported by the DAPLink probe.
- **Programming/Debugging Errors:**

Confirm that your IDE or debugging tool is correctly configured to use the CMSIS-DAP debugger. Check for any error messages provided by the software. Ensure the firmware file is valid and compatible with the target MCU.
- **Slow Download Speed:**

Ensure your USB connection is stable. While the typical speed is around 30KB/s, network or system load can affect performance. Using a direct USB port instead of a hub might help.

8. DOCUMENTATION AND SUPPORT

For further technical details, hardware schematics, and software source code, please refer to the official documentation:

- **User Manual (GitHub):** <https://github.com/wuxx/nanoDAP/blob/master/doc/README.md>
- **Hardware and Software Repository:** <https://github.com/wuxx/nanoDAP>
- **Windows 7 Serial Port Driver:** https://github.com/wuxx/nanoDAP/tree/master/driver/windows7_serial_driver
- **Script Tool for OpenOCD:** <https://github.com/wuxx/openocd-toolbox>

For additional support, please contact MiiEIAOD customer service through the platform where the product was purchased.

9. WARRANTY INFORMATION

Specific warranty details for the MiiEIAOD DAPLink Debug Probe are not provided in this manual. Please refer to the product listing on the retailer's website or contact MiiEIAOD customer support for warranty terms and conditions.

