

ApolloICD In-Circuit Debugger

Product Brief



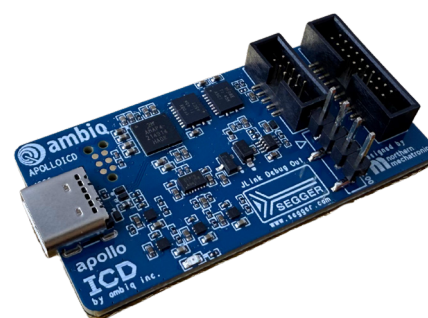
Ambiq®, the leader in low power System-on-Chip (SoC) design, introduces the ApolloICD In-Circuit Debugger/Programmer, expanding our powerful development tool ecosystem.

This USB powered tool brings cost effective, easy, high-speed Serial Wire Debug (SWD) debugging and programming to Ambiq's full line of Apollo SoCs.

ApolloICD requires minimal external hardware for debugging and eliminates the need for sockets or separate adapters. ApolloICD connects to the target SoC via a standard 20-pin header connector mounted on the target board, with 20-pin ribbon cable included.

ApolloICD also includes a 10-pin header connector to support alternate target connection via a 10-pin ribbon cable. It also features an additional 4-pin header for virtual communication port (VCOM) interface to the target.

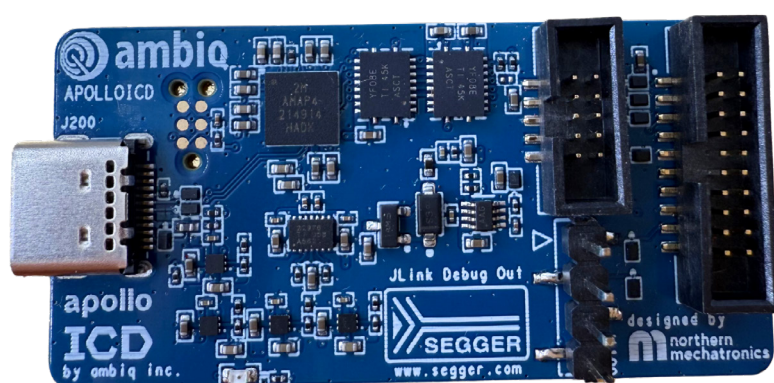
ApolloICD supports SEGGER J-Link debugger compatible toolchains such as Visual Studio Code, IAR, Keil, Eclipse, GDB-based IDEs, and SEGGER Embedded Studio.



ApolloICD

Feature Highlights

- Compatible with entire line of Apollo SoCs
- Ultra-fast programming and debugging interface supports up to 48 MHz
- Connectors for both 20-pin and 10-pin standard ribbon cables
- Additional 4-pin header for VCOM interface to target
- Single USB-C interface for programming and power
- Supports SEGGER J-Link debugger compatible toolchains



ApolloICD

Features and Specifications

Target Apollo SoC Compatibility

- Apollo3 series
- Apollo4 series
- Apollo5 series

Target Programming Interfaces

- Standard 20-pin male 1.27mm pitch IDC keyed box header (ribbon cable included)
- Standard 10-pin male 1.27mm pitch IDC keyed box header (ribbon cable not included)

Target Communication Interfaces

- Onboard 4-pin header for VCOM serial communication interface

Target Operating Voltage

- Supports wide range of target operating voltage from 1.5 V – 5.0 V
- Hardware auto-detect and voltage tracking of target operating voltage

Ultra-Fast Programming and Debugging

- Ultra-fast programming and debugging interface with support up to 48 MHz
- Flash program and verify up to 100 KB/s
- VCOM interface with support up to 1Mbps

SEGGER J-Link Compatibility

- SEGGER J-Link Debug Out license included
- Supports SEGGER J-Link debugger compatible toolchains

USB Host Interface

- USB 2.0 full speed with USB-C connector

Power Management

- Powered over USB-C host interface (target powered separately)
- Onboard system voltage regulation and target voltage tracking

Onboard Features

- Diagnostic LED indicator

Package Contents

- ApolloICD In-Circuit Debugger
- 20-pin ribbon cable assembly, length 304.8 mm / 1'
- USB-C to USB-A cable, length 1 m / 3.28'
- Adhesive rubber mounting feet

Device Dimensions

- 25 x 51.5 x 9.65 mm

Package Options

- 5.6 x 5.6 x 0.8 mm BGA with 97 GPIO

Ordering Information

- APOLLOICD

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