

# PLT-200A

## Production Line Tool



The PLT is a box that loads firmware, runs automated tests, and logs the results in the cloud. It is designed to serve the needs of developers throughout the product life cycle. After an IoT device is designed and validated on a PLT, identical boxes are sent to the production line for programming and testing at manufacturing scale. The development team can see results directly from the production line and stay ahead of issues that delay the product build.

### What is the PLT?

"PLT" stands for Production Line Tool. It is an Internet-connected box that does the following:

1. Loads firmware images into devices.
2. Runs automated tests.
3. Logs the results in the cloud.

### Microcontroller (MCU) Support

Currently, out of the box, we support the STM32 from ST Microelectronics and the nRF52 from Nordic Semiconductor. We are happy to look at your product to assess the workload of extending to what you are using as well.

Supported MCUs

Manufacturer	MCU Model	Support Status
Espressif	8266	-
Espressif	ESP32	Supported
Freescale	Kinetis	-
Nordic	nRF51	-
Nordic	nRF52	Supported
Nordic	nRF91	-
ST	STM32	Supported
TI	CC1352	Supported
TI	CC26x0	-
TI	MSP430	-

- Program on-board MCU flash or MCU RAM.
- Programming via SWD or JTAG.
- Additional MCU/RFSoc support on demand

### Power and Relays

#### Power Control

The PLT-200A can power the device under test with either 3.3, 5 or 12 Volts at up to 2 Amp. The voltage and current provided to the PLT can be measured during test plan execution.

#### Short Control

The PLT-200A can short a test pin with ground, VDD or another test pin.

### Electrical Measurements

The PLT-200A can perform several electrical measurements of analog test points.

Electrical Measurements

Measurement	Range	Accuracy
Voltage	0-12V	+/- 0.1V
Continuity	<1Ω, >1MΩ	-
Impedance	470Ω - 2KΩ	+/- 5%
Current Draw	20mA-2A	+/- 5%
Frequency	32.768kHz, 8MHz	200ppm

### Logic Measurements

The PLT-200A can measure and test up to 48 logic test points.

### UART Testing

The PLT-200A allows testing UART interactions with the DUT, at speeds up to 1 Mbps.

- Speed: 300bps - 1 Mbps
- Flow Control: Xon/Xoff, DTR/CTS

### PLT-200A

#### Electrical

AC Supply	Dual-Fused 110-240 VAC, 50/60Hz
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#### Connectors (Rear)

AC Power	IEC 320 C13
SWD	6-pin TC2030-IDC
SIG	6-pin TC2030-IDC
JTAG	10-pin TC2050-IDC
ICT-PWR	4-pin
ICT-SIG	HD78
USB	4x High-Retention Type-A socket
Ethernet	RJ45 Cat6a
RF (SDR Option)	SMA

#### Order Information

PLT-200A	Production Line Tool
PLT-200A-FUSE	Spare Fuse set for PLT-200A.
ICT-200A	ICT Fixture
CPC-200A-XXnn	Custom Pogo-Pin Cassette
CCB-200A-XXnn	Custom PLT Carrier Board
TC2030-IDC	6-pin Tag-Connect cable
TC2030-IDC-10	6-pin Tag-Connect cable, 10"
TC2050-IDC	10-pin Tag-Connect cable

## CAN Bus Testing

The PLT-200A allows testing CAN interactions with the DUT, at speeds up to 1 Mbps.

CAN Standards

<b>CAN 2.0A</b>	11-bit
<b>CAN 2.0B</b>	29-bit
<b>ISO-11898-1</b>	-
<b>ISO-11898-2</b>	1Mbps
<b>ISO-11898-3</b>	40..125 Kbps
<b>ISO-11898-4</b>	TTCAN
<b>ISO-11898-5</b>	1Mbps
<b>ISO-11898-6</b>	1Mbps

## Bluetooth LE (BLE) Testing

The PLT-200A allows testing Bluetooth Low Energy (BLE) interactions with the DUT.

BLE Standards

<b>BLE 4.0</b>	-	Supported
<b>BLE 4.1</b>	-	Supported
<b>BLE 4.2</b>	-	Supported
<b>BLE 5.0</b>	-	Supported
<b>GATT</b>	-	Supported
<b>GAP</b>	-	Supported

## WiFi Testing

The PLT-200A allows testing 2.4GHz WiFi interactions with the DUT.

WiFi Standards

<b>802.11</b>	2Mbps	Supported
<b>802.11b</b>	11Mbps	Supported
<b>802.11g</b>	54Mbps	Supported
<b>802.11n</b>	600Mbps	Supported
<b>802.11ac</b>	1300Mbps	-
<b>802.11ad</b>	7Gbps	-
<b>802.11af</b>	569Mbps	-

## Barcode Scanning

The PLT-200A allow barcodes (EAN-13, QR, Code 128, UPC) to be scanned using a USB-attached barcode scanner.

Supported Barcode Scanners

<b>Symbol LS2208</b>	1D
<b>Symbol LS4208</b>	1D
<b>Symbol DS4208</b>	2D
<b>Symbol DS6708</b>	2D
<b>Symbol DS8108</b>	2D

## Label printing

The PLT-200A allows labels to be printed using a USB-attached label printer.

Supported Label Printers

<b>Zebra GX430t</b>	medium-sized; benchtop
<b>Zebra QLn220</b>	small; portable

## Security

The PLT contains a Secure Element to protect the integrity of the deployment process.

- FIPS 186-3 ECDSA
- FIPS SP800-56A ECDH
- NIST Standard P256 Elliptic Curve

All Cloud communication, including deployment of firmware and reporting of test results are protected using TLS1.2 mutual authentication.

## Cloud Backend

Using the PLTcloud backend, developers can upload custom firmware and test plans to PLTs anywhere in the world. Live production data can be pulled from these same PLTs.

## Options

Enhanced DAQ (U6)

DAQ module with additional ports.

SDR module (LimeSDR)

Software-Defined Radio (SDR) module for PLT200A. Can be used for RF frequency analysis, simulation of GNSS(GPS) or cellular networks.

Bed-of-Nails Fixture

ICT Fixture with custom DUT-specific Pogo-Pin Cassette

Custom PLT Carrier

Custom PLT Carrier board, with DUT-specific features

### For more information

Visit [plt.bcdevices.com](http://plt.bcdevices.com) for the complete product specification about this any any other PLT products, or contact us at [plt@bcdevices.com](mailto:plt@bcdevices.com).

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Blue Clover Devices is THE IoT ODM.

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