

# ChipCHECK

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## CC120 Hardware Description



### CHIPS ANALYZER (B166500)

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## 3.0 Hardware Description

This section will describe the main components of the ChipCHECK hardware and provide an overview of the instrumentation that is required to properly and safely operate the ChipCHECK equipment.

### 3.1 Basic Overview

Figure 3-1 below provides an overview of the main User interfaces involved in the operation and maintenance of the ChipCHECK equipment.

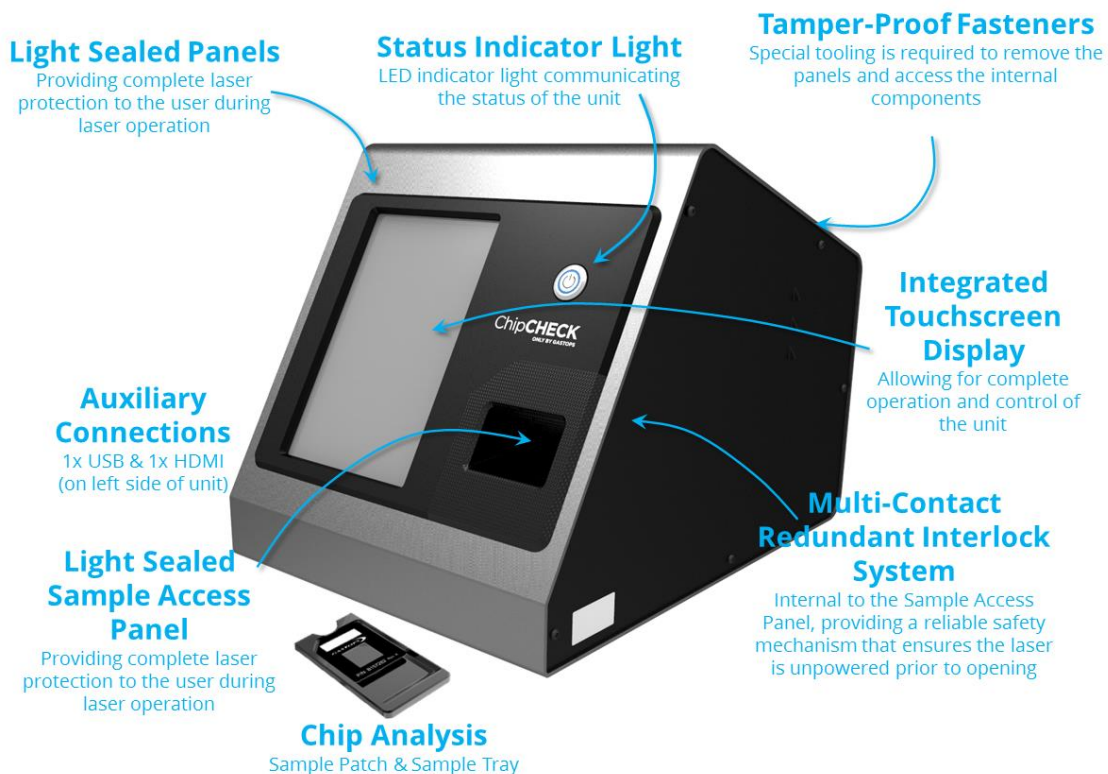


Figure 3-1: ChipCHECK Equipment Interfaces (Transport Case & Accessories Not Shown)

The main User interfaces for the operation of the ChipCHECK equipment are as follows:

1. **User Interface and Control Mechanism (Integrated Touchscreen Display):**

This is the control mechanism for the equipment and includes the required software and software interface to operate the equipment. This display is integrated into the front of the ChipCHECK equipment and cannot be removed by the User.

2. **Interfaces (1x USB, 1x HDMI):**

The ChipCHECK equipment is equipped with one USB interface and one HDMI interface which are found on the left side panel. These connections provide the ability to connect the ChipCHECK to USB peripherals such as flash drives, keyboard and a mouse. The connections are ruggedized and sand proof. Note that the User shall only use/access the USB connection. The HDMI connection is intended for expert users only (troubleshooting), and should not be used during normal operation.

3. **Unit Power Button:**

Located on front of the unit, this button allows for ease of Power Up and Power Down of the unit. This button is also lit up to allow for a simple visualization of the power status of the unit (red – powered down / blue – powered up / flashing blue – powering up or powering down). Note that this is not the master power switch of the unit. The unit's master power switch is located on the back side of the unit.

4. **Fuse, Main Power Switch and Power Input Interface:**

The back face of the unit provides the unit's main fuse, power switch and power input interface. Electrical safety is provided to the User/Operator through the use of proper grounding of the three-pronged power plug and 3A slow blow fuse. Furthermore, the main power switch provides the Operator with the kill switch to the entire unit. Note that the power supply internal to the unit is both 110VAC and 240VAC compatible.

5. **Sample Patch:**

Samples Patches allow for the unit to complete a Chip Analysis. The Sample Patches are plastic sheets equipped with a 0.5in x 0.5in (1.27cm x 1.27cm) clear window with adhesive, allowing for semi-permanent retention of the debris during an analysis. The Sample Patches are also equipped with an adhesive strip on the back allowing for retention of the Sample Patch on the Sample Tray during an analysis. Note that this is a consumable item.

6. **Sample Tray:**

The Sample Tray is the mechanical device that accepts the Sample Patches, and ensures a repeatable and reliable insertion. The Sample Tray is equipped with keying features and magnetic alignment assemblies to ensure specific orientation and insertion of the Sample Patches.

7. **Sample Access Panel:**

The Sample Access Panel provides the User with access to the Sample Receptacle and protection from the internal laser radiation. The panel is equipped with a force contact redundant laser safety interlock system in order to provide the required protection for safe and proper use. See below and refer to Section 2.2.2 for more detail.

## 3.2 Indicators

The front of the unit is equipped with one status indicator light which notifies the User of the unit status at any given time. Note that this indicator light also acts as the power button that powers up all of the unit's internal components. At any given time the unit will be in one of the states shown and described in the Figure below.

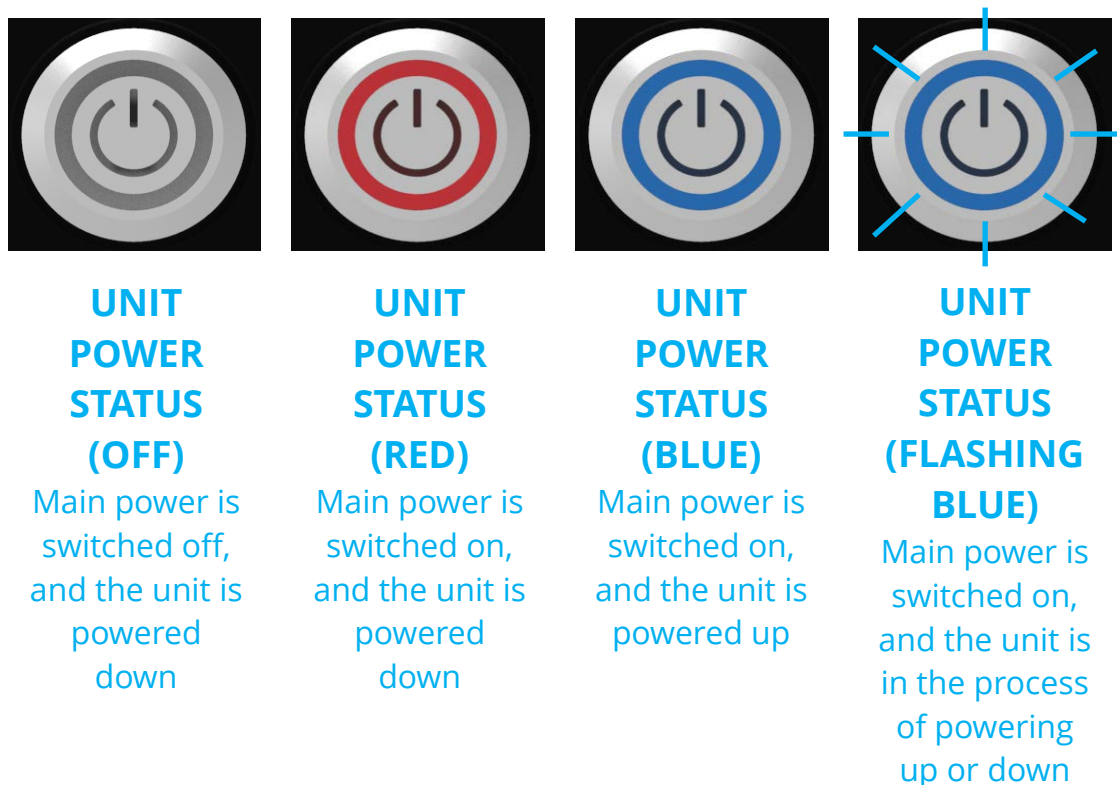


Figure 3-2: Unit Status Indicator Lights

## 3.3 Mechanical Setup

Before beginning the setup of the unit, ensure the following components have been provided (all of which will be included in the Transport Case):

<u>Quantity</u>	<u>Description</u>
1x	ChipCHECK Model CC120
1x	Unit Power Cable
1x	Sample Tray (Chip)
200x	Sample Patches
1x	Standardization Standard
1x	Calibration Standard
20X	Sample Patch Cases

The ChipCHECK unit is shipped fully assembled and setting up the unit for operation requires only the following steps.

1. **Placing/Positioning the ChipCHECK Unit:**

- a) Remove the unit from the transport case. During transport, it is highly recommended that the unit remains in its vertical orientation.
- b) Place the unit on a relatively flat work surface, capable of supporting the mass of the unit (40 lbs/18kg). Place the unit so that the Sample Access Panel faces the User. It is recommended the unit is positioned ensuring sufficient space to access both the front and the back of the unit. Note that the unit must also be provided adequate air flow underneath and around the unit for proper ventilation.

2. **Connecting Power:**

- a) Plug the AC power cable into the AC Power Input port located on the backside of the unit. Connect the other end of the AC Power cable into a 100-120 VAC Wall socket. Note that this unit is also 240VAC compatible.

**NOTE:** The unit is grounded via the AC Power cable. It is the User's responsibility to assure that the cable and the wall plug have adequate grounding.

3. **Powering up the Unit:**

- a) Power up the ChipCHECK unit by turning on the Main Power Switch located on the Back Panel of the unit and then pressing the Power Button on the front of the unit. The ChipCHECK software will initiate automatically.