

Product Brief

MCCI® PictBridge

PictBridge Standard

PictBridge is a standard that enables direct printing from portable devices. Without the need for a personal computer PictBridge-enabled printers are controlled via the Picture Transfer Protocol (PTP) from a portable device such as a digital camera or a camera phone. MCCI supports PictBridge over both wired and wireless USB.

The PictBridge standard is defined by the Japan-based Camera and Imaging Products Association, (www.cipa.jp/pictbridge/) as CIPA DC-001. It specifies a set of technical attributes for software implemented in still camera devices and printers. It has led to widespread interoperability among cameras and printers. In PictBridge, the printer is the "USB host" and the camera is the "device."

Basic Features

- Print an image displayed on the Digital Still Camera (DSC)
- Print two or more images selected from the display on the DSC
- Print an index of all images
- Print all images
- Display printer status
- Discontinue print job
- Restart from recoverable error
- Print part of image by specifying a clip (cropped) area
- Print multiple copies of a single image
- Print image with a date stamp
- Specify the exact size of a print

Advanced Features

MCCI supports all Basic and certain Advanced features, as defined by CIPA. Digital Print Order Format (DPOF), for example, is a technique for defining which stored images are to be printed at a later time.

MCCI's PictBridge

The MCCI PictBridge system builds on the proven MCCI USB DataPump®. It provides a set of software modules for implementing the PictBridge protocol in compliant DSCs or camera phones that operate over USB or Wireless USB and that use the USB Still Image Capture Class 1.0 (SIC) protocol. MCCI code provides Application Programming Interfaces (APIs) to the customer-provided User Interface (UI).

WHQL Certification

The Microsoft Windows Hardware Quality Labs (WHQL) program exists to qualify devices such as cell phones for the Microsoft logo. Qualified products can be included on the Windows Product Listing sites.

WHQL requires that a specific set of PTP commands be implemented. In PictBridge mode, the phone will pass WHQL if the PTP stack meets Microsoft's requirements. A PictBridge device must pass the test in any mode when it is plugged into a Windows system. Microsoft only tests the first (default) configuration of a multi-configuration device. MCCI Pictbridge assures the end product, if otherwise qualified, will qualify for the Windows logo.

CIPA Certification

CIPA logo certification is required to display the PictBridge logo on the final product. The MCCI PictBridge Implementation has passed a pre-certification test before integration into your product. This means that the cost and effort of final product logo certification is minimized when you integrate the MCCI PictBridge solution into your product. CIPA must perform the actual logo testing. Visit the Pictbridge Certification Testing page at www.mcci.com to see how MCCI can help with your CIPA submission.

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*MCCI PictBridge
performs over
wired and
wireless
USB*

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Validation Tools

MCCI provides a number of Windows-based tools for working with the PictBridge stack:

- PictBridge Command Line Interface (PBCLI) is a portable command line interface implementation for communicating with the lower MCCI PictBridge stack.
- PictBridge Camera Simulator (PBCamSim) is a graphical user interface using the actual MCCI PictBridge stack with a Win-32 wrapper. It is used to simulate and test the various functions of a PictBridge-compliant camera. PBCamSim is useful for prototyping the UI and as a debug tool. The engineer can replicate PictBridge device behavior on the PC during target integration, including USB bus traffic behavior.
- PictBridge Host-Side Verification Test (PBHVT) is a Windows-based application that simulates a PictBridge-enabled printer. Printer parameters can be controlled by the operator in PBHVT, which can be valuable during product integration and testing.

NOTE: PBCamSim uses an MCCI Catena® PCMCIA card to provide a USB device interface that can be connected to a host port on the PC-based test system.

PictBridge Architectural Diagram

