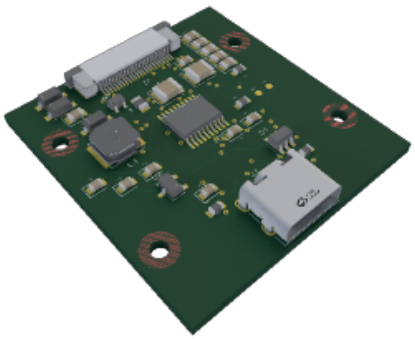
5.83-inch E-Paper Display Carrier

1.1 Description

A carrier for the black-and-white 5.83-inch ER-EPD0583-1B bare e-paper panel.



Assembly view

1.2 Device specifications

Parameter	Specification
Compatible panel	5.83-inch BuyDisplay ER-EPD0583-1B
Display technology	Black-and-white e-paper
Display interface	Four-wire SPI
PCB dimensions	36 × 38 mm
Mounting holes	4 × Ø2.2 mm for M2 screws; 30 × 20 mm center spacing

1.3 Using the board

Use it for a desk sign, schedule, or other image that changes occasionally. Mount the glass on its own support and leave slack at the ribbon. The drawing dimensions apply to the controller PCB.

Device guide

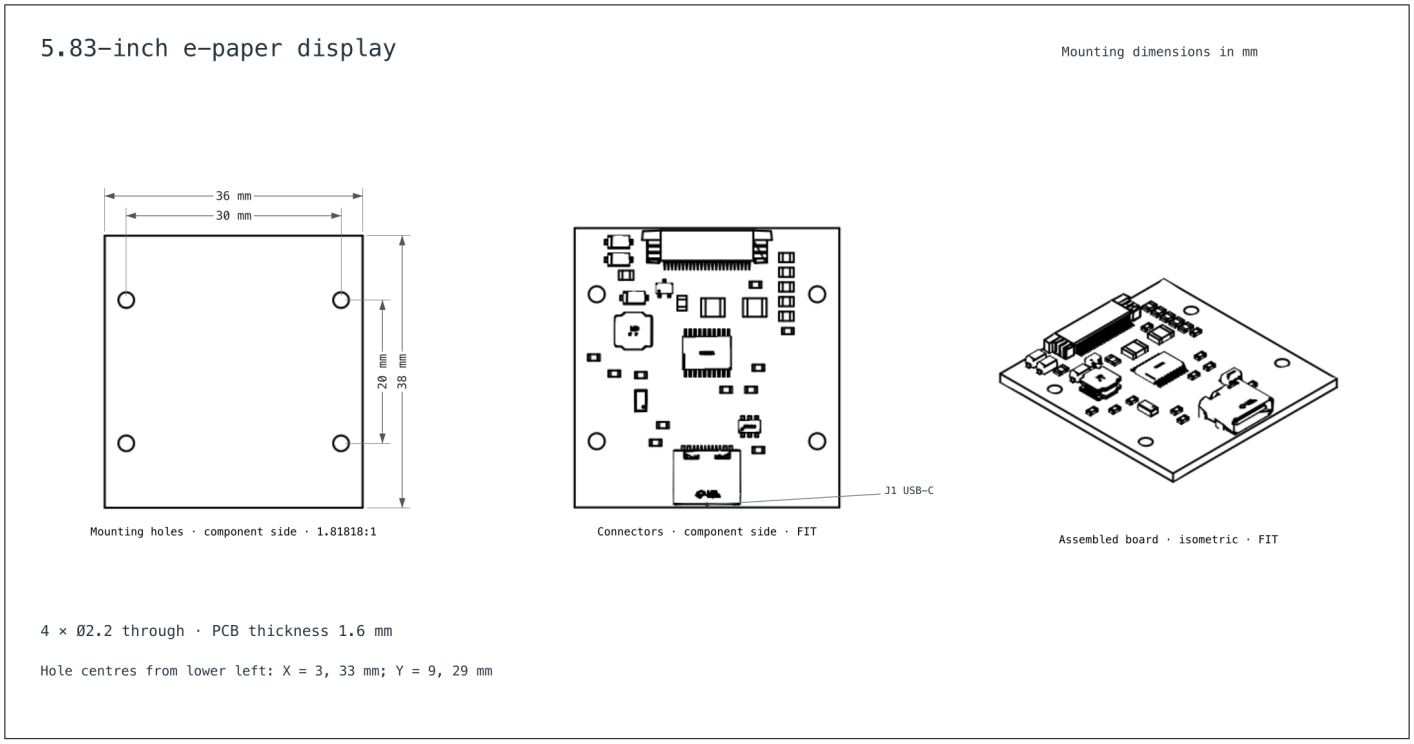
2 Protocol reference

Four-wire SPI · black-and-white e-paper. This prototype has no published USB command set. The table describes the interface on the PCB.

Operation	Request or signal	Result
Reset	Pulse the panel reset line.	Prepares the controller for initialization.
Load image	Select the panel with CS. Use D/C to send an image-memory command followed by data.	Stages image data in panel memory.
Refresh	Send the panel refresh command.	Updates the glass using the external boost stage.
Wait	Monitor BUSY.	Start the next update once the panel is idle.

3 Mechanical information

3.1 Assembly and mounting



Component-side plan and isometric assembly. Dimensions in millimeters.

3.2 Installation dimensions

The PCB measures **36 × 38 mm**, with **4 × Ø2.2 mm** clearance holes for M2 screws. The centre-to-centre spacing is **30 × 20 mm**. Orient the component side with the **J1 USB-C port at the bottom**. Measure right and up from the **lower-left corner of the PCB** in the component-side view. The hole centres are at X = 3, 33 mm and Y = 9, 29 mm.

Modeled component height: approximately 3.3 mm above the component-side PCB surface. The CAD files show the populated carrier. Allow separate space for the panel and flex cable.

3.3 Design resources

Device guide · **Full-size mounting drawing** · **Drawing TSX** · **PCB source**