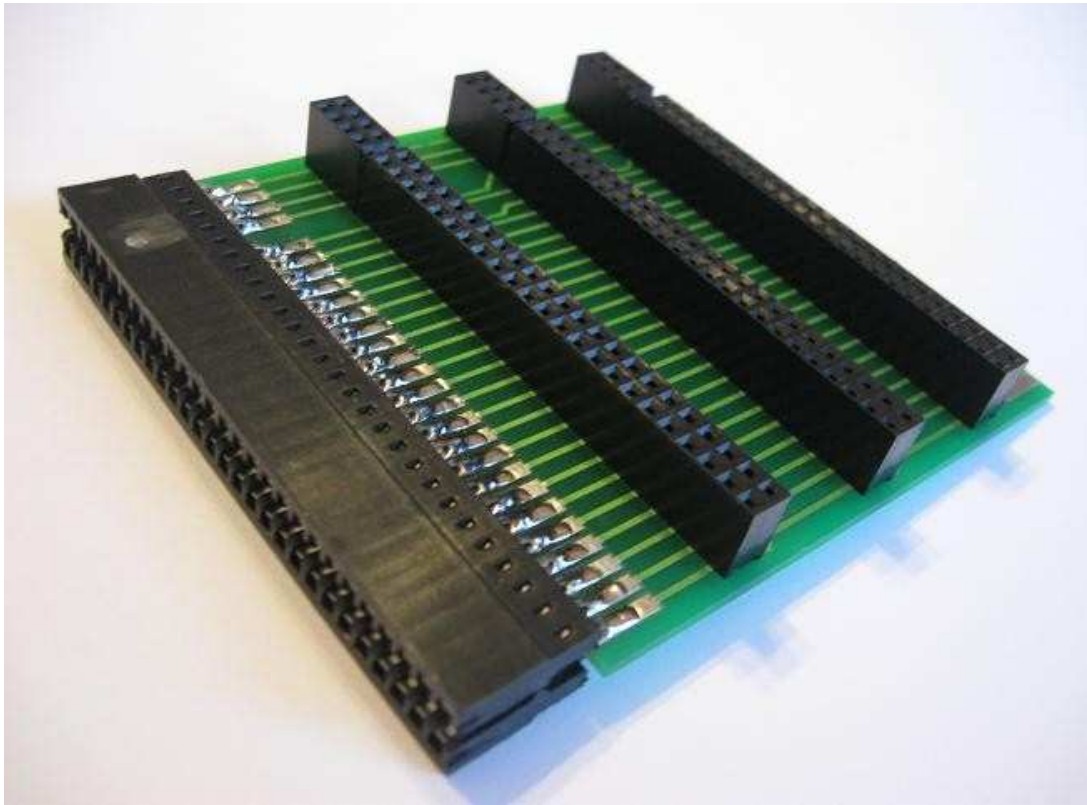


ZX ExpBoard manual



ZX ExpBoard is a ZX Spectrum bus expansion board containing two (for the ExpBoard 2) or three (for the ExpBoard 3) slots for cards equipped with pin header (square pins). Moreover, the ZX ExpBoard is pass-thru, so it is possible to attach an interface with a classic edge connector .

ZX ExpBoard is aimed at developers, both Hardware and Software, but it is useful for anybody who wants to connect many interfaces to their Speccy at the same time.

Pin header usage has its benefits in low price and good electrical contact between the card and the bus expansion board. The same card can be equipped either with pin header (prototype) or edge connector (final version) without changing the PCB layout.

There are one or two (depending on the version) positions for soldering additional capacitors to +5V power as well.

Warning: *Do not attempt to plug or unplug interfaces/cards when the computer is on!
This can cause damage to your computer and/or connected interfaces/cards!*

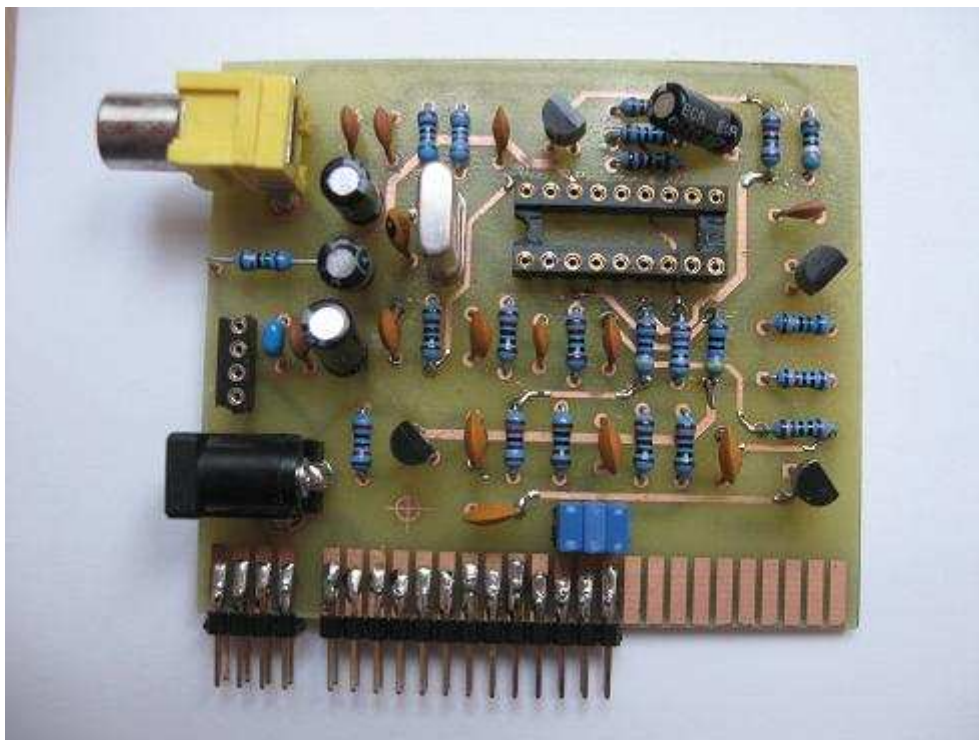
Usage tips

- 1) When you are going to attach/detach card(s) to/from the ZX ExpBoard, **first switch the computer off** and **detach the ZX ExpBoard from it**. Pin headers hold quite strongly and you will have to be firm but slow. Holding the ExpBoard (i.e. With one hand) you will have better chance to add/remove cards/interfaces.

- 2) Pin header receptacles on the ZX ExpBoard are not keyed, so when attaching a card, make sure that you are attaching it to right position. The opposite position could have fatal consequences.
- 3) **Every time** when you are going to switch the computer on, make sure that the ExpBoard is attached properly.

Tips for HW developers and all who will be making their own interface cards

- 1) At the same position, **where the key is** (on the edge connector), **omit the corresponding pair of pins**. This is useful for the visual control when plugging the card into the ExpBoard. (See the photo below.)
- 2) There are four pairs of pins on the shorter part of the connector (remember the key gap!) - **solder all of them**, even if they are not used on your card. Again, this is useful for visual control when plugging the card into the ExpBoard. See the photo below.
- 3) On the longer part of the connector you can omit all unused pins, starting from the end of connector, up to first used pin (see the photo). So you won't have to use so much force to attach/detach the card.



Experimental interface card equipped with the pin header

- 4) When drawing the PCB, use the edge connector, as you see on the photo. So it will be possible to solder either pin header or edge connector receptacle to its pads.
- 5) To solder the pin header on your interface card, detach the ZX ExpBoard. Put the pin header to empty receptacle and put the board between its pins. Then solder it's pins to the pads on your card.