

PIGdaptor

The concept and design of this PIGdaptor is the Copyright of Mick Ames (MIXTEL 90)

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This system is not suitable for critical systems or for installations where failure or incorrect operation could result in injury or death and must not be used in or connected to such systems.

No guarantee of performance is given, not even that it will work at all.

There is no intentional compliance with any standards whatsoever.

The system is totally dependent on third party modular components which may become unavailable or unsuitable. In this instance no support will be available.

The PIGdaptor is an interface board that allows a Pimorini PGA2350 module to be used on a standard breadboard. All but three of the GPIO pins (36, 37 & 38) are made available in one form or another.

GP47 is used for PSRAM access.

DVI video is supported via an on-board HDMI-compatible connector

1	D2+	GP16
2	D2 shield	GND
3	D2-	GP17
4	D1+	GP18
5	D1 shield	GND
6	D1-	GP19
7	D0+	GP12
8	D0 shield	GND
9	D0-	GP13
10	CLK+	GP14
11	CLK shield	GND
12	CLK-	GP15
17		GND

other HDMI pins are unconnected

The power supply / programming interface uses mini USB. Although now considered rather old fashioned it has several advantages over other solutions. The connectors are much easier to solder than USB-C and they are more rugged than micro USB.

There is an on-board Debug port. This is a 1mm NSH 3-pin type.: Pin 1 clock, pin 2 GND, pin 3 data.

GP25 is also connected to a LED via a resistor. It can be used as a user LED and will also indicate if the GP25 pin is used as an input. There is a "solder blob" link beneath the PGA2350 that can be broken to disconnect the LED if required.

BILL OF MATERIALS

Name	Value	Comment
PCB		Custom
C1	100nF	0805 SMD capacitor
C2	100nF	0805 SMD capacitor
D1	PMEG4005CT (or similar)	SMD Dual Schottky diode SOT23
D2	1206	SMD LED - green
H1	15-way	0.1in male pin header
H2	15-way	0.1in male pin header
H3	8-way	0.1in male pin header
H4	8-way	0.1in male pin header
H5	8x2 (4-off)	0.1" male pin header
R1	220R	0805 SMD resistor
R2	220R	0805 SMD resistor
R3	220R	0805 SMD resistor
R4	220R	0805 SMD resistor
R5	220R	0805 SMD resistor
R6	220R	0805 SMD resistor
R7	220R	0805 SMD resistor
R8	220R	0805 SMD resistor
R9	1K	0805 SMD resistor
R10	1K	0805 SMD resistor
S1		3x6mm tactile switch
S2		3x6mm tactile switch
S3		3x6mm tactile switch
SK1	5PF	mini USB socket
SK2		SMD DVI/HDMI socket
SK3	3-way	NSH 1mm PCB socket

Most of the components were found on ebay or AliExpress. D1 is available from most big component suppliers. Anything with the same connections and a sensible current rating will do here.