



# 4D SYSTEMS

*TURNING TECHNOLOGY INTO ART*

## *gen4* Interface Board

For all gen4 sizes (Picaso and Diablo16)

gen4-IB

DATASHEET

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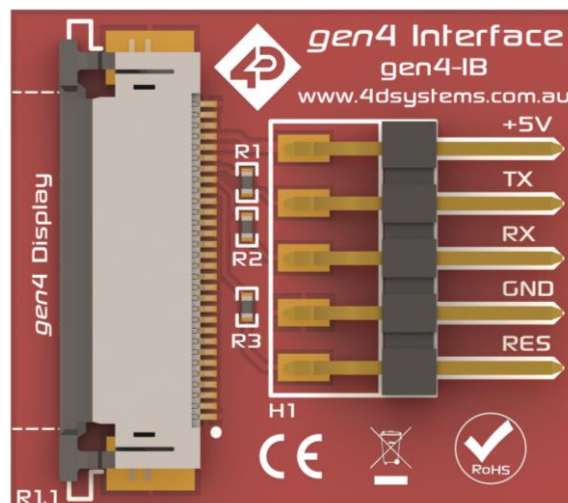
## 1. Description

This datasheet covers the gen4-IB (Interface board) which is compatible with all of the gen4 range of Intelligent Display modules which feature Picaso or Diablo16 graphics processors. It is included with every display module, and is a quick and easy way to interface to the gen4 range, without having to break out the signals from the 30-way FFC cable.

The gen4-IB is a simple interface that converts the 30-way FFC cable coming from your gen4 display module, into the common 5 signals used for programming and interfacing to 4D Systems products. The remaining signals from the gen4 display module are not accessible through this interface board. Please refer to the gen4-PA (Programming Adaptor) which is a USB programmer for the gen4 range of display modules, and also breaks out all of the signals from the display.

If you have existing 4D Products, and have a uUSB-PA5 or uUSB-PA5-II, or even a 4D Programming Cable, then you can use these programming devices via the gen4-IB to program the gen4 display module directly, without the need of a gen4-PA board.

The gen4-IB can be used to interface with 4D Programming devices, as mentioned above, for interfacing to a breadboard for prototyping, interfacing to Arduino and Raspberry Pi interfaces (see gen4 -AR and -PI kits), or for interfacing to virtually any host.



The gen4-IB has no processor, requires no drivers or any software. It is a simple interface only, converting the signals from the 30-way FFC cable from the display module, and breaking out the 5 important signals required for programming and basic interfacing.

More information can be found inside the datasheet for the specific display module being used. Please refer to the 4D Systems website and the product page of your chosen product, for more information. [www.4dsystems.com.au](http://www.4dsystems.com.au)

The Standard FFC cable supplied has the following specifications:

30 Pin Flexible Flat Cable, 150mm Long, 0.5mm (0.02") pitch  
 Cable Type: AWM 20624 80C 60V VW-1  
 Heat Resistance 80 Degrees Celsius  
 Connections on the opposite side at each end (Type B)

## 2. Example Hardware Connections

The following pictures illustrate how to connect the parts of a gen4 display module together, specifically utilising the gen4-IB. Note, the display module illustrated below is the gen4-uLCD-32DT.

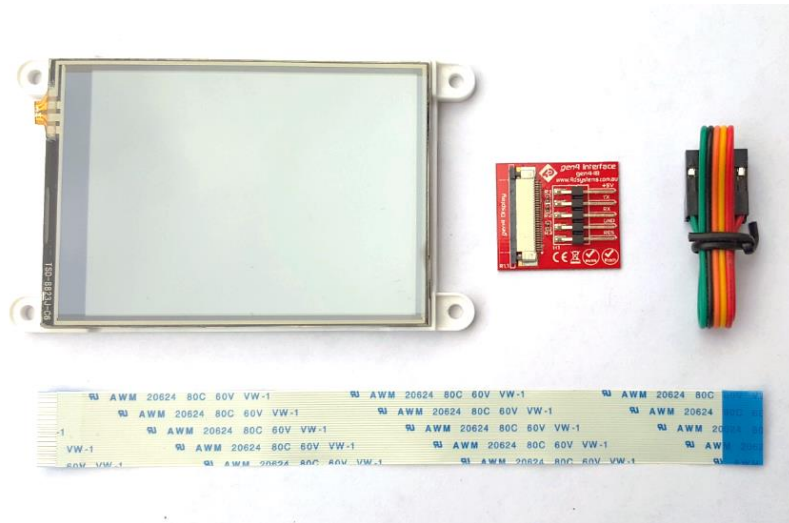


Figure 1. Typical components that come with a gen4 display.

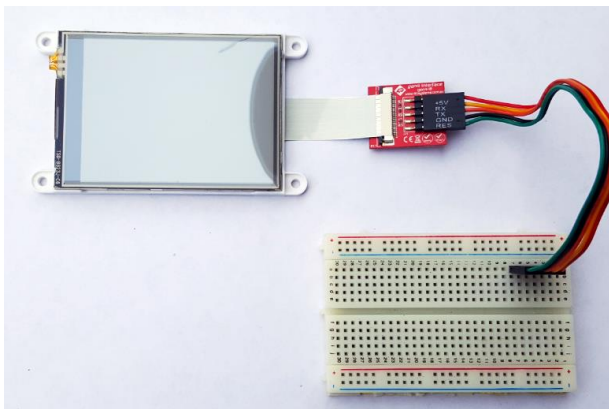


Figure 2. gen4 display connected to a breadboard via a gen4-IB and 5-way cable

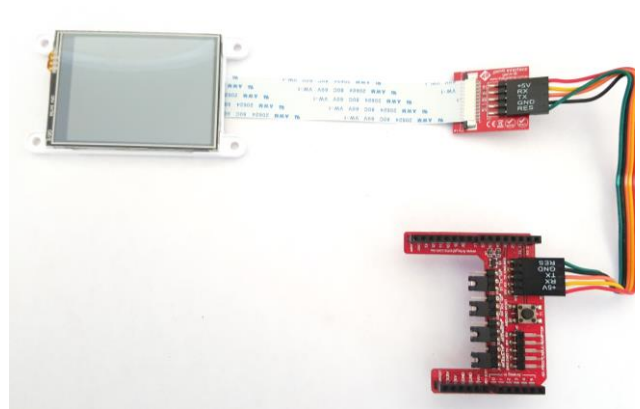


Figure 3. Components in the AR Kit connected together. The gen4-IB interfaces to the gen4 display module, and to the Arduino Adaptor Shield via our 5-way cable.

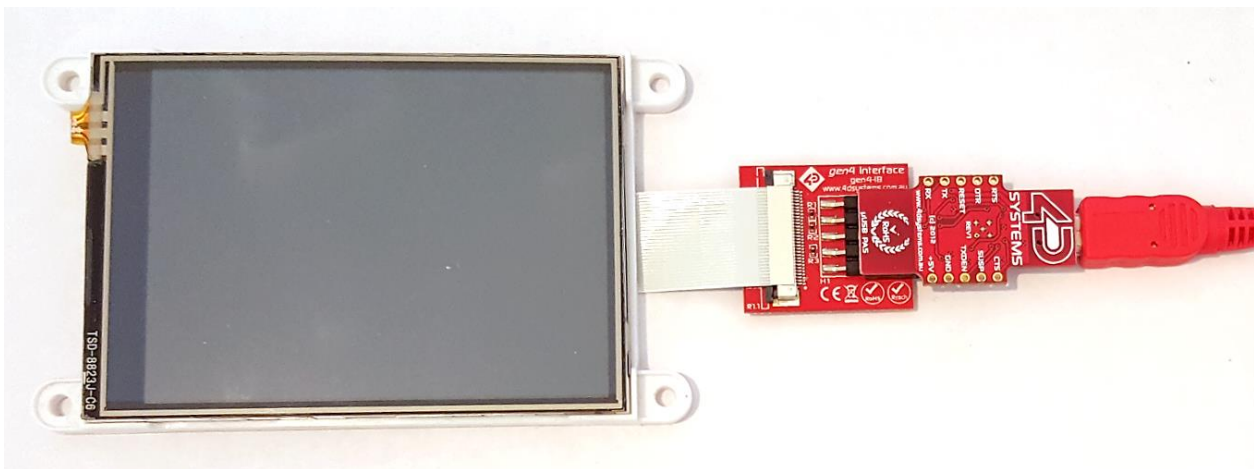
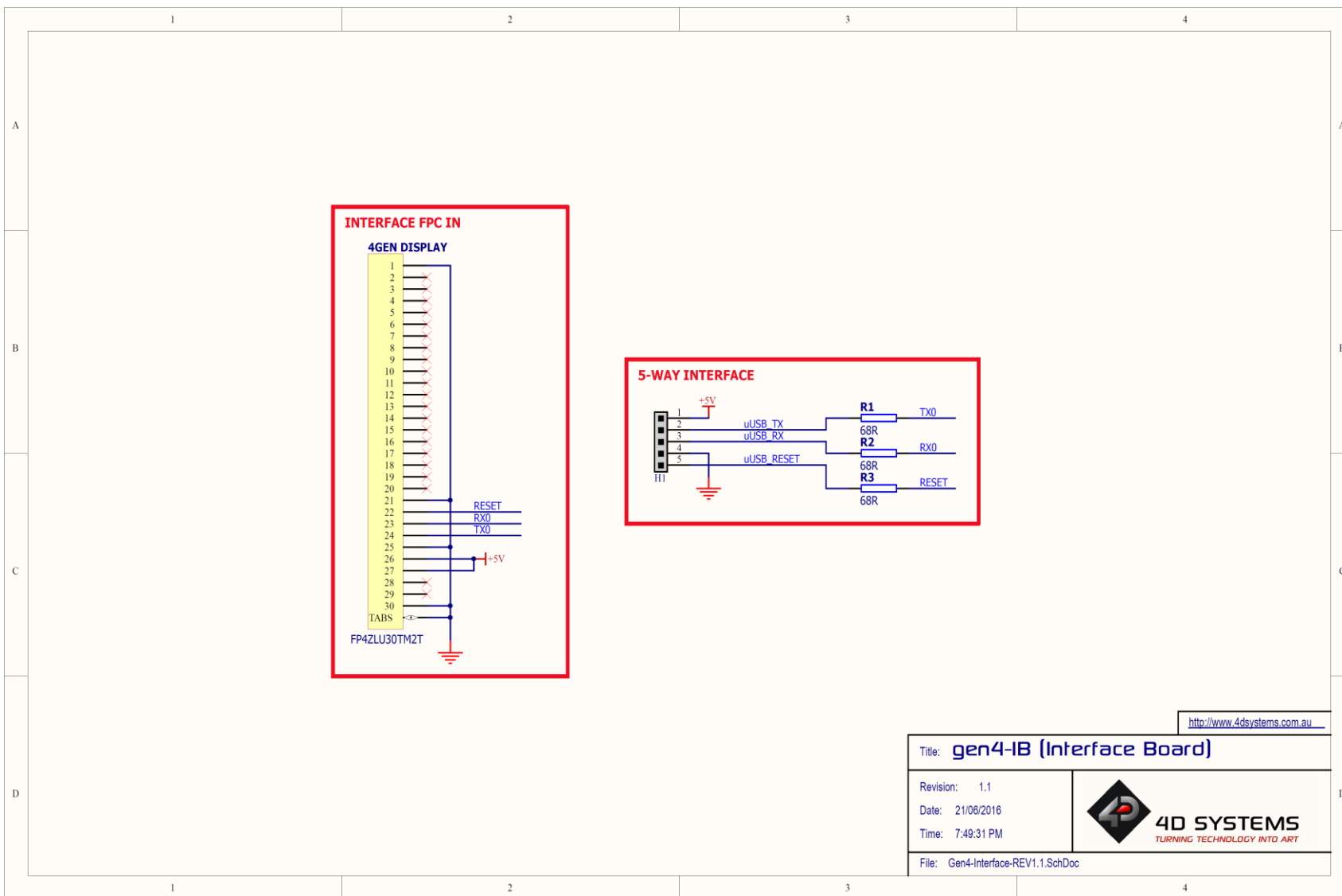


Figure 4. gen4 display, connected to the gen4-IB, with the uUSB-PA5 programming adaptor connected directly.

3. Schematic Diagram



## 4. Legal Notice

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