4D SYSTEMS
TURNING TECHNOLOGY INTO ART

Gen4 Breakout

DATASHEET

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gen4-Breakout

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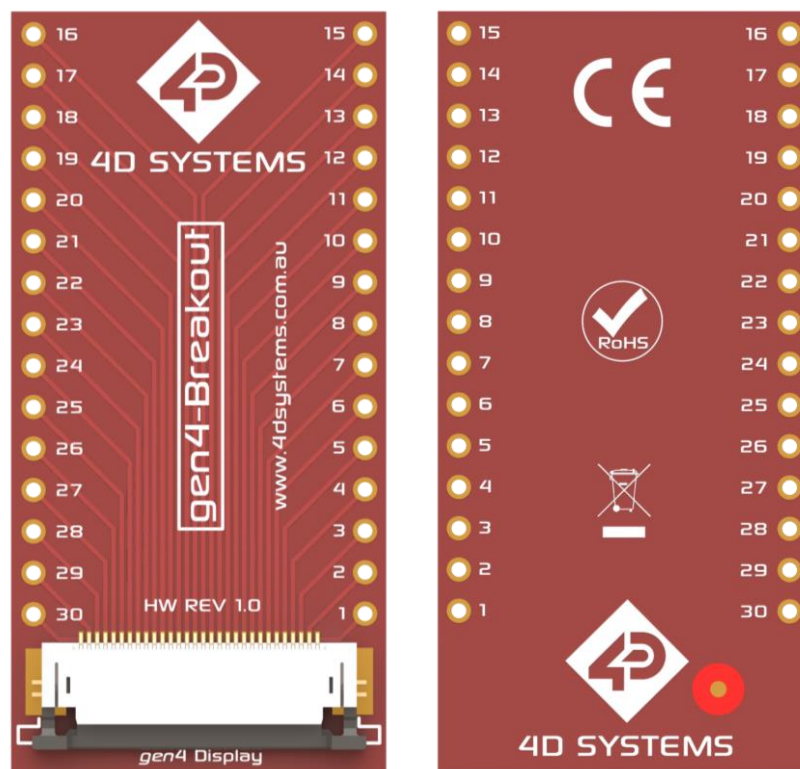
gen4 Breakout

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1. Description

This datasheet covers the gen4-Breakout board, which is compatible with multiple 4D gen4 display modules, along with the pixxiLCD range of display modules. It is included in some Starter Kit (SK) packs with certain products, or can be obtained separately, and is a quick and easy way to interface to the 4D gen4 display modules.

The gen4-Breakout is very simple, it breaks out the 30 signals from the FFC connector into 30 pads, 15 down each side. The breakout board is breadboard compatible if desired, or header pins (not included) can be soldered for ease of connections, or simply solder wires directly (not included).

The gen4-Breakout is useful when getting to each of the 30 signals is required, without the interference of USB devices or other peripherals, such as trying to utilize the TX/RX pins from a gen4 module but fighting with the USB controller on the 4D-UPA programmer. The gen4-Breakout solves this, and offers simple access to each of the signals, useful for both development and final products, without having to manage the FPC connector directly.

The gen4-Breakout has a 30-way top contact FFC connector at the top of the module, for connecting to gen4 display modules, and then 15 through hole pads down each side, breaking out the 30 signals.

Figure 1. gen4-Breakout, Front View (Left), Back View (Right)

The gen4-Breakout is compatible with all gen4 display modules which feature a 30 pin FFC. It does not matter what the pinout is of each gen4 display, or if they are compatible with each other, as this gen4-Breakout blindly breaks out each signal individually to a pad so its function is based purely on the module connected to the FPC connector. Please refer to the gen4 display module you are connecting, as to what each of the 30 pins function will be.

2. FPC Cable Specification

The FFC cables supplied by 4D Systems (included with products) have 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)

If there is a requirement for different length FPC cables, please contact the 4D Systems Sales team, who will endeavor to assist.

3. Header Compatibility

Virtually any 2.54mm (0.1") pitch headers should be able to be mounted to the gen4-Breakout. Standard male or female pin headers have been tested successfully, widely available from electronics suppliers.
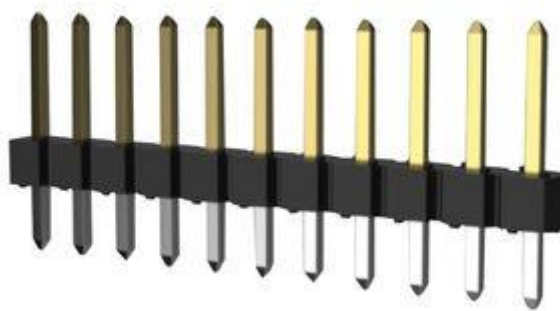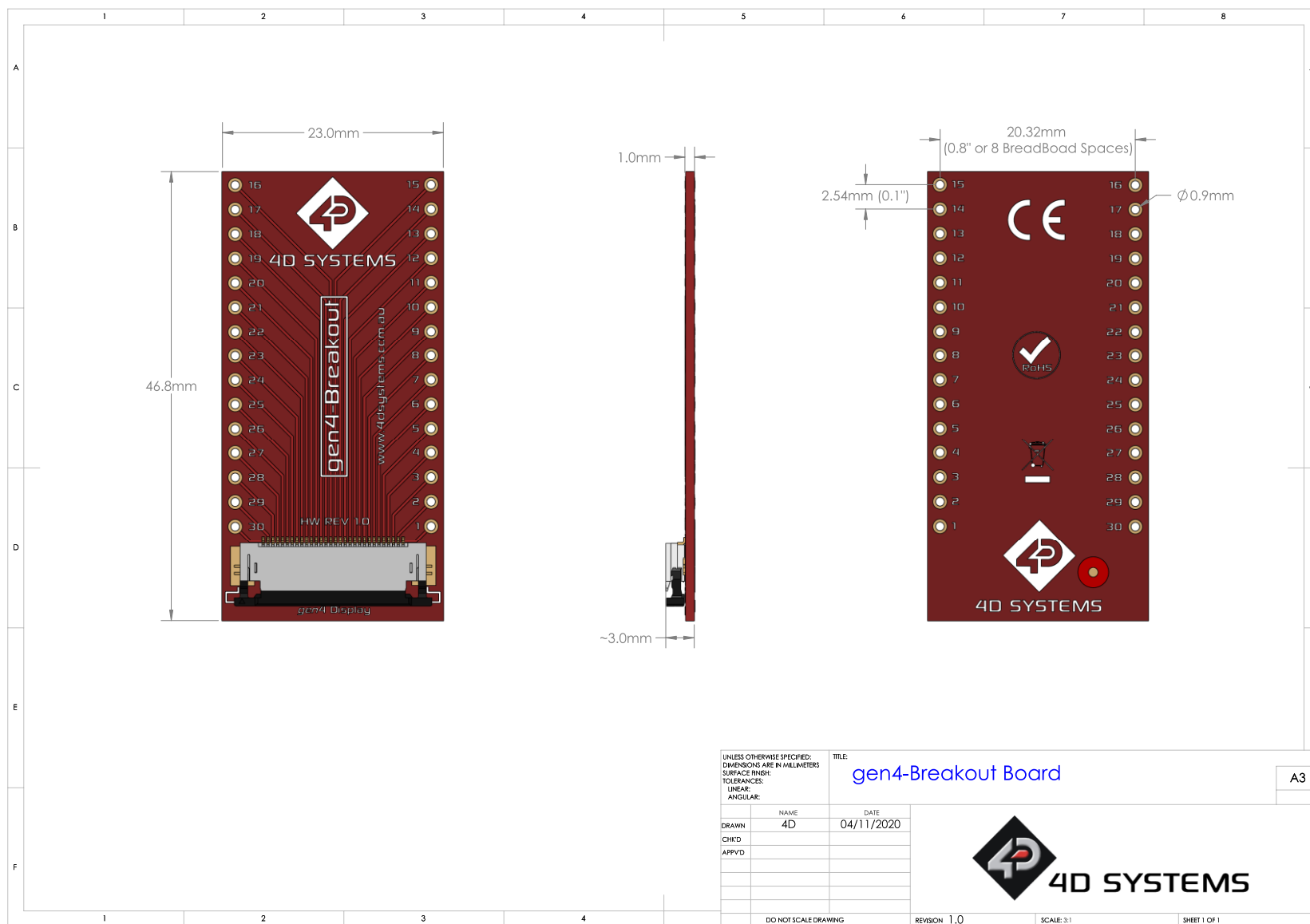

Figure 2. Example Male pin header, 2.54mm (0.1") Pitch (not included)
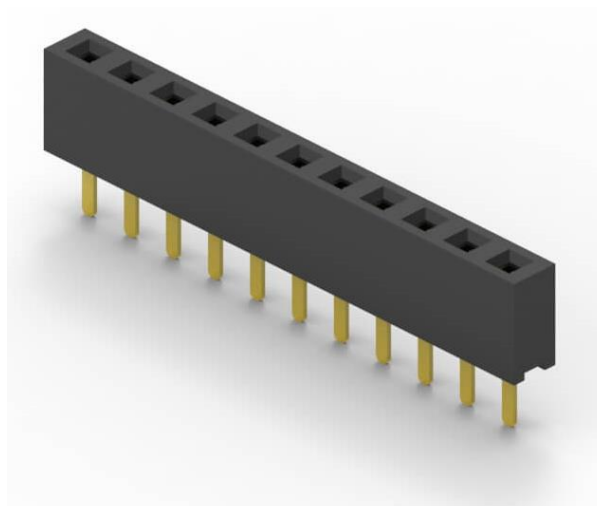
Figure 3. Example Female pin header, 2.54mm (0.1") Pitch (not included)

4. Mechanical Dimensions

5. Hardware Revision History

Revision Number	Date	Description
1.0	Sept 2019	Initial Public Release Version

6. Datasheet Revision History

Revision Number	Date	Description
1.0	04/11/2020	Initial Release Version
1.1	17/12/2020	Minor update/typo fix prior to release

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