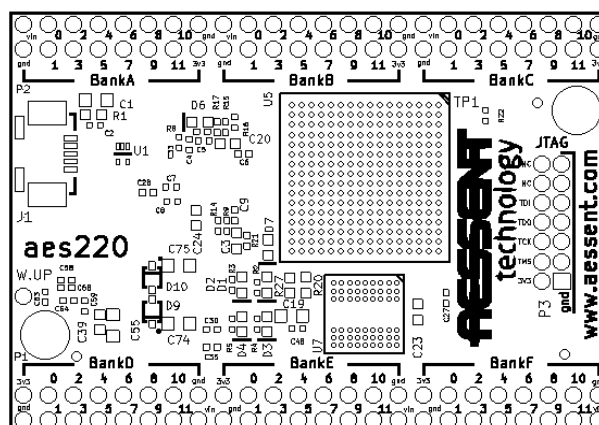**Aessent Technology Ltd**

aes220 High-Speed USB FPGA Mini-Module

Connectors and Cables Guide Version 1.2

Change History

Version	Changes	Author
V1.0	Original Version	Sébastien Saury
V1.1	Added Mini USB Cable, updated prices	Sébastien Saury
V1.2	Corrected title. Corrected P24P2RMAL mating part as P24P2RFEM in description paragraph. Clarified that P8P2RMAL allows plugging of daughter boards side by side.	Sébastien Saury

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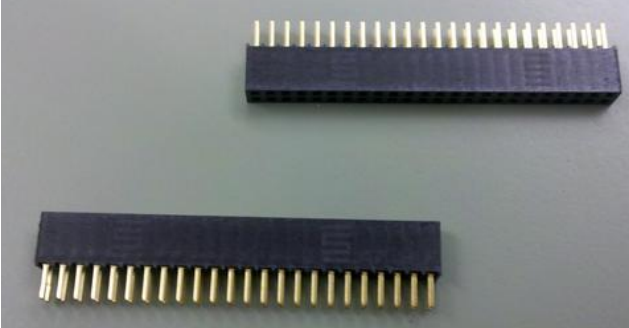# 1   Full Length Stack Up Connector P24P2RSTACK

1.1 Description

Figure 1: P24P2RSTACK Full Length Stack Up Connector

The P24P2RSTACK connectors allow for an aes220 board to be stacked up with another aes220 board or with a board with the same footprint. The connectors through hole pins are sufficiently long to offer the possibility of connecting to another similar connector hence allowing boards to be stacked up on top of each other. Alternatively it means the board can be plugged into a mother board equipped with P24P2RFEM connectors and still give access to its numerous I/Os (for a daughter board for example)

Pitch: 2.54mm

Mates with: P24P2RFEM, P24P2RMAL, P8P2RFEM and P8P2RMAL
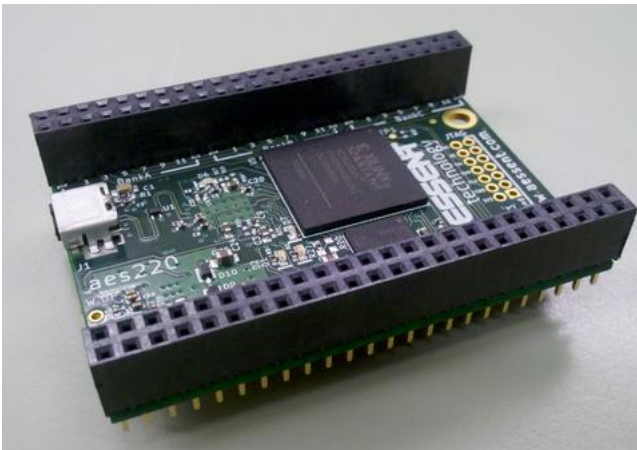
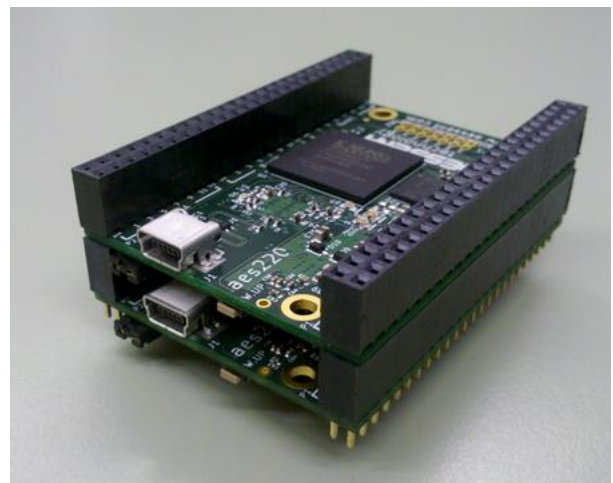Price: £3.50 each + VAT

Figure 2: Connectors Mounted on Board

Figure 3: aes220 Stacked Up Using P24P2RSTACK

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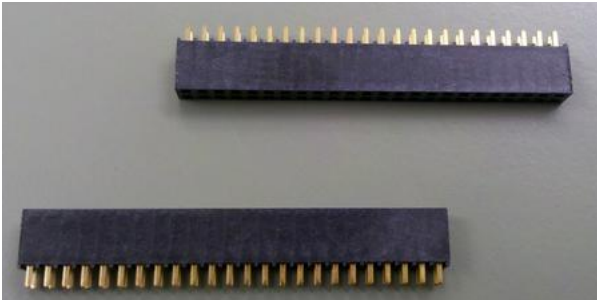## 2   Full Length Female P24P2RFEM and Male P24P2RMAL Headers

Figure 4: P24P2RFEM Full Length Female Headers

The P24P2RFEM connectors are full length female headers used to plug other boards or headers onto the aes220 module or to plug an aes220 module fitted with the P24P2RMAL or P24P2RSTACK connectors onto a mother board. They are standard 2.54mm pitch header. Unlike the P24P2RSTACK the pins protruding from the other side of the board are not long enough to connect to another header.

Pitch: 2.54mm

Mates with: P24P2RMAL or P8P2RMAL

Price: £3.07 each + VAT

The P24P2RMAL is the mating part of the P24P2RFEM connector although it can also mate with the P24P2RSTACK connector. It can be used to connect an aes220 module to a mother board equipped with the P24P2RFEM connectors.

Pitch: 2.54mm

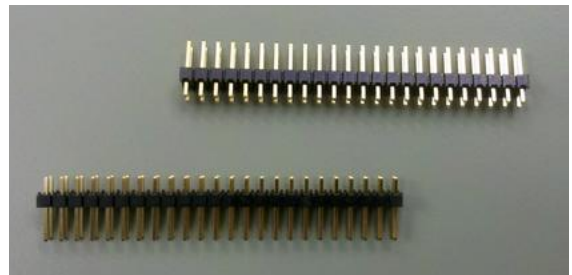Mates with: P24P2RFEM or P24P2RSTACK or P8P2RFEM

Price: £1.95 each + VAT

Figure 5: P24P2RMAL Full Length Male Headers

Figure 6: P24P2RFEM on aes220

Figure 7: P24P2RMAL on aes220

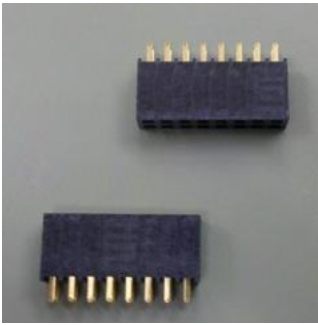www.aessent.com

3   Third of Length Female P8P2RFEM and Male P8P2RMAL Headers

The P8P2RFEM is a third of the length of the P24P2RFEM and would fit into one bank of the aes220 module. This is useful if only wanting to connect one daughter board on the aes220. The daughter board would then be fitted with the P8P2RFEM mating part: the P8P2RMAL connectors.

Pitch: 2.54mm

Mates with: P8P2RMAL

Price: £1.25 each + VAT

Figure 8: P8P2RFEM

The P8P2RMAL is a third of the length of the P24P2RMAL. It fits in one bank of the aes220 module but would more likely be used on the daughter boards plugged onto an aes220 (it is then possible to plug 3 such daughter boards side by side on the aes220).

Pitch: 2.54mm

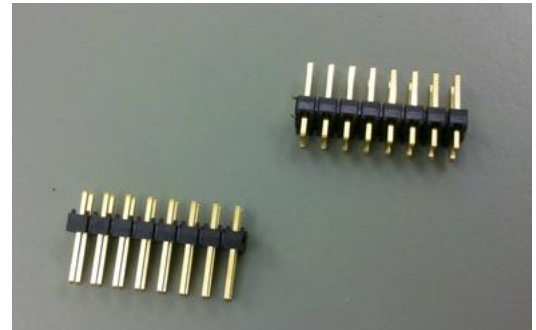Mates with: P8P2RFEM, P24P2RFEM, P24P2RSTACK

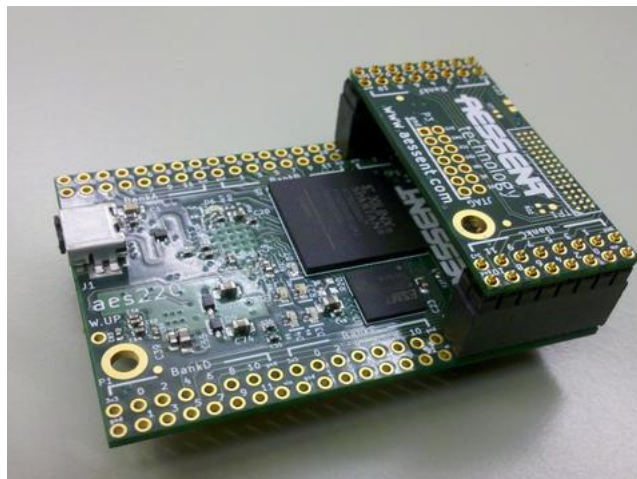Price: £0.78 each + VAT

Figure 9: P8P2RMAL

Figure 10: Daughter Board on aes220 using P8P2RMAL and P8P2RFEM

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4   Third of Length P8P2RSPAC Spacer

The P8P2RSPAC can be used to permanently fit a daughter board onto an aes220. The spacing between the boards is then 7.5mm and most components are 1mm high or less save for the USB connector (4mm in height) the jumper (2.5mm) and the coils L1 and L2 (1.6mm).

Pitch: 2.54mm

Mates with: P8P2RFEM, P24P2RFEM, P24P2RSTACK
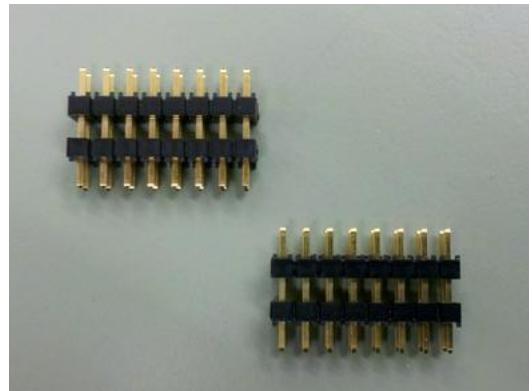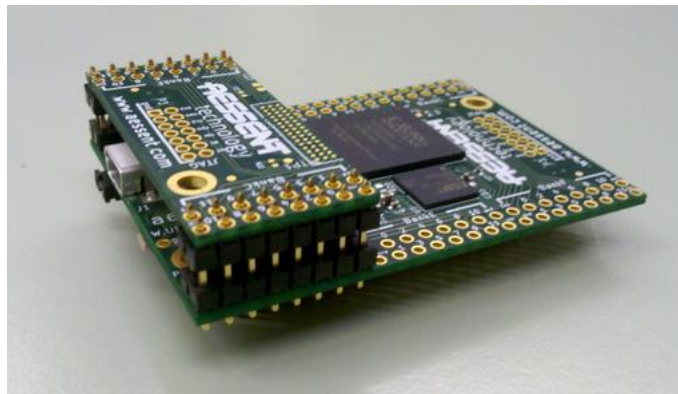
Price: £0.97 each + VAT

Figure 11: P8P2RSPAC

Figure 12: A daughter fitted on an aes220 using P8P2RSPAC

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5   1m Mini USB Cable USBMIN1M

Figure 13: 1m long Mini USB Cable

The   USBMIN1M   is meant to connect the aes220 modules to a standard PC USB port (USB-A).
It is a standard USB-A to USB Mini-B cable.

Pitch: N/A

Mates with: aes220a/b, aes100, aes101

Price: £4.50 each + VAT

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