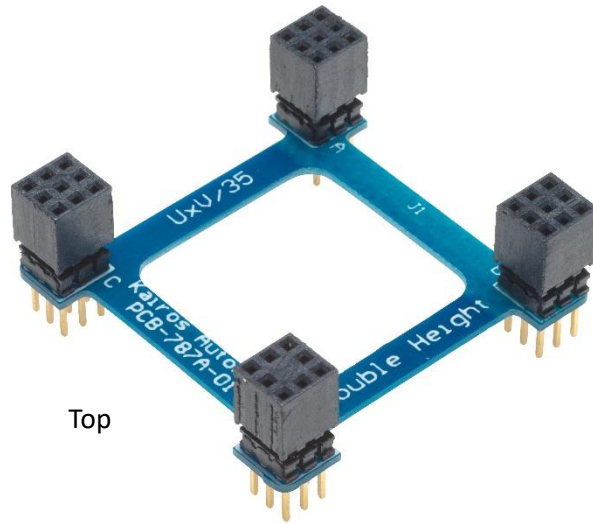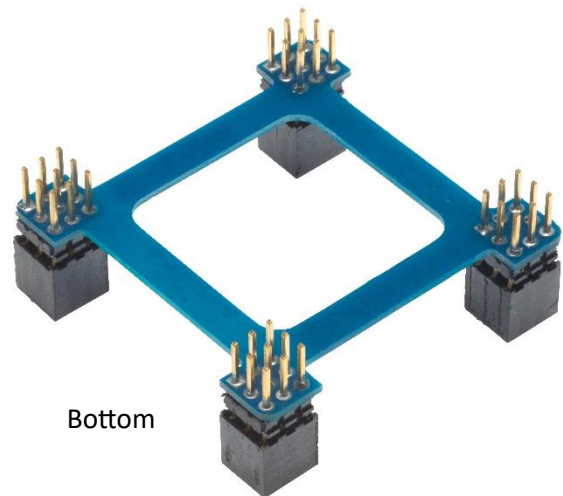# KA1043-01 UxV/35™ Double Height Board
Datasheet

Top

Bottom

Description

This stack management board provides a single vertical slot of space in a UxV/35 stack.

It is used for additional connector spacing, enhanced interoperability with other systems or simply to place another UxV/35™ board at an optimal location.

About the UxV/35™ Standard

Making rapid assembly possible

In the PC/104™ industry, an embedded computer can be assembled within minutes. Modules are unpacked, stacked, connected, powered up, and the operation begins. PC/104™ is among the oldest American standards for embedded computing.

The objective of UxV/35™ aligns with this precedent. The process involves unpacking a set of flight modules, stacking them as needed, and configuring their software. After installing the batteries, the flight can commence within minutes. Scalability is assured through additional orders from a cooperative network of vendors

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Achieving compatibility with open-source controllers

The UxV/35™ Standard, as outlined, is compatible with open-source flight and vehicle controllers such as ArduPilot and Betaflight.

Providing scalability and interoperability

It facilitates interoperability between numerous vendors, spanning production volumes from single units to thousands.
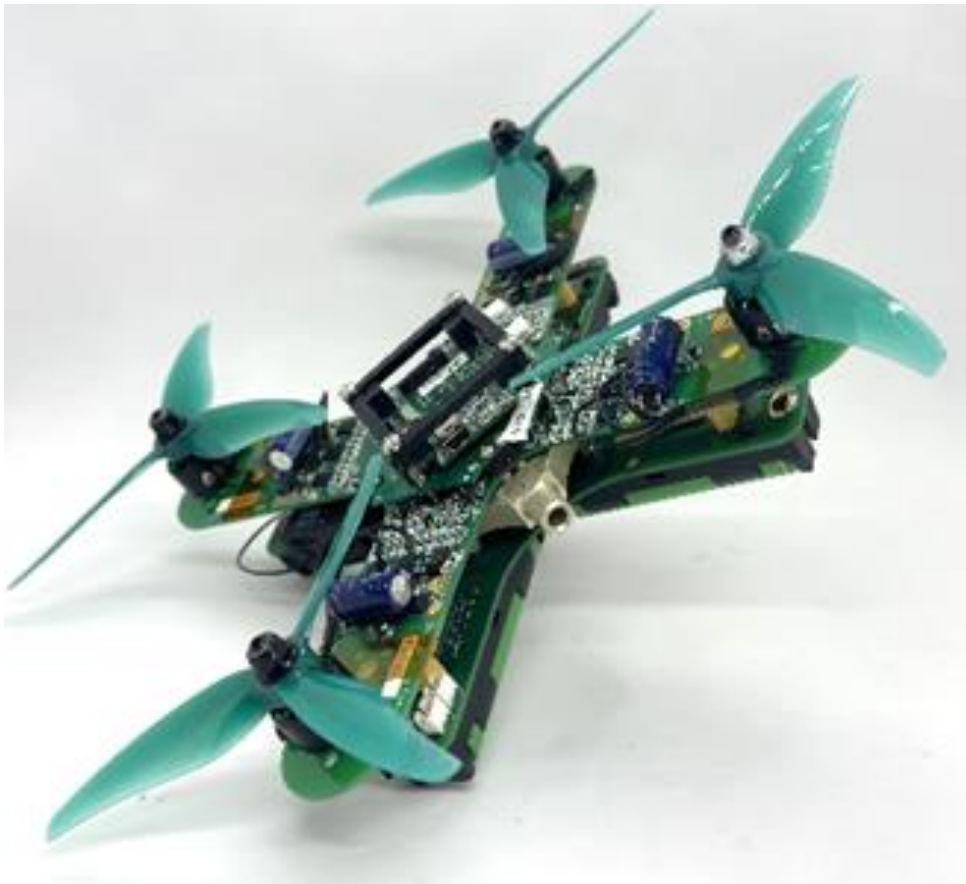
Accommodating a wider range of component sources

It shifts the reliance on components from specific geographical locations by modifying connection pitches to accommodate a wider range of sources.
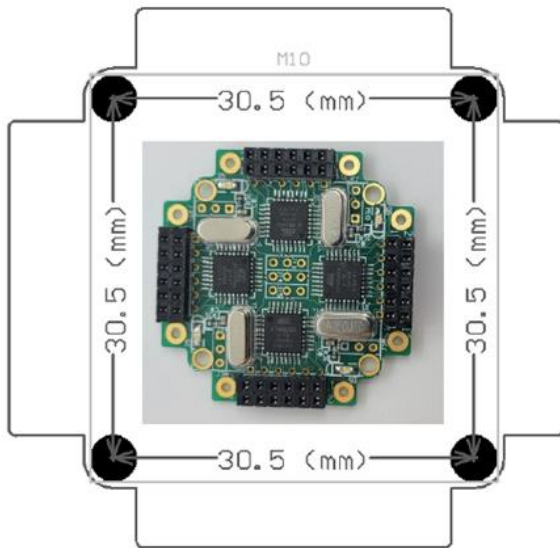
Enhancing reliability

The precision design of the connecting pins between stacked boards ensures solid performance.

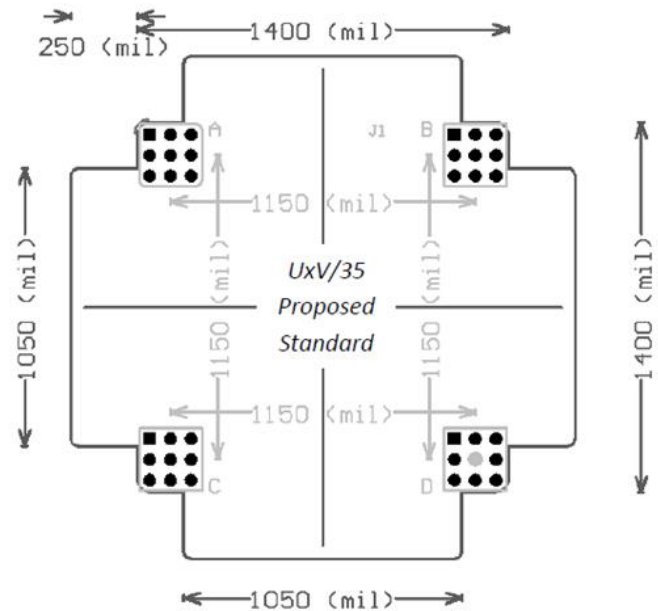*For more details on UxV/35™, see Kairos82nd.com.*

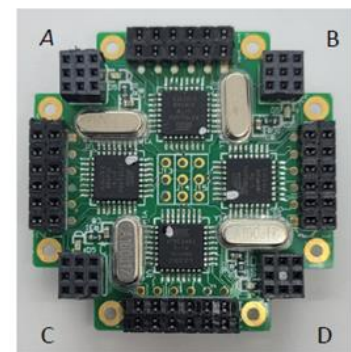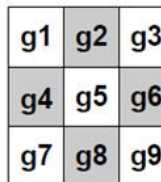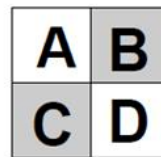**Example: Kairos UxV/35™ Stack Manual Flight Drone**

UxV/35™ Primer

250 (mil) 1400 (mil)

1150 (mil)

1050 (mil)

1400 (mil)

UxV/35 Proposed Standard

1150 (mil) 1150 (mil)

1150 (mil)

1050 (mil)

M10

30.5 (mm)

30.5 (mm)

30.5 (mm)

30.5 (mm)

Existing Defacto Flight Stack Standard

Corner Stacking Connector Groups

A	B
C	D

A — Servo Signals
B — I2C and General Purpose Signals
C — Power and Power monitoring, Analogs, Safety
D — Serial Signals

g1	g2	g3
g4	g5	g6
g7	g8	g9

Group A	Group B	Group C	Group D
A1 —Servo Output 1	B1 —Primary I2C Clock (SCL)	C1 —Battery (3S or 4S), Batt +	D1 —TxA
A2 —Servo Output 2	B2 —Primary I2C Data (SDA)	C2 —Ground, Batt-	D2 —RxA
A3 —Servo Output 3	B3 —Secondary I2C Clock (SCL)	C3 — Radio Signal Strength Indicator	D3 —TxB
A4 —Servo Output 4	B4 —Secondary I2C Data (SCL)	C4 —Current Usage Indicator	D4 —RxB
A5 —Servo Output 5	B5 —General Purpose 1	C5 — Return To Home	D5 —Key
A6 —Servo Output 6	B6 —General Purpose 2	C6 — 3.3V	D6 —TxC
A7 —Servo Output 7	B7 —General Purpose 3	C7 — Reset	D7 —RxC
A8 —Servo Output 8	B8 —General Purpose 4	C8 — Pause	D8 —TxD
A9 —SBUS Signal	B9 —General Purpose 5	C9 — +5V	D9 —RxD

Country of Origin

Kairos82nd uses the color of the PCB to assist in the determination of country of origin. One hundred percent of Kairos82nd UxV/35™ components are manufactured in Salt Lake City, Utah. The PCBs are sourced and assembled locally. The firmware on these boards is source code managed by Kairos82nd or is available as open source.

All Kairos82nd UxV/35™ boards that are Blue or Green indicate that the components used are sourced from domestic and global foundries. Any firmware is owned, managed, or controlled by Kairos82nd.

Any of our PCBs that are Red indicate that they may contain components from a country of origin is not acceptable for usage by the U. S. Government without a waiver.

All interoperability boards are Red because they can be adapted to 3rd party boards where Kairos82nd cannot manage the country of origin.

Warranty

Kairos 82nd warrants its products for one (1) year from date of purchase. Kairos will repair or replace, at Kairos' discretion, products found to be defective. Repair or replacement will not be covered for a product that has been physically damaged or where power was misapplied.

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