

**HRI**  
RANGE

**HARWIN**

**KONA<sup>®</sup>**



# **NPI RELEASE**

**KONA RIGHT-ANGLE SERIES**

## MALE RIGHT-ANGLE PCB CONNECTORS, BOARD MOUNT &amp; PANEL MOUNT



The [right-angle versions](#) are also available in 2, 3 and 4-contact single row options for PCB throughboard mounting.

The KA1-MH1xx05M3 Standard gender fixings have a female thread for use with the 10mm long hex socket bolt [KA1-4200000](#) for additional security on the PCB.

The KA1-MH1xx05M4 include both the board mount and mating threads, but also additional internal threads for fixing to a front panel.

## FEMALE RIGHT-ANGLED CONNECTORS, CABLE

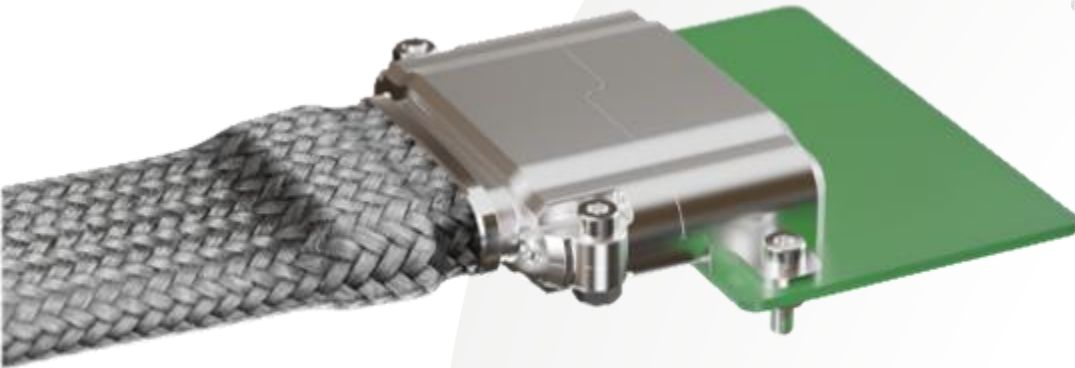


The right-angled female cable connectors also include 2, 3 and 4-contact single row housings for cable connections, but are of two-piece construction. The main contact bodies are part numbers [KA1-202xx98F1](#), fitted with standard gender fixings (floating thumbscrews with added hex socket cavities for use with torque drivers). To complete the connector, the rear cap is also required (part number range [KA1-510xx98](#)).

Both housing parts are supplied separately, as is the [KA1-0500005](#) solder contact.



## MALE PCB RIGHT-ANGLE BACKSHELLS



Kona Male Right-Angle Backshells are offered for the Male PCB Connectors. These mate with existing KA1-970xx00 Straight Cable Metal Backshells.

Panel mount option available, with side tabs for fastening.

## RELEASED PART NUMBERS

Part Number	Description	Part Number	Description
<b>KA1-MH1XX05M3</b>	Male Right-Angle Throughboard Board Mount	<b>KA1-960XX02</b>	Male Right-Angle PCB Backshell
<b>KA1-MH1XX05M4</b>	Male Right-Angle Throughboard Board Mount & Panel Mount	<b>KA1-961XX02</b>	Male Right-Angle Panel Mount Backshell
<b>KA1-11500005</b>	Male Right-Angle PCB Contact	<b>KA1-4200000</b>	Panel Mount or Board Mount Bolt
<b>KA1-202XX98F1</b>	Female Right-Angle Cable Housings with Thumbscrews	<b>KA1-4300000</b>	Female Right-Angle Housing Backplate
<b>KA1-510XX98</b>	Female Right-Angle Housing Backplate	<b>ZA1-9100000</b>	Cap Removal Tool
<b>KA1-05000005</b>	Female Right-Angle 8AWG Solder Contact		

*Note: 'XX' = 02, 03, 04: three connector sizes, where the number designates the number of contacts.*

## RELEASE HIGHLIGHTS – WHY?

Right-Angle range of PCB and cable connector format now offers solutions for end-applications in tighter areas where there may be height or cabling restrictions, also requiring board edge mount connectors for panels and quick routing away from the PCB.

The new variants support the evolution and growth of the Kona product series. Designed for power transmission and extreme environmental use.

# KONA FAMILY



## EXISTING KONA FAMILY MEMBERS



- Male Vertical PCB: Board Mount & Reverse Fix | Standard & Extended Tail Length
- Male Vertical PCB Shielding
- Male & Female Cable: Thumb Screw, Retaining Nut, Panel Mount | Solder Contacts & Crimp (female only)
- Cable Connector Shielding
- Hardware & Accessories: Crimp Tool, Positioner, Contact Removal Tool, Nuts

## EMC SHIELDING – METAL BACKSHELLS



The strong and lightweight machined aluminium backshells provide EMI protection to sensitive components on the system, keeping noise to a minimum and maximising product performance.

They are designed to accommodate flexible, abrasion resistant, metal braiding and are supplied with tie-bands to attach such braiding to the shell. The backshells, together with the braiding, provide mechanical and electrical protection for performance benefits.

## READY-MADE CABLE ASSEMBLIES



Ready-made cables are available made to order, inspected and tested for immediate production use. Variations include:

- Single-ended, male or female – free end can be supplied as cut, or stripped to your specified length
- Double-ended – male-to-male, female-to-female, or male-to-female
- Specify your own cable lengths from 100mm to 9,990mm
- Standard gender and reverse fixing options for each end

# KONA SPECS & FEATURES

## ELECTRICAL SPECIFICATIONS

Specification	Rating
Current Rating	60A per contact
Maximum Voltage	3,000V AC/DC for 1 minute
Working Voltage (sea level)	1,500V AC/DC
Contact Resistance	2mΩ max

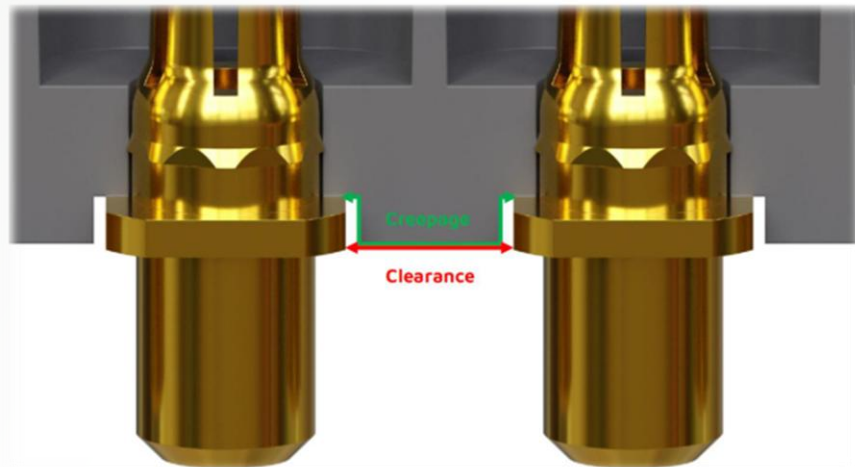
Kona is capable of the highest current rating per contact from Harwin. At 121A per inch or 48A per centimeter for the 4-contact model, it's the highest power density in our portfolio.

The full Kona [Component Specification C052xx](#) includes additional information and de-rating curves.

## 8.5MM PITCH FOR CURRENT & VOLTAGE



### 8.5mm PITCH PIN SPACING



By increasing the pitch of the connector to 8.5mm, you get increased electrical specifications:

- Current rating – 60A max per contact simultaneously;
- Voltage rating – 3,000V AC maximum for 1 minute; 1,500V DC or AC peak working voltage at sea level.

Commercial or COTS, the Kona range is a professional high-performing connection system.

## MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Specification	Rating
Operating Temperature Range	-65°C to +150°C
Vibration	10-2,000Hz @ 20g (198m/s <sup>2</sup> )
Shock	100g (981m/s <sup>2</sup> ) for 6ms
Durability	250 mating cycles

Extreme environmental resilience in a robust, compact design for high performance.

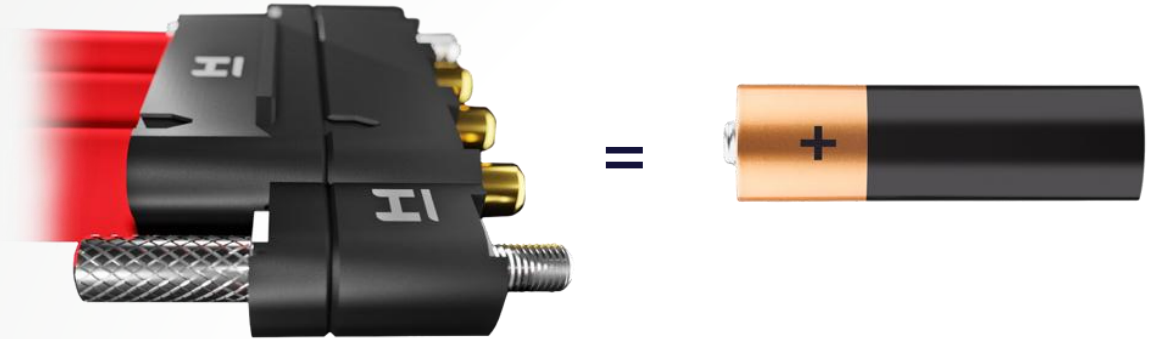
Temperature range exceeds Datamate, and matches Gecko.

Consult the [Test Report Summary HT076xx](#) for more information.

## COMPACT & LIGHTWEIGHT



**A KONA 4  
WAY MATED  
PAIR WEIGHS  
THE SAME AS  
AN AA  
BATTERY**

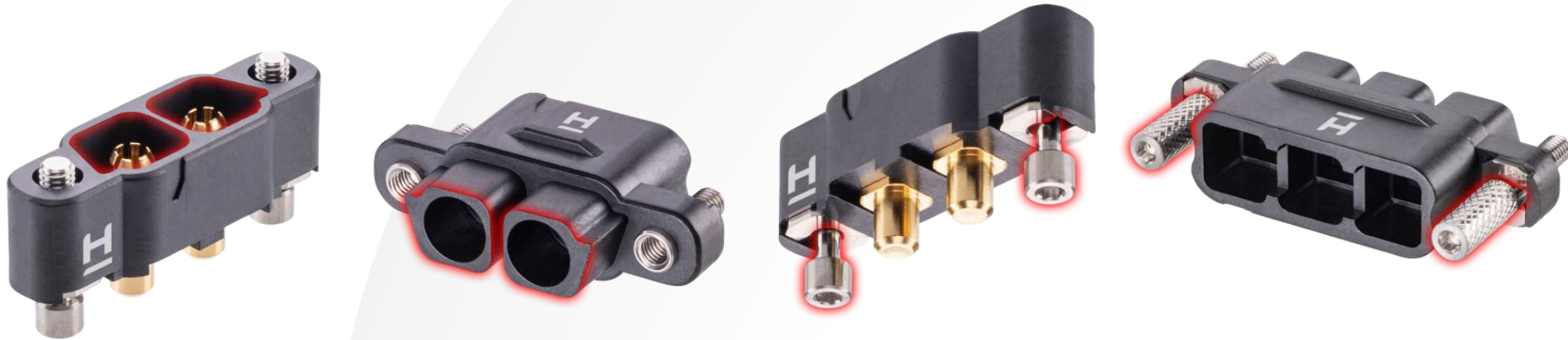


A mated pair of connectors will weigh just 25g (0.88oz), which is the same as a standard AA battery. The lengths are also comparable – the 3-contact version is 50mm long, also the same length as that AA battery.

Specifying this connector for power connections will keep the component weight low and PCB real estate minimal, releasing more weight and space for your other functions.



## FEATURES – SHROUDING, POLARIZATION, SCREW LOCK FIXING



Contacts on the Kona range are all individually shrouded, with a recessed design. This helps prevent accidental touch of contacts by locating the contact end below the housing face. The contacts are also better protected against incidental damage from physical knocks or mis-mating.

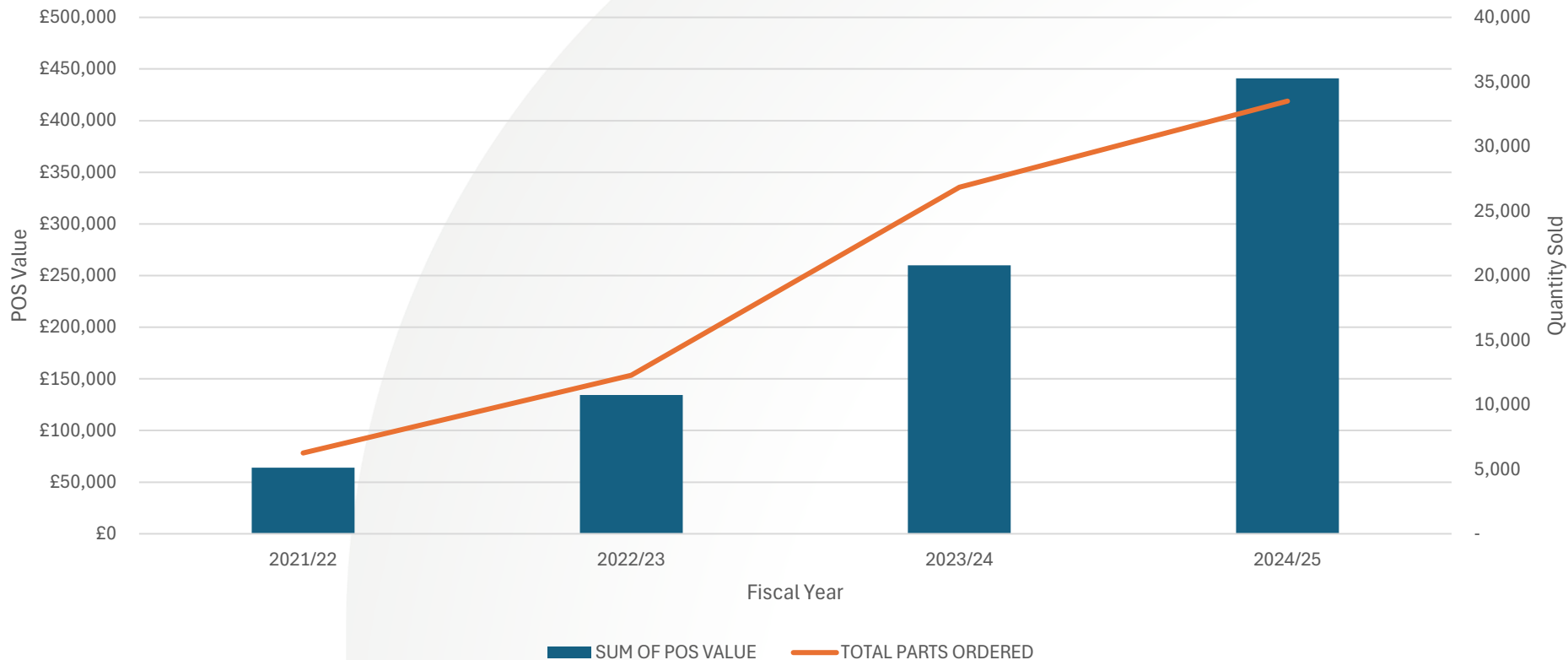
Polarizing features can be seen on the outer edge of the shrouding, to prevent mating round the wrong way.

All Kona connectors are fitted with screw-lock fixings, to achieve the maximum vibration and shock specifications. They are also mate-before-lock, so connectors are easier and faster to mate before the screws are engaged and screwed together.

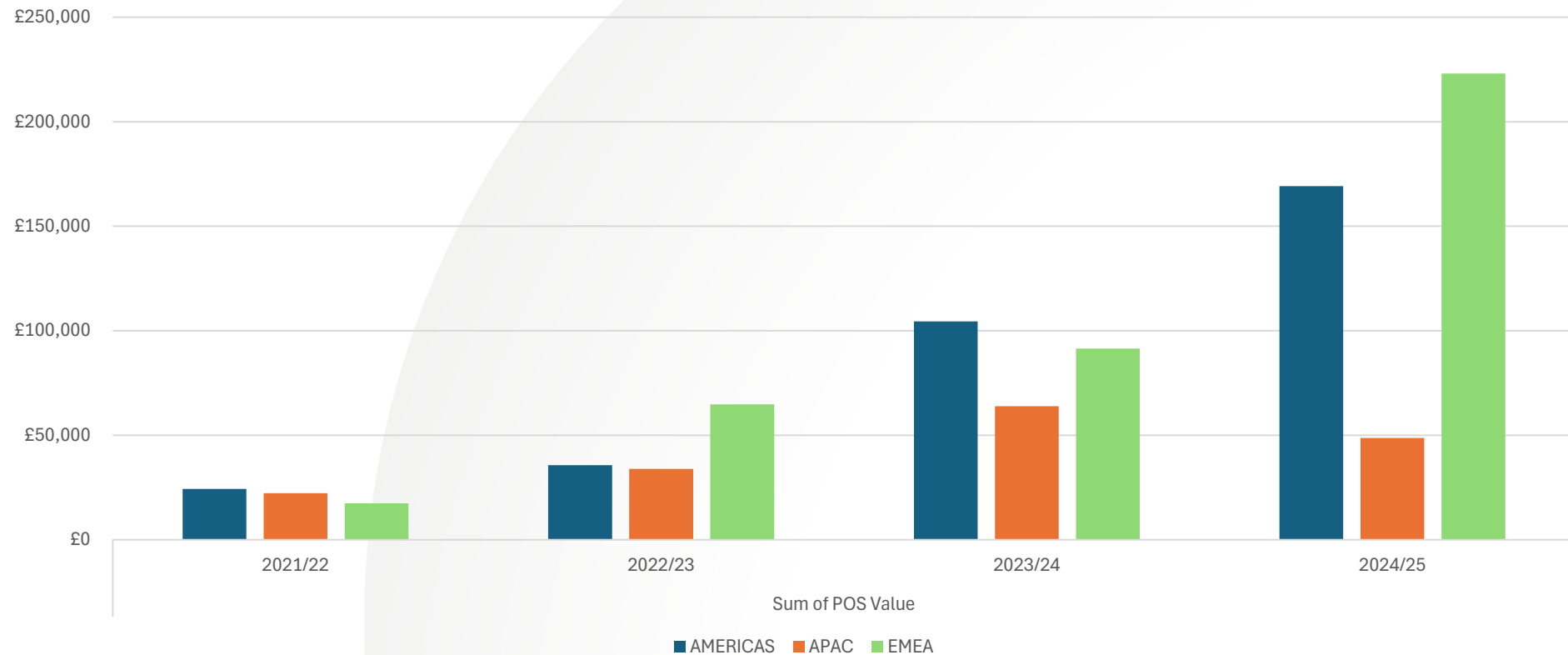
# KONA TARGETS



## KONA POS HISTORY

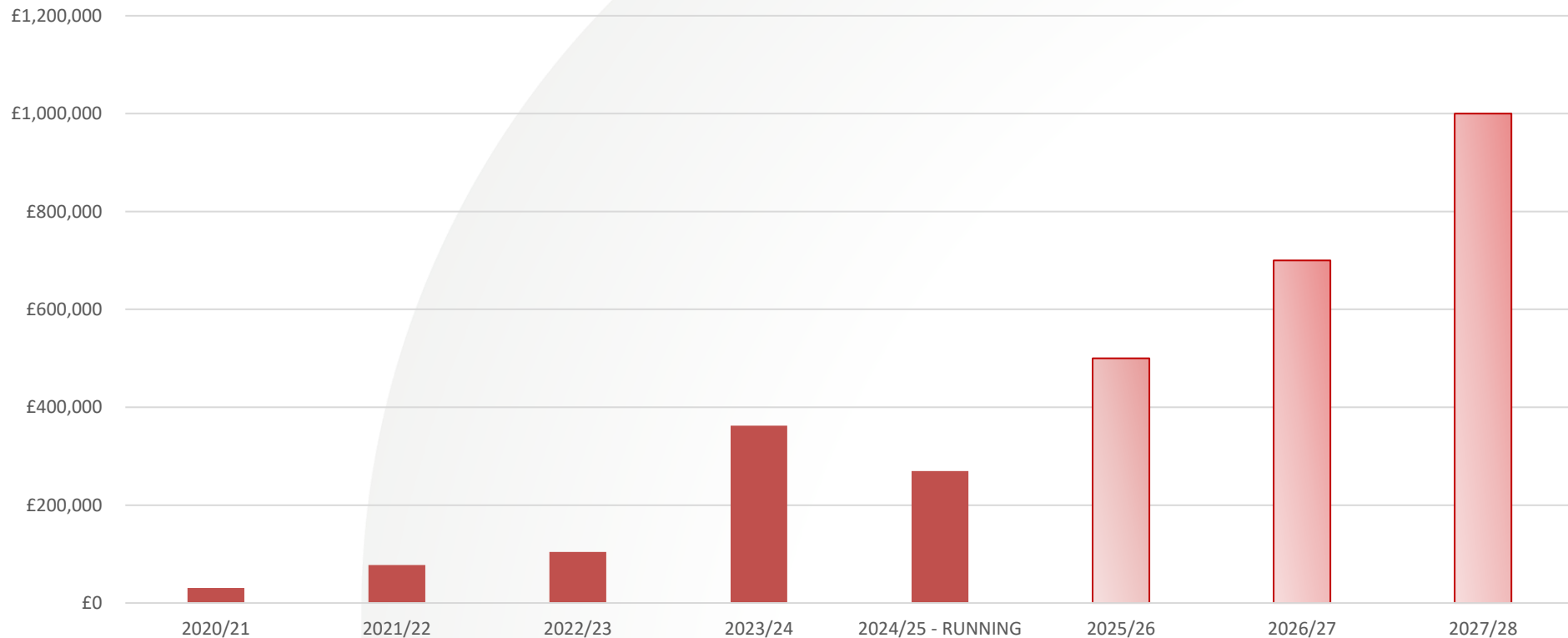


# KONA POS ZONE SPLIT (Annual)





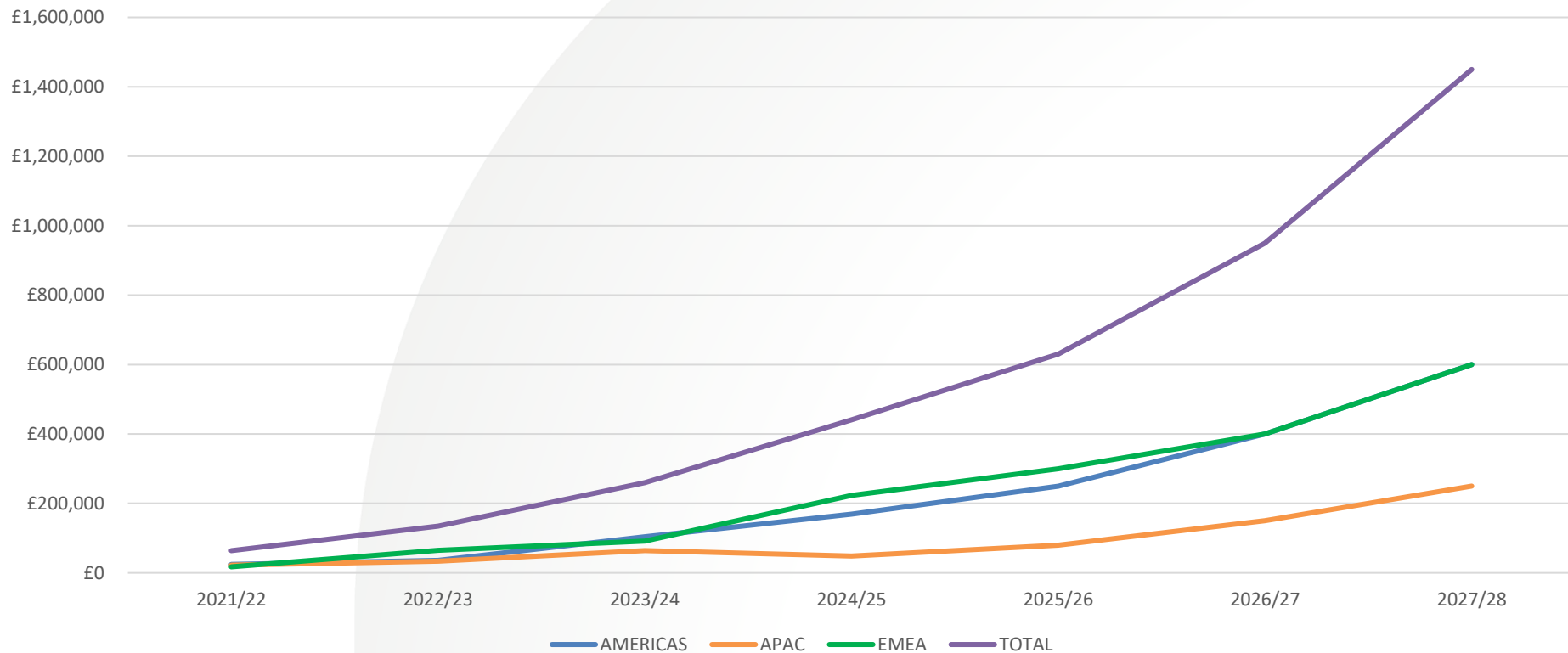
## KONA BOOKINGS TARGET



ZONE	POS Target by Region			
	2025/26	2026/27	2027/28	
AMERICAS	£250,000	£400,000	£600,000	40%
AMERICAS GROWTH	32%	38%	33%	
APAC	£80,000	£150,000	£250,000	
APAC GROWTH	39%	47%	40%	17%
EMEA	£300,000	£400,000	£600,000	43%
EMEA GROWTH	26%	25%	33%	
TOTAL	£630,001	£950,001	£1,450,001	£3,929,101
TOTAL GROWTH	30%	34%	34%	



## KONA POS ZONE SPLIT TARGETS (Annual)



## OPPORTUNITY TARGET

NEW OPPORTUNITIES	CONVERTED OPPORTUNITIES
Number of KA1 opportunities created (by part count) in the next 12 months (past open state)	KA1 opportunities converted to win (by part count) in the next 12-24 months
<b>100</b>	<b>&gt;60%</b>
This is a 54% increase on current	Currently 25% conversion rate. HRi rate for 24/25 = 75%



REGION	OPEN OPS WITH KA1 PRODUCT LISTED	OPEN KA1 PRODUCT LINE OPS	Sum of Total Price (KA1 only)	Sum of Total Opportunity Amount
EMEA_Nordics_and_Eastern	2	3	£206,620	£628,480
EMEA_South	3	22	£170,152	£1,441,945
EMEA_UK_Ireland_Benelux	1	19	£164,844	£3,132,027
APAC	2	8	£99,477	£456,476
AMER_Northeast	1	4	£95,791	£383,166
AMER_West	3	8	£28,169	£101,186
AMER_North	1	1	£1,873	£4,531
<b>TOTAL</b>	<b>13</b>	<b>65</b>	<b>£766,925</b>	<b>£6,147,810</b>

OPPORTUNITY SUMMARY			
CLOSED WON OPS FOR KA1 PRODUCT		<b>17</b>	<b>£ 105,648</b>
CLOSED LOST OPS FOR KA1 PRODUCT		<b>51</b>	<b>£ 3,342,248</b>
OP CONVERSION RATE		<b>25%</b>	
OP CONVERSION VALUE		<b>3%</b>	

## HOW?

Value Added Product Features	Backshells
	Crimps (coming soon) & Tooling
	Cable Assemblies - Cable Configurator is Live
Introduce New Product Options	Crimps & Tooling - in progress
	Female PCB - in progress
	Latched
	Kona with signal contacts for switch function
	Dustcaps
	Shield variations (45° cable outlets)
	IP Rating
Additional Testing	Low-cost alternative
	Peak Current testing (200A)
Marketing Campaigns	2025 marketing campaign for Kona
Target Exhibitions (examples)	AUVSI
	SpaceTech
	DSEI
	Electronica (global)
	Drone show
	Ocean Business
Key Account Development	Grow awareness of the Kona family and capabilities within key accounts. Expanding outreach to more engineers and projects.

## MARKETS & APPLICATIONS

### KEY MARKETS

Defense

Aerospace

UAV

Industrial

Robotics

Space

### APPLICATIONS

Power Modules

Satellite sub-systems/payloads

Power Control

Onboard computing systems  
(industrial, aerospace, space)

Power Switches

AC/DC converters

Battery Management

Please provide any application knowledge and information you have on the use of Kona products to Sam Bennett: [sbennett@harwin.com](mailto:sbennett@harwin.com)

Key Links	
Kona POS Reports	<a href="#">Kona POS - 2025-02.xlsx</a>
Kona Opportunity & Case Reports	<a href="#">Kona Open Ops and Cases.xlsx</a>
Sales Force Opportunity Report (filter by part no/brand)	<a href="#">OPPORTUNITIES BY PRODUCT &amp; BRAND   Salesforce</a>
Web Pages	<a href="#">Kona Right-Angle Web Pages</a>

Please note, the POS report covers all existing Kona business. The customers can be used as models for expanding outreach into similar markets and applications of the Kona product range.

**Thank You**

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