

FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY
SOLE SOURCE CERTIFICATION

Requisition Number: 0000225494 Bid # Quote # 98406

In accordance with authority granted under Florida A & M University Regulation 6.005(10) (b), the following documentation is submitted in support of a request to purchase the items(s) listed below that are only available from one vendor.

Vendor: **KUKA**

Account Number: 751702 Cost \$ 36652.00

Item(s): **Pipeline KR 4 R600_VP_PRO_STANDARD**

Justification: (Describe efforts made, vendors contacted, prices quoted, specifications required, availability, compatibility, decision/reason for selection). See attached for justification.

To be used for various applications, including 3D printing and automated construction. Lectures will be dedicated in Construction Materials introducing these advanced construction technologies. Incorporated into student activities like concrete canoe competition or the first-year engineering course. This research will enhance the ability to obtain external funding. In addition the robotic arm can be configured for other applications including precise cutting, automated assembly, and recycling, which will support other research activities in those fields. Sole Source Letter and FAMU Sole Source Form Attached.

I, the undersigned, certify the above to be true and correct to the best of my knowledge and belief.

<u>Qian Zhang,</u>	<u>PhD.,</u>	<u>03/28/2022</u>
Signature	Title	Date

I, the undersigned designee of the Florida A & M University Purchasing Office, as delegated in Regulation 6.005(10) (b), (or a designee delegated the authority as described in, hereby **concur** **do not concur** { } with the above justification and **recommend** **do not recommend** { } the procurement of the above as a sole source. If applicable, the reason(s) for disapproval are:

Mattie Hood
Digitally signed by Mattie Hood
 DN: cn=Mattie Hood, o=FAMU, ou=Procurement Services, email=mattie.hood@famuedu, c=US
 Date: 2022.04.08 14:27:45 -0400

Director of Procurement Services **Date**

I, the undersigned designee, acting for and on behalf of the University President pursuant to the delegation authority **approve** { }, **disapprove** { } the procurement of the above as a sole source. If applicable, the reason(s) for disapproval are:

W. Rebecca Brown 4/13/2022

VP, Administrative and Financial Services **Date**

POSTED FROM 4/18/22 9:00 a.m. TO 4/21/22 9:00 a.m.

DATE TIME DATE TIME

FAILURE TO FILE A PROTEST WITHIN THE TIME PRESCRIBED IN REGULATION 6.005(9) (K), SHALL CONSTITUTE A WAIVER OF THE RIGHT TO PROCEEDINGS.

KUKA



KUKA Robotics Corporation 51870 Shelby Parkway, Shelby Township, MI 48315

February 2, 2022

Assistant Professor Qian Zhang, PhD
Civil & Environmental Engineering
FAMU-FSU College of Engineering
2525 Pottsdamer Street, Suite B316
Tallahassee FL 32310

Ref. Quote # 98406

To Whom It May Concern:

With regard to the above referenced Quote # 98406, this letter is to confirm that KUKA Robotics Corporation (“KUKA”), or its affiliate, is the sole source manufacturer of KUKA robots and associated KUKA products which are distributed in the United States by KUKA. With a view that KUKA desires to offer added benefits to its sole source customers, KUKA agrees to provide its education sole source customers with the following: (i) an additional six (6) month period to its standard warranty for KUKA products and services; and (ii) maintenance services performed only by qualified KUKA employees. These are value added services to sole source customers and evidence of KUKA’s commitment to provide exemplary service to its customers.

If you desire additional information regarding the above, please do not hesitate to contact POC, POC Title, by phone at POC phone number or via email at POC email.


Thank you for your interest in our products.

Sincerely,

DocuSigned by:

96940B6AE8E24D5...

Nate Brazelle
Vice President of Sales - USA

DocuSigned by:

5AE017AFC4EC4B2...

Pjeter Lulgjuraj
Sales Operations Manager

KUKA



KUKA Robotics Corp. | 51870 Shelby Parkway | 48315-1787 Shelby Township | United States of America

Ms. Qian Zhang
FAMU-FSU College of Engineering
2525 Pottsdamer Street
Tallahassee Florida 32311
United States of America

Date: 02.02.22

Quote Number : 00098406

Subject : KUKA Ready2_Educate Pro UL KR4 Cell

Dear Ms. Zhang,

Thank you for your quote request and your interest in the innovative and flexible automation solutions from KUKA.

On the following pages, you will find the appropriate products and services from the World of KUKA Robotics.

If you have any questions about our offer or need further information, please contact us. We look forward to assisting you.

Sincerely,

Allen Jackson
KUKA Robotics Corp.

KUKA Robotics Corporation
51870 Shelby Parkway
Shelby Township, MI 48315
USA
www.kuka.com

Tel. +1 586 465-8800
Fax. +1 866 FAX KUKA
ROBUSSalesOperations@kuka.com

24 Hour Emergency Hotline:
800-459-6691

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Customer: FAMU-FSU College of Engineering
 Quotation Number: 00098406
 Your Contact Person: Allen Jackson
 Phone: +1 (586) 765-2180

Quotation Summary

FAMU-FSU College of Engineering

Quote Number: 00098406	Date of Offer: 02.02.22	Customer Project: Quote 00098406	Validity: 05.03.22
Date of Delivery: 4 weeks w/o Transformer 10 weeks w/ Transformer	Incoterm: DDP	Place Incoterm: Tallahassee, FL	Payment: 30% DP, 70% 30 days after delivery. On Approved Credit <u>Apply for Credit Here</u>
Warranty: 12 months	Currency: USD	General Terms & Conditions: <u>Standard T&C</u>	Letter regarding processing of personal data: <u>Article 13 GDPR</u>

Project Summary

Project		QTY	36,652.00 USD
Configuration 1	Pipeline KR 4 R600_VP_PRO_STANDARD *while supply lasts	1	34,000.00 USD
Configuration 2	Robot Programming	1	2,652.00 USD

Your Contact Persons

Your Contact Person
 Allen Jackson
 Sales Account Manager

Your 2nd Contact Person
 Chris Sage
 Sales Quote Engineer

Mobile : +1 (586) 765-2180
 Email : allen.jackson@kuka.com

Mobile : (586) 201-5789
 Email : chris.sage@kuka.com

24 Hour Emergency Hotline:
 800-459-6691

KUKA Sales Email:
 ROBUSalesOperations@kuka.com

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Customer: FAMU-FSU College of Engineering
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Confidentiality:


This quotation is confidential and intended exclusively for your in-house use. The disclosure of technical details and information regarding prices to persons not belonging to your company requires our prior approval. This obligation to maintain confidentiality remains valid even after the termination of a contract.

Your KUKA Solution

Pos.	Product Image	Description	Art. No.	Reference ID	QTY
Config: Pipeline KR 4 R600_VP_PRO_STANDARD					
Small Robotics					
10		KR 4 R600 The industrial robot KR 4 R600 is a top performer in its class due to its high flexibility and long reach with optimal payload capacity. <ul style="list-style-type: none"> » Maximum payload: 4.63 kg » Maximum reach: 601 mm » Number of axes: 6 » Pose repeatability (ISO 9283): ± 0.015 mm » Protection rating (IEC 60529): IP40 » Mounting position: Ceiling, Desired angle, Floor, Wall Energy supply system routed internally: <ul style="list-style-type: none"> » 4x air » 1x energy supply connection (M12, 8 pins) » 1x Ethernet connection, optional (M12, 8 pins) You can find exclusive content when logged in to myKUKA: https://my.kuka.com/shop#/product/356043 Register and gain access to more detailed information about the product, downloads and much more! Check under https://compose.kuka.com whether the robot meets your requirements for reach and payload.	356043		1
20		RAL9003 Signal white II The manipulator is delivered in the color RAL9003 Signal white II. The color of the base frame varies according to the robot model (exception: KR 3 AGILUS and KR AGILUS-2, supplied with gray base frame).	328431		1
30		Cable set INT+3m 091ST0600 AIR CTR* The internal cable set supplies the robot with electric power and compressed air and is permanently installed in the robot. The interface plate on the robot base allows simple pneumatic installations. In addition, the external connection with a length of 3m between the robot and the control cabinet is included.	362189		1

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Pos.	Product Image	Description	Art. No.	Reference ID	QTY
KUKA Control Unit					
40		<p>KR C5 micro</p> <p>The KUKA KR C5 micro robot controller provides an extremely space-saving controller solution with an outstanding integration density of functions for small robot systems. The software is installed on an internal 60 GByte mass storage device.</p> <p>The following interfaces are supported:</p> <ul style="list-style-type: none"> » Digital 24V inputs/outputs » EtherCAT Extension Bus KEB » Ethernet-based field buses (with the corresponding KUKA software products) <ul style="list-style-type: none"> » smartPAD interface » Safe signals for cell safety » USB interfaces 	12400970		1
50		<p>Wiring diagram layout (KUKA) / IEC</p> <p>The controller is supplied with a circuit diagram with IEC standard circuit diagram symbols.</p>	12400977		1
60		<p>Rated supply voltage 230 V to 240 V</p> <p>The mains supply voltage during operation of the controller is in the range of 230 to 240 volts. If necessary, a switch to the range of 200 to 220 volts can be made via WorkVisual.</p>	12400976		1
70		<p>Systemboard performance 4/4GB M.2</p> <p>The "Performance" system board provides extensive computing power for the robot controller and safety controller and also contains a total of 8 Ethernet interfaces.</p>	342410		1
80		<p>Interfaceboard standard</p> <p>16 24V input signals and 16 24V output signals in NPN or PNP configuration can be connected to the robot controller.</p>	306598		1
90		<p>KR C5 SSD external 60GB</p> <p>With the external SSD, the entire software installation of the controller can be stored on an externally accessible mass storage device.</p>	281418		1
100		<p>CONFIGURATION Parallel-Safety</p> <p>The safe signals for the robot safety controller are connected via discrete 24 V safe signals.</p>	12400973		1
110		<p>Device connection cable 3m NEMA 6-15</p> <p>Connection cable with NA connector according to NEMA 6-20P and with C19</p>	328541		1

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Pos.	Product Image	Description	Art. No.	Reference ID	QTY
		coupling according to EN 60320 for the North American region.			
120		UPS batterypack 24V	337133		1
		In the event of a sudden power failure, the external 24 V battery pack ensures the voltage supply to the controller in order to enable a controlled shutdown without data loss.			
130		Cable 1m CON UPS	334766		1
		24 V UPS connecting cable between controller and battery pack or between two controllers Length: 1 mm			
140		KSS 8.7	381614		1
		<p>KSS 8.7 provides all the functions required for operator control of KR C5-based KUKA robot systems.</p> <ul style="list-style-type: none"> » Only available for KR C5 / KR C5 micro – as a “functional twin” of the KR C4-based KSS 8.6 » Simple planning and configuration due to separation of the engineering and runtime systems » KUKA.smartHMI touch screen user interface with user-friendly operator guidance on the KUKA.smartPAD-2 » Programming with inline forms for the fast, error-free programming of tasks and motion steps » Motion Manager for optimized time response in I/O handling » Improved path planning using new motion blocks » Implementation of all safety-oriented functions by means of integrated safety PLC » Safety functions and safety-oriented communication in discrete dual-channel technology (XG11.1, XG11.2*, XG11.3, XG13) or direct safety-oriented communication with the safety PLC via Ethernet-based protocols (PROFIsafe, CIP Safety or FSoE) » Rights management – operating modes and functions can be configured so that they are only available to those users authorized and trained for them (for KSS 8.5 or higher) » Extended diagnosis of all internal and external EtherCAT bus instances (KSS 8.6 or higher) » Support of up to three linked axes that can be subordinate to a robot kinematic system (Robroot kinematic system) (KSS 8.6 or higher) <p>* if available</p>			
150		KUKA.EthernetSwitch Quad-Port 1.0	381878		1
		Managed Industrial Ethernet Switch with 4x 10/100/1000 Mbit/s RJ45 ports suitable for PROFINET® IO, Fast Start-up, PROFIsafe® Device, PROFIenergy® as well as for EtherNet/IP™ IO, QuickConnect™, CIP Safety™, CIP Energy™.			
160		KUKA.GripperSpotTech 5.0	360403		1
		<p>KUKA.GripperSpotTech 5.0 is a technology package providing an extended range of commands and menus:</p> <ul style="list-style-type: none"> » Control of grippers, fixtures and tools » Monitoring of grippers, fixtures and tools, static and dynamic 			

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Pos.	Product Image	Description	Art. No.	Reference ID	QTY
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» Commands for pneumatic spot welding applications and control of process equipment

Accessories

170		ready2_educate_vp_KR 4	16008989		1
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Modular training cell for instructing robot operators and robot programmers for the KR 4 AGILUS. All components are already assembled, installed and configured. The training cell is thus CE compliant. The installation dimensions are based on a standard 1200x800 mm pallet for simple transportation.

The modular training cell contains the following components and functions: Integrated KR 4 AGILUS incl. KR C5 Micro (excl. robot price, this is configured separately)

- » 200 - 230 V AC, 50/60 Hz, 2 kVA, 2x16 A fuse-protected
- » Compressed air 6 bar (must be provided by the customer)
- » Robot payload 4 kg

Prepared for Vision applications

- » Ethernet + 12 V power supply for the Vision application for smart camera
- » Pneumatic module for controlling a suction gripper

HAN modular media interface on the right-hand application plate for customer-specific applications

- » Compressed air
- » Ethernet
- » I/Os
- » 24 V, 2 A power supply

Two application plates

- » for parallel use of two applications
- » for integration of applications by the customer or integrator

A curriculum tailored to the training cell ensures long-term learning success

- » Three consecutive courses
- » Modular course structure comprising concentrated 45-minute training modules

- » Integrated exercises, learning objective checks and recapitulation

180		Application package pro	374909		1
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Versatile training application tailored to the KR 4 AGILUS can be converted in a few quick steps and without the use of tools thanks to the modular hole pattern

- » Robust application with gripper, pen and "hot wire"
- » Wide range of possible exercises (logic and motion programming in various applications)
- » Adaptable exercises and degree of difficulty

190		KUKA smartPAD-2 10m	291556		1
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The KUKA smartPAD is a hot-pluggable control panel connected via cable (cable length 10m). The teaching process can be carried out intuitively and efficiently with the 8 jog keys or the ergonomic 6D mouse. A large touch screen, KUKA inline forms and context-specific screens make for simple and fast programming. With the KUKA smartPAD, you intuitively and efficiently control the robot or even the entire system.

200		KUKA.Recovery USB Stick 4.0	325090		1
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KUKA

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Pos.	Product Image	Description	Art. No.	Reference ID	QTY
		<p>The KUKA.Recovery USB Stick 4.0 is a bootable 16GB USB stick for industrial use, with preconfigured KUKA.Recovery 4.0 software. It is used for data backup and restoration of the entire hard drive of KUKA robot controllers.</p> <p>Note: This version is only compatible with KR C4 and KR C5 controllers.</p>			
Transport					
210		T+P Terminal KUKA Sub US CA Sea L	97003368		1
		<p>Flat-rate transport charge The flat-rate transport charge applies pursuant to Incoterms 2020.</p>			
220		DDP USA (CyberTech/Quantec +)	123801068		1
Config: Robot Programming					
230		PROG P1 KSS 8 R2 (Robot Programming 1) KRST	123801026	96000566	1
		<p>(5 Day) Robot Programing Training at KUKA Training Facilities: - Shelby Township, MI - Greenville, SC For more information about training classes, please visit https://college.kuka.com/</p>			
Total					36,652.00 USD



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Items with pricing shown under "Our Recommendations" section are not included in above Project Summary pricing and need to be purchased additionally. Recommendation pricing is only valid at time of robot purchase.

Our Recommendations

Pos.	Product Image	Description	Art. No.	Reference ID	QTY	Net Price USD
Config: Optional Vision Package						
240.1		Application package vision Fully integrated vision application » Robust application with camera incl. holder, suction gripper, alignment station and detection surface with inclined plane and pusher » Degree of difficulty and complexity can be increased step by step » Use of the smart camera integrated into the controller » Use of the System Software – free of charge – for offline programming of jobs (camera not required for programming)	378108		1	3,795.00
Config: Optional PLC Package						
250.1		KUKA.HMI Easy 1.0 The KUKA.HMI Easy 1.0 software is used to create simple customized user interfaces on the KR C4. KUKA.HMI Easy 1.0 provides the plug-in for configuration in WorkVisual and the runtime for use on the KR C4.	312345		1	408.69
260.1		Application package PLC PLC teaching panel with 8 digital inputs and outputs.	380852		1	5,386.31
Config: Optional Accessories for R2Educate						
270.1		KUKA.Sim 4.0 E C F pay-once With KUKA.Sim 4.0 E C F pay-once (15 seats) you can simulate your system concepts and program KUKA robots offline. The product enables easy robot programming, the generation of KRL robot programs and exact cycle time analyses. Cycle time analyses are available for KSS 8.5, KSS 8.6 & KSS 8.7. Includes: » Autocad RealDWG import AutoCAD 2000-2019 » CAD import - CATIA V4/V5/V6, SolidWorks, SolidEdge, STEP, JT, etc. » 3D PDF export, AVI HD video export; animation file export » F - Floating license / server license (15 user) Important note: » Proof that the user is a state educational institution or university is required. Hardware/software requirements (minimum): » Windows 10 (64-bit) » min. 8GB RAM » CPU Intel i5 or comparable processor	351796		1	730.00

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Pos.	Product Image	Description	Art. No.	Reference ID	QTY	Net Price USD
		» Free hard disk space min. 15 GB » Graphics card (latest generation) with integrated Intel HD graphics 6000 or comparable » Graphics resolution min. 1280 x 1024 Further information about licensing and license activation can be found in the following KUKA Xpert article: License Management in my.KUKA				
280.1		MEMD mastering set MEMD mastering set Electronic mastering device of small design for mastering the robot axes	208642		1	1,950.00
290.1		Air Compressor for Ready2_Educate Quiet Tank 1/5 Hp Airbrush Compressor W/Air Tank & Hose Provides "Air-On-Demand" with Constant Pressure and Zero Pulsation 1/5 Horsepower this unit delivers more Air Volume (CFM) and Air Pressure (PSI)	123801075		1	150.00
300.1		3kVA Autotransformer 120v-230vac	123801013		1	750.00



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Commercial Conditions

Pricing:

DDP Tallahassee, FL

Payment:

30% DP, 70% 30 days after delivery.

Based on Approved Credit. [Click HERE to apply for credit with KUKA Robotics Corporation!](#)

Delivery period:

10 weeks, commencing on receipt of your written order, clarified in all details. Changes requested by the customer entitle us to amend a contractually agreed delivery date. Observance of the stated delivery periods is subject to the provision that we have ourselves obtained correct and punctual delivery from our suppliers.

Warranty:

12 months From receipt of the goods

Liability:

No liability is accepted for indirect damage, consequential damage or loss (due to defects), such as loss of revenue, utilization or production, capital costs or other costs arising from any interruption of business. Claims for damages resulting from delayed delivery are excluded. Liability in all other cases- on whatever legal grounds- is limited to the value of the order.

The foregoing disclaimer and limitation of liability do not apply: in the case of loss or damage arising from willful or gross negligence, including willful or gross negligence by legal representatives or vicarious agents of KUKA Deutschland GmbH; in the case of loss of life, physical injury or impairment of health; insofar as guarantees are given; and to the extent of application of product liability law. Compensation claims for the loss of stored data are excluded if the loss would have been prevented by correct data backup.

Commitment period:

This quotation is valid until 05.03.22

This quotation is valid subject to a positive credit rating investigation and internal export control verification by KUKA. The prices quoted for accessories and options are only valid in conjunction with an order for a robot at the same time.

Confidentiality:

This quotation is confidential and intended exclusively for your in-house use. The disclosure of technical details and information regarding prices to persons not belonging to your company requires our prior approval. This obligation to maintain confidentiality remains valid even after the termination of a contract.



Customer: FAMU-FSU College of Engineering
 Quotation Number: 00098406
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Ordering Instructions

E-mail order to:	Fax order to:	Mail order to:
ROBUSSalesOperations@kuka.com	1-866-FAX-KUKA	KUKA Robotics Corporation 51870 Shelby Parkway Shelby Township, MI 48315, USA

Orders must include: Delivery terms, payment terms, and refer to the Quotation Number on this document.

Note: New customers must file commercial credit application; please ask Allen Jackson for details.

24 Hour Emergency Hotline: 800-459-6691

MY.KUKA.COM CUSTOMER PORTAL

my.KUKA: Your digital customer portal

With my.KUKA, customers can view robot data, order spare parts, manage licenses and more. my.KUKA combines numerous self-service functions into one user-friendly interface, providing access to information and individual support for a customer's robot application at any time and from anywhere.



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