

7. Mechatronics Engineering Lab Equipment

SR No	DESCRIPTION OF EQUIPMENT (TECHNICAL DETAILS)
1	2
1	Modern Control System Trainer
2	PLC (6ES7215-1AG40-0XB0) (Specification: SIMATIC S7-1200, CPU 1215C, compact CPU, DC/DC/DC, 2 PROFINET ports, onboard I/O: 14DI 24V DC, 2AO 0-20 mA DC, Power Supply: DC 20.4-28.8V DC, Program/data memory 125kB)
3	Analog Module (6ES7234-4HE32-0XB0) (Specification: SIMATIC S7-1200, analog I/O SM1234, 4AI/2AO, +/-10V, 14-bit resolution or 0(4)-20mA, 13-bit resolution)
4	PLC Communication Board (6ES7241-1CH30-1XB0) (Specification: SIMATIC S7-1200, Communication Board CB 1241, RS485, terminal block, supports Freepoint)
5	HMI Module (6AV2123-2JB03-0AX0) (Specification: SIMATIC HMI, KTP900 Basic, Basic Panel, Key/touch operation, 9" TFT display, 65535 colors, PROFINET interface, configurable from WinCC Basic V13/STEP-7 Basic V13, contains open source software, which is provided free of charge see enclosed CD)
6	IoT Module (6ES7647-0BA00-0YA2) (Specification: SIMATIC IOT2050, 2x Gbit Ethernet RJ45; Display port; 2x USB2.0, SC card slot, 24V DC industrial power supply)

7.Mechatronic Engineering Lab Equipment

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7	<p>Ethernet Switch (6GK5005-0BA00-1AB2)</p> <p>(Specification: SCALANCE XB005 unmanaged industrail Ethernet Switch for 10/100 Mbit/s; for setting up small star and line topologies; LED diagonistics, IP20, 24V AC/DC power supply, with 5x 10/100 Mbit/s twisted pair ports with RJ45 sockets; manual available as a download)</p>
8	<p>Ethernet Plug-In Connector (6GK1910-1BB10-2AA0)</p> <p>(Specification: Industrail Ethernet FastConnect RJ45 plug 189 4x2, RJ45 plug-in connector; CAT6A; (10/100/1000/10000 Mbit/s) with rugged metal enclosure and FC connection system, for IE FC Cable 4x2 (AWG24); 180deg cable outlet)</p>
9	<p>Power Supply</p> <p>(Specification: SITOP PSU100S 24V/5A Stabilized power supply input: 120/230V AC, output: 24DC/5A)</p>
10	<p>Standard Cable (6XV1840)</p> <p>(Specification: IE FC TP Standard Cable GP 2x2 (Profinet Type A), CAT 5E, bus cable 4 wire, shielded special configuration for quick assembly to IE FC RJ45 plug 2x2)</p>
11	<p>Hollow Frame (W=450 x H=660 x D= 375)mm</p> <p>(Specification: rainig Kit Frame Structure with Hollow Galvanised)</p>

7.Mechatronic Engineering Lab Equipment

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12	Raspberry Pi 4 Model B 8GB RAM Heat Sink, Power Supply for Raspberry Pi 4B, Case, Cooling Fan, 4K HD HDMI Cable, 15.6inch Universal Portable Touch Monitor, 1920×1080 Full HD, IPS, HDMI/Type- C, SAMSUNG EVO MicroSD card (512GB) 5 cards + SAMSUNG EVO MicroSD card (64GB) 5 cards
13	Arduino Starter Kit
14	Arduino board (Mega) 2560 REV3, Cable
15	Power Supply Pynq Z1, 12V Cable, SD card (32GB), USB A to Micro-B Cable, Pynq-Z1 Covers, Cat5e Ethernet Cable
16	display Module OLED 128x128, General 1.5inch
17	Flexible Assembly System Screw insertion station with Siemens PLC - SMC - FAS-212
18	Flexible Assembly System Pallet Transfer Station with Siemens PLC - SMC - FAS-220

7.Mechatronic Engineering Lab Equipment

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19	<p>Vision Sensor (FQ2) Training Kit</p> <p>Vision Sensor (FQ2-S20050F)</p> <p>Touch Finder (FQ2-D30)</p> <p>FQ Ethernet Cables</p> <p>I/O Cables</p> <p>Power Supply for Sensor</p> <p>Fiber Optic Amplifier</p> <p>Fiber Optic Connector</p> <p>Fiber Optic Cable</p> <p>Training Kit</p>
20	<p>Basic Electro-Pneumatics Trainer</p> <p>DL 8115EPB included Noiseless compressor DL 8110SLZ</p> <p>Spec;</p> <p>DL 8110P11:Slide valve , filter - regulator with manometer and distributor</p> <p>DL 8110P11: Simple effect (SE) magnetic cylinder with retracted piston rod and flow micro-regulator</p> <p>DL 8115EP01:3/2 electro-pneumatic valves,1 NC (YES) and 1 NO (NOT)</p> <p>DL 8115EP02:5/2 electro-pneumatic valves, bistable (1) and monostable with</p> <p>mechanical spring (1) with filters</p> <p>DL 8115EP03: Double effect (DE) magnetic cylinder with flow micro regulator</p> <p>(2),reed sensors (2) and photo - electric sensor</p>

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21	PID Controller Controllers-PID Including Laboratory Software DL ACTSW Data acquisition / control unit DL 1893 Experiment : Controller P,I,D,PI,PD,PID
22	Modern Control Systems Trainer - Microprocessor - DC Servo System,- Pump systems - Sensors,- compatible Software package
23	Interactive Touch Screen System - Brand Name : i-SMART Touch - Model : IST65B - Display Size : 65 inch - Glass: 4mm Antil Glared glass - Touch Type : Inferred - Response Time : 6 ms - Touch Points : 20 Points - Resolution : 3840x2160 (4K) - Ratio : 16:9 - Frame Rate : 60 Hz - Viewing Angle : 178° - Android : 8.0 - RAM : 2 GB - ROM : 8 GB

7.Mechatronic Engineering Lab Equipment

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24	<p>Omron Servo Training Ether CAT Network Application Power Supply Unit 100-240 VAC,50/60Hz ,Omron PLC (NX1P2),Omron HMI 5 inch IO-Link Master Unit (NX), System Units (NX-PF), Omron EtherCAT cable 1S Servo System(R88D-1SN,R M-1Drive/Motor) ,Switch and lamp,Training kit base Case, Model-R 88-NB5-SQ</p>
25	<p>Omron Vision Sensors (FQ2)Traing Kit Vision Sensor Omron (FQ2-S20050F),Touch Finder Omron(FQ2-D30), FQ Ethernet Cables,I/O Cables,Power Supply for Sensor,Fiber Optic AmplifierFiber Optic Connector,Fiber Optic Cable,Training Kit Model-MVS-FQ2-S200</p>

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26	<p>Sample Configuration 1; (TP 501 + TP 502)</p> <p>1. Basic Hydraulics Training Equipment Set</p> <p>TP 501 Components Pressure relief valve 2-way flow control valve One-way flow control valve The valve is closed by a locking cone Non-return valve 4/2-way hand lever valve, spring return 4/3-way hand lever valve, relieving mid-position 4 /3-way hand lever valve, closed mid-position Shut-off valve Differential cylinder 16/10/200 with Weight, 9 kg for cylinder Hydraulic motor T-distributor 4-way distributor with pressure gauge Pressure gauge, Flow sensor</p> <p>TP 502 Components Pressure relief valve, compensated 3-way pressure reducing valve Flow dividing valve 2/2-way stem actuated valve, convertible Diaphragm accumulator with shut-off Differential</p>

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27	<p>Basic Electrohydraulic Training Equipement Set TP 601</p> <p>Components</p> <p>Pressure relief valve</p> <p>2-way flow control valve</p> <p>One-way flow control valve</p> <p>Non-return valve</p> <p>4/2-way solenoid valve, spring return</p> <p>4/3-way solenoid valve, closed mid-position 4/2-way double solenoid valve, detenting Shut-off valve</p> <p>Weight, 9 kg, for cylinder</p> <p>Differential cylinder 16/10/200 with cover Mounting kit for cylinders</p> <p>T-distributor</p> <p>4-way distributor with pressure gauge</p> <p>Pressure gauge, pressure switch, electronic</p>

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28	Equipment set TP 602 – Advanced level Time relay, two-fold Relay, three-fold Preset counter, electronics Diaphragm accumulator with shut-off Hydraulic motor 4/3-way solenoid valve, relieving mid- position Proximity sensor, inductive, M12 Emergency Stop switch in the form of an T-distributor Non return valve, delockable Pressure relief valve, compensated We must already have the basic hydraulics package such as configuration TP 601.

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29	<p>Basic Hydraulics Training Equipement Set</p> <p>TP 501 Components</p> <p>Pressure relief valve</p> <p>2-way flow control valve</p> <p>One-way flow control valve</p> <p>The valve is closed by a locking cone</p> <p>Non-return valve</p> <p>4/2-way hand lever valve, spring return</p> <p>4/3-way hand lever valve, relieving mid-position</p> <p>4/3-way hand lever valve, closed mid-position</p> <p>Shut-off valve</p> <p>Differential cylinder 16/10/200 with</p> <p>Weight, 9 kg for cylinder</p> <p>Hydraulic motor</p> <p>T. distributor</p>
30	<p>MV-541 Motor Speed and Position Training System</p> <p>(model, which houses the sensors, and a frame cabinet, which contains the set of modules for signal conditioning)</p>
31	<p>DAQ-601 Data Acquisition and control module</p> <p>(MATLAB-SIMULINK, through the Data Acquisition Toolbox, and LABVIEW environment)</p>
32	<p>Logic module with CMR module and Analog IO logo 8(12/24 RCE)</p> <p>-24V Din Ray Power Supply</p>

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33	<p>Power Electronic Trainer</p> <p>Model No:CEE 2026(DC power Supply,Four Digital Meter Pulse Generator Circuit)</p>
34	<p>Electropneumatics Training Equipment Set(TP-201)</p> <p>Specification:Signal input, Electrical relay, three fold, limit switch Electrical left actuated,limit switch Electrical right actuated,Proximity sensor, optical , M12Proximity sensor , electronic with cylinder mounting2*3/2 way solenoid valve 5/2 way solenoid valve with LED5/2 way doubled solenoid valve with LEDpressure sensor with displayone-way flow control valveSingle Acting CylinderDouble Acting CylinderStart up valve with filter control valve</p> <p>Manifold , Plastic tubing</p>

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35	<p>Basics Hydraulics Training Equipment Set (configuration 2) (501+601)</p> <p>TP501 components: Pressure relief valve, 2 way flow control valve, one way flow control valve, non return valve, 4/2 way hand lever valve, 4/3 way hand lever valve, relieving mid, 4/3 way hand lever valve, closed mid, shut off valve, Differential cylinder 16/10/200 with weigh 9kg for cylinder, hydraulic motor, T distributor , 4 way distribution with pressure gauge, pressure gauge , flow sensor</p> <p>TP-601 Components: Pressure relief valve, 2 way flow control valve, one way flow control valve, non return valve, 4/3 way solenoid valve, 4/3 way solenoid valve , 4/2 way doubled solenoid valve, shut off valve, weight 9kg for cylinder, Differential cylinder 16/10/200 with cover</p>
	<p>Mounting kit for cylinder</p> <p>T- distributor, 4 way distributor</p> <p>Pressure gauge, Pressure Switch</p> <p>Relay three Fold, Signal input electrical,</p> <p>Limit Switch Electrical left actuated</p> <p>Limit Switch Electrical right actuated</p> <p>Proximity sensor Electronic</p>

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36	<p>Electrohydraulic Equipment Set- Advanced Level-TP 602 (configuration4)</p> <p>Time Relay , two-fold, Relay , three fold, preset counter, Accumulator, Hydraulic motor, 4/3 way solenoid valve, Proximity sensor, inductive , M12 Emergency stop switch, T distributor , non- return valve delockable, pressure relief</p>
37	<p>Depth Camera D455</p> <p>Intel® RealSense™</p> <p>Use Environment: Indoor/Outdoor Image Sensor</p> <p>Technology: Global Shutter, 3µm × 3µm pixel size</p> <p>Recommanded Range: 0.4–6 meters[1]</p> <p>Inertial measurement unit: Bosch BMI055</p> <p>Depth Technology: Active IR Stereo</p> <p>Minimum Depth Distance (Min-Z): 0.4 m</p> <p>Maximum range: Approx. 20 meters[2]</p> <p>Depth Field of View (FOV): 86° × 57° (±3°)</p> <p>Depth Output Resolution: Up to 1280 × 720</p> <p>Depth Frame Rate: Up to 90 fps</p> <p>RGB Sensor Resolution: 1280 × 800</p> <p>RGB Frame Rate: up to 90 fps</p> <p>RGB sensor Technology: Global shutter</p>
	<p>Form Factor: Camera Peripheral</p> <p>Length × Depth × Height: 124 mm × 26 mm × 29 mm</p> <p>Connectors: USB-C* 3.1 Gen 1* Mounting Mechanism:</p> <ul style="list-style-type: none"> - One 1/4-20 UNC thread mounting point. - Two M4 thread mounting points. - Tripod

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38	<p>Jetson Nano Board</p> <p>GPU: NVIDIA Maxwell architecture with 128 NVIDIA CUDA® cores</p> <p>CPU: Quad-core ARM Cortex-A57 MPCore processor</p> <p>Memory: 4 GB 64-bit LPDDR4, 1600MHz 25.6 GB/s</p> <p>Storage: 16 GB eMMC 5.1</p> <p>Video Encode: 250MP/sec</p> <p>1x 4K @ 30 (HEVC)</p> <p>2x 1080p @ 60 (HEVC)</p> <p>4x 1080p @ 30 (HEVC)</p> <p>4x 720p @ 60 (HEVC)</p> <p>9x 720p @ 30 (HEVC)</p> <p>Video Decode: 500MP/sec</p> <p>1x 4K @ 60 (HEVC)</p> <p>2x 4K @ 30 (HEVC)</p>
	<p>Camera: 12 lanes (3x4 or 4x2) MIPI CSI-2 D-PHY 1.1 (1.5Gb/s per pair)</p> <p>Connectivity: Gigabit Ethernet, M.2 Key E</p> <p>Display: HDMI 2.0 and eDP 1.4</p> <p>USB: 4x USB 3.0, USB 2.0 Micro-B</p> <p>Others: GPIO, I2C, I2S, SPI, UART</p> <p>Mechanical: 69.6 mm x 45 mm</p> <p>260-pin edge connector</p>

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39	<p>Tamiya 1/10 TT02 Honda Acura NSX w/ESC Motor EP Car Kit #58634</p> <p>Length: 472mm</p> <p>Wheelbase:257mm Tamiya 1/10 TT02 Honda Acura NSX w/ESC Motor EP Car Kit(1Set)</p> <p>ESCMotor: 540-Brushed Type (1 pc)Wheel (4 pcs)</p> <p>Tire (4 pcs)Clear Body (1 Set)Decals Instruction</p>
40	<p>Raspberry Pi 4 Model B -</p> <p>Broadcom BCM2711, Quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz</p> <p>-2GB, 4GB or 8GB LPDDR4-3200 SDRAM (depending on model)</p> <p>-2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, Bluetooth 5.0, BLE</p> <p>-Gigabit Ethernet</p> <p>-2 USB 3.0 ports; 2 USB 2.0 ports.</p> <p>-Raspberry Pi standard 40 pin GPIO header (fully backwards compatible with previous boards)</p> <p>-2 × micro-HDMI ports (up to 4kp60 supported)</p> <p>-2-lane MIPI DSI display port</p> <p>-2-lane MIPI CSI camera port</p> <p>-4-pole stereo audio and composite video port</p> <p>-H.265 (4kp60 decode), H264 (1080p60 decode, 1080p30</p>

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	<ul style="list-style-type: none"> -Micro-SD card slot for loading operating system and data storage -5V DC via USB-C connector (minimum 3A*) -5V DC via GPIO header (minimum 3A*) -Power over Ethernet (PoE) enabled (requires separate PoE HAT) -Operating temperature: 0 – 50 degrees C ambient * A good quality 2.5A power supply can be used if downstream USB peripherals consume less than 500mA in
41	<p>Laptop Computer</p> <p>Intel Core i7 11th generation,Ram 8GB DDR4 Memory,1TB Hard Disk</p> <p>Nvidia Geforce MX330 2GB Graphics,15.6" FHD Display</p> <p>USB 3.0 (Dual), 3.1, HDMI, VGA, Card reader,AX + BT5,48Wh battery</p>
42	<p>PLC Trainer Kit</p> <p>S7-1200 Series CPU 1215C DC/DC/DC</p> <p>SITOP Power Supply (5A)</p> <p>SIMATIC HMI KP900 Comfort, Comfort Panel</p> <p>S7-1200 PLC CB 1241 RS 485 communication board</p> <p>SIEMENS Official Training</p> <p>TIA Portal Software</p>

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43	<p>Three Phase Induction Motor</p> <p>Model Y90S-4</p> <p>Power 1.5HP(1.1KW)</p> <p>Voltage 380 VAC</p> <p>Frequency 50Hz</p> <p>Speed 1390 r/min</p> <p>Max; current 2.85A</p> <p>Connection Y(star)</p> <p>IP class IP55</p> <p>Ins; class F</p> <p>Output shaft diameter 24mm</p> <p>Foothole 140-100mm</p> <p>Dimension 360-205-280 mm</p> <p>Weight 21.4 kg</p>
44	<p>Power Electronic Trainer</p> <p>DC Power Supply : a) 0-10V/50mA b) 0-25V/50mA c) +12V/500mA d) +5V/500mA</p> <p>Brand : CROWN</p> <p>Model : CEE 2026</p> <p>Pulse Generator Circuits: a) Variable duty cycle pulse generator for chopper circuits. b) 1KHz +ve & -ve edge pulse generator</p> <p>Four Digital Meter : a) 19.99VDC b) 19.99V-199.9V DC c) 199.9uA - 19.99mA DC d) 1.999mA - 199.9mA DC</p>

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45	<p>Analog Electronic Lab Trainer</p> <p>Component : One PNP Transistor CK-100 and one NPN Transistor CL-100. One FET BFW10.</p> <p>Brand : CROWN</p> <p>Model : CEE 2020</p> <p>One Step Down Transformer : 9-0-9V</p> <p>Five Potentiometers : 330W, 1K, 4.7K, 10K, 47K</p> <p>DC Power Supply: +12V Regulated, +5V Regulated, 10V Variable, 0-5V Variable.</p>
46	<p>Equipment Set set TP111: Basic Closed loop Pneumatics Training</p> <p>Tender Specification</p> <p>Basic Closed Loop Pneumatic Training Set</p> <p>The Equipment set must include;</p> <p>PID controller</p> <p>Comparator</p> <p>Status Controller</p> <p>5/3 way Solenoid valve.mid position closed</p> <p>5/3 way Proportional valve</p> <p>Linear potentiometer</p> <p>connecting cable and mounting accessories</p> <p>Ruler</p> <p>Weight 5kg for linear drive</p> <p>Shock absorber</p>

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47	Uarm Swift Pro (Robot arm) Size: 150 x 140 x 281mm Weight: 2.2kg Degrees of Freedom: 4 Joint:Gearbox + Stepper Repeatability: 0.2mm Feedback:12 bit encoder Payload: 500g Working Range:50–320mm Max Speed :100 mm/s Connection:USB / Bluetooth 4.0 Motherboard: Arduino Mega 2560 Power Adapter:nput 100–240v 50/60 Hz Output 12v / 5a 60w Working Temperature: 0°C–40°C

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48	<p>AI Nvidia LiDar RoboEX (Han Back)</p> <p><i>Hardware Specifications:</i></p> <p>Nvidia Jetson TX2, RoboEX 3WD</p> <p><i>LiDAR Specifications:</i></p> <p>Distance Range 0.15–6 TBD, Angular Range 0–369 Degree</p> <p>Distance Resolution <0.5mm, Angular Resolution <=1Degree</p> <p>Sample Duration 0.5ms, Sample Frequency >=2000Hz</p> <p><i>Software Specifications:</i></p> <ol style="list-style-type: none"> 1. AI (Tensor Flow, Keras) 2. Nvidia Jetson TX2 (OS,CUDA,cuDNN, Multimedia) 3.RoboEX 3WD (AndroX StudioTM) <p><i>Training Contents:</i></p> <ol style="list-style-type: none"> 1. Deep Learning through AI Nvidia RoboEX 2. Robot Control with AI Nvidia RoboEX 3. LiDAR with AI Nvidia LiDAR RoboEX
49	<p>IoT Smart Pioneer (Han Back)</p> <p><i>Hardware Configuration and Specification:</i></p> <p>Gateway(Resberry Pi3), HBE-ADK-2560, BLE Module, Sensor Module, Base</p> <p>14"TFT LCD, keyboard, Mouse, USB Hub-3ports or more, Jumper Cable</p> <p><i>Software Specifications:</i></p> <ol style="list-style-type: none"> 1.Gateway (O/S, Camera Program, Server Program) 2.BLE Module(F/W IDE, Communication, Function) 3.ADK-2560(F/W IDE, Communication, Function) 4. Cloud (Minutes Cloud Platform)

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50	<p>QDrone (QUANSER)</p> <p>Dimensions: 40 x 40 x 15 cm, Weight (with batteries:) ~1000 g Max Payload: ~300 g, Power: 3S 11.1V LiPo (3300mAh) with XT60 connector</p> <p>Flight time: ~11 minutes for hover per battery charge</p> <p><i>Onboard Computer:</i></p> <p>(1) Intel Aero Compute Board (powered by a quad-core Intel Atom processor), (2) Quad-core 64-bit 2.56 GHz processor, (3) 4 GB LPDDR3-1600 RAM</p> <p>Expandable I/O: PWM (8x), UART (2x) , SPI (3x SS pins), I2C, ADC (4x), Encoder Input (3x), CPU GPIO (5x)</p> <p>Cameras: Intel Aero Vision Accessory Kit Intel RealSense(R200): Depth sensing (3-4 metre range), Vision (640x480 @ 60 FPS or 1080p @ 30FPS)</p>

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51	<p>QUANSER Qbot 2 for QUARC</p> <p>Platform: 2-wheeled Kobuki base from Yujin Robot</p> <p>QBot 2 diameter: 35 cm, QBot 2 height (with Kinect mounted): 27 cm</p> <p>Maximum linear speed: 0.7 m/s, Available payload: App. 4.5 kg, Battery life: 3 hours</p> <p>On-board computer: Gumstix DuoVero Zephyr with integrated 802.11 b /g/n WiFi</p> <p>QUARC maximum sample rate: 1,000 Hz, Camera resolution: 640 x 480, Depth sensing: 11 bit</p> <p>Depth sensor range: 0.5 – 6 m</p> <p>On-board sensors: (1)3 digital bump sensors, 2 wheel encoders</p> <p>(2)3 digital wheel drop sensors, 2 programmable LEDs</p> <p>(3)3 cliff sensors, 3 digital butt ons</p> <p>(5)2 analog motor current sensors, 1 battery voltage sensor</p> <p>(6)1 Z-axis angle measurement (heading), 1 Kinect® RGBD sensor</p> <p>Additional I/O channels available:(1) 8 reconfigurable digital I/O channels, 1 SPI bus channel</p> <p>(2) 4 analog input channels, 1 I2C serial bus channel, (3) 2 encoder input channels</p> <p>(4) 4 PWM output channels, (5) 1 UART serial port (in terface 3.3 V serial de vice)</p>

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52	<p>SIMATIC Field PG M6 (M6 Advanced)</p> <p>Processor: Intel® Core™ i7-8850H (8th generation, 6 cores, 12 threads), 9 MB Cache, 2.6 GHz (up to 4.3 GHz with turbo boost technology)</p> <p>Memory: 32 GB DDR4-SDRAM, 2,666 MHz</p> <p>Solid State Drive: 2 TB (SATA 6 GB/s)</p> <p>Graphics: Intel® UHD Graphics 630, 4K Support (4,096 x 2,304 Pixel @ 60Hz), 3 monitors, different contents *)</p> <p>Display: 15.6" wide screen, 300 cd</p> <p>Resolution: Full-HD (1,920 x 1,080 Pixel)</p> <p>Optical Drive: Dual layer multi standard DVD – RW</p> <p>Status LED: 8 LEDs that can be read with the display cover opened or closed</p>
53	<p>Comfort Panel</p> <p>SIEMENS 6AV2124-0MC01-0AX0</p> <p>SIMATIC HMI TP1200 Comfort, , Touch operation, 12" widescreen TFT display, 16 million colors, PROFINET interface,</p> <p>MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0 (Microsoft Support included Security updates discontinued) configurable from WinCC Comfort V11.</p>
54	<p>SIF 414 - IAV- Mobile Robot</p> <p>Controlled through a web application (IAV Easy Interface)</p>

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55	<p>PLC 40 IO Training Kit</p> <p>Omron PLC CP1L 40 IO(24 IN/16 OUT) Relay Output (CP1L-M40DR-A), RS232C Port (CP1W-CIF01), RS232C Cable 9-PIN 2M(PLC-PC) (XW2Z-200T), Model: CP1L-M40-DR, Omron PLC Training Reference Text Book, CP1L 40 I/O</p>
56	<p>3. NI Digital Electronic Circuit (NI ELVIS Main Board,NI Multisim - Digital Electronics Training Board)</p>
57	<p>4. NI Electronics Circuit Training (NI ELVIS Main Board,NI Multisim - Electronics Training Board,)</p>
58	5.Arduino uno ATmega328P ?
59	6.Arduino Mega 2560R3 board ?
60	<p>7. Analog Multimeter</p> <p>Drop shock proof meter, Null(zero center) meter $\pm 5 / \pm 25$ in DCV, High resistance up to 200MΩ with low voltage, Protective body cover, Capacitance, dB, Li measurement</p>
61	<p>8.Pick and Place Pneumatics Training Kit Controlled With Omron PLC & HMI</p>
62	<p>9. Modern Control Systems Trainer</p> <ul style="list-style-type: none"> - Microprocessor - DC Servo System - Pump systems - Sensors