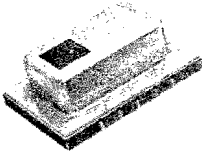
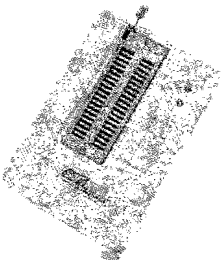
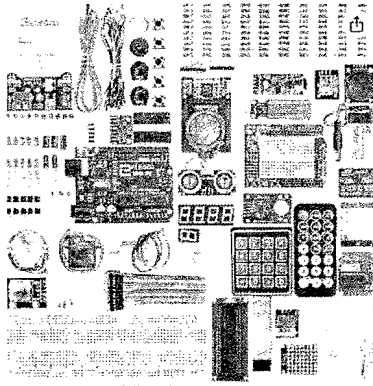




National Centre for Physics
Detailed specification Document

A-223

S#	Project M4S2AD: Mutli-Modality & Multi-Model Surveillance System for Anomaly Detection component list (POC-PCC1)			
	Title of the Project	Specification	A/U	QTY
1.	Panasonic's Grid-EYE® Wide Angle Type Infrared Array Sensor	<p>Specs and Features:</p> <ul style="list-style-type: none"> ● Digital output (I²C) = thermal presence, direction, and temperature values. ● Number of Pixel: 64 (Vertical 8 x Horizontal 8 Matrix) ● Operating Voltage (DC) (V): 5.0 ● Viewing angle (°): 90  <p>Accessories:</p> <ul style="list-style-type: none"> ● Connector cables ● Mounting brackets ● Heat-resistant enclosures ● Dust protection covers ● Calibration toolkits ● EMI shielding components ● Thermal test pads ● Quick start guide ● Screw sets and fixing tools ● Power adapters (5V compatible) <p>Warranty: OEM</p> <ul style="list-style-type: none"> ● Or Equivalent to Above Specs 	Nos	1
2.	SOFI SP8-A High Speed Universal EEPROM Flash Bios Programmer	<p>Specs and Features:</p> <ul style="list-style-type: none"> ● SOFI SP8-A High Speed Universal Programmer ● Support Thousands of chips (Read, Write Backup) ● Supported Devices list (all types 25,24,93, BR90, BR93 series FLASH and eeprom) ● Supports up to more than 5400 kinds of devices ● Uses a USB interface. ● software and hardware design <ul style="list-style-type: none"> ○ Reasonable ○ Friendly man-machine interface  <p>Accessories:</p> <ul style="list-style-type: none"> ● Connecting wires ● Connecting Modules <p>Warranty: OEM</p> <ul style="list-style-type: none"> ● Or Equivalent to Above Specs 	Nos	1



Specs and Features:

UNO R3
Project Most
Complete
Starter Kit
(ATmega328
P
Microcontrol
ler)

- **UNO R3 Board (ATmega328P Microcontroller)**
 - Input Voltage (recommended): 7-12V
 - Digital I/O Pins: 14 (6 PWM outputs)
 - Analog Input Pins: 6
 - Flash Memory: 32 KB
 - Clock Speed: 16
- **MHzSensors and Modules**
 - **DHT11 Temperature and Humidity Sensor**
 - **IR Remote Control and Receiver Module**
 - **Ultrasonic Distance Sensor (HC-SR04)**
 - **MQ-2 Gas Sensor**
 - **Passive Infrared (PIR) Motion Sensor**
 - **LDR Light Sensor Module**
 - **Sound Sensor Module**
 - **Joystick Modul**
- **Displays:**
 - **LCD1602 Module** (16x2 Character Display with I2C interface)
 - **7-Segment Display** (Single and Four-Digit versions)
 - **LED Matrix Module**
- **Actuators**
 - Servo Motor
 - Stepper Motor with ULN2003 Driver Board
 - Small DC Motor with Driver Module
- **Communication and Input**
 - RFID Reader Module with Tags
 - Bluetooth Module (HC-05 or HC-06)
 - Keypad (4x4)
- **Miscellaneous Components**
 - Breadboard
 - Jumper Wires (male-male, male-female, female-female)
 - LEDs (Red, Green, Blue, Yellow, and RGB)
 - Resistors (various values)
 - Capacitors (various values)
 - Diodes and Transistors
 - Push Buttons
 - Buzzer Module
 - Potentiometer
 - Relay Module
 - Power Supply Module
 - Thermistor
- **Storage and Packaging**

- Plastic Storage Box

Accessories:

- USB Cable (for programming and power)
- 9V Battery and Battery Clip (for portable power)
- Power Adapter (7-12V)
- Heat Shrink Tubes (for secure wiring)
- Screwdriver (small size for module assembly)
- Dupont Wire Crimping Tool
- Electrical Tape
- Soldering Kit
- Soldering Iron
- Solder Wire
- Flux
- Soldering Stand
- Desoldering Pump
- Multimeter (for debugging circuits)
- Prototype PCB Board

Safety Equipment:

- Anti-Static Wrist Strap
- Safety Goggles
- Wi-Fi Module (ESP8266) for IoT projects
- Mini Breadboard for compact designs
- Battery Holder for AA batteries
- Magnifying Glass or Lamp for detailed work

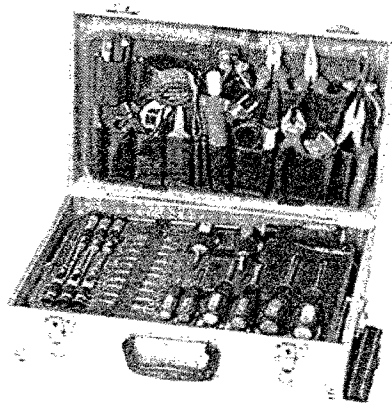
Warranty: OEM

- Or Equivalent to Above Specs

4.

Nos

1



Pro'sKit PK-15307EI Electronics Tool Kit

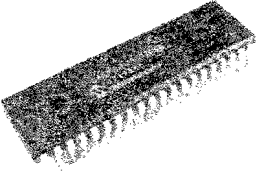
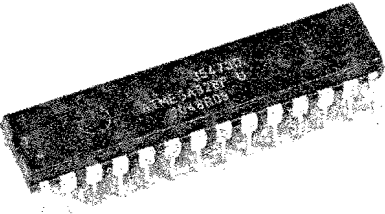
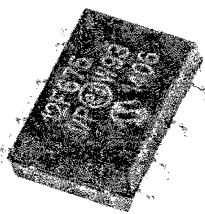
Specs and Features:


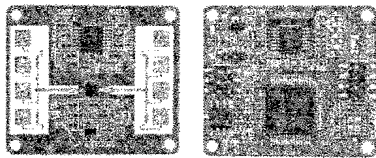
- Nose Plier: 135 mm
- Diagonal Cutting Plier: 110 mm
- Dual Color Lineman's Plier: 210 mm
- Dual Color Long Nose Plier: 165 mm
- Adjustable Wrench: 6"
- Dual Color Side Cutting Plier: 165 mm
- Needle File Set: 5 pieces
- Ceramic Soldering Iron: 110V
- Digital Multimeter: 3-1/2 Compact
- Measuring Tape: 3M/10FT
- Solder Core: 63% SN
- Hex Key Set: 7 pieces
- Wire Stripper Cutter

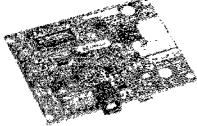
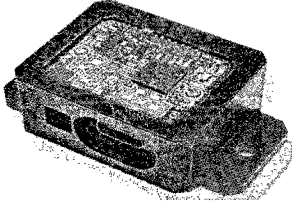
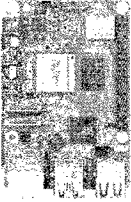
- Utility Knife: 3 blades, self-loading
- All-Purpose Snip
- Solder Aid Tools
- Desoldering Pump
- Electronic Combination Wrench: 10 pieces
- Flux Bottle: 2 pcs/pack
- Blow Brush: Ø62mm
- IC Extractor
- Slip Joint Plier: 154 mm
- Screwdrivers:
 - 3.0 x 75 mm
 - 1 x 75 mm
 - 5.0 x 75 mm
 - 1 x 75 mm
 - 6.0 x 100 mm
 - 2 x 100 mm
 - 2 x 250 mm
 - 6.0 x 40 mm
 - 2 x 40 mm
 - 2.0 x 50 mm
 - 2.4 x 75 mm
 - 3.0 x 100 mm
 - 1 x 50 mm
 - 1 x 75 mm
 - 1 x 100 mm
- Nose Plier: 135 mm
- Diagonal Cutting Plier: 110 mm
- Dual Color Lineman's Plier: 210 mm
- Dual Color Long Nose Plier: 165 mm
- Adjustable Wrench: 6"
- Dual Color Side Cutting Plier: 165 mm
- Needle File Set: 5 pieces
- Ceramic Soldering Iron: 110V
- Digital Multimeter: 3-1/2 Compact
- Measuring Tape: 3M/10FT
- Solder Core: 63% SN
- Hex Key Set: 7 pieces
- Wire Stripper Cutter
- Utility Knife: 3 blades, self-loading
- All-Purpose Snip
- Solder Aid Tools
- Desoldering Pump
- Electronic Combination Wrench: 10 pieces
- Flux Bottle: 2 pcs/pack
- Blow Brush: Ø62mm
- IC Extractor
- Slip Joint Plier: 154 mm
- Soldering Tip Cleaner
- Fine Tip Straight Tweezer
- Utility Component Storage Box
- Hobby Vise
- Top Pallet for PK-15307
- Pallet for PK-15307
- Aluminum Frame Tool Case with 1 Pallet

Accessories

- Soldering station or mat (for soldering tools)
- Multimeter probes and leads
- Replacement soldering iron tips

		<ul style="list-style-type: none"> ● Organizer for small tools and components ● Heat-resistant gloves (optional for soldering safety) ● Safety goggles (for cutting and soldering tasks) <p>Warranty: OEM</p> <ul style="list-style-type: none"> ● Or Equivalent to Above Specs 		
5.	Microchip: Microcontrol ler 256 Bytes EEPROM Self Programmin g Parallel Slave Port - PIC16F877A	 <p>Specs and Features:</p> <ul style="list-style-type: none"> ● CPU 8-bit ● PIC Number of Pins 40 ● Operating Voltage (V) 2 to 5.5 V ● Number of I/O pins 33 ADC ● Module 8ch, 10-bit Timer Module 8-bit(2), 16-bit(1) Comparators 2 DAC Module Nil Communication Peripherals UART(1), SPI(1), I2C(1), MSSP(SPI/I2C) ● External Oscillator Up to 20Mhz Internal Oscillator <p>Warranty: OEM</p> <ul style="list-style-type: none"> ● Or Equivalent to Above Specs 	Nos	1
6.	IC Chip ATMEGA32 8P-PU	 <p>Specs and Features:</p> <ul style="list-style-type: none"> ● Microcontroller:ATMEGA328 ● MCU: 8BIT ● FLASH : 32KB ● PCB: ATMEGA328P-PU <p>Accessories:</p> <ul style="list-style-type: none"> ● Jumper wires ● Arduino-compatible board ● breadboard ● Power supply <p>Warranty: OME</p> <ul style="list-style-type: none"> ● Or Equivalent to Above Specs 	Nos	5
7.	Microchip- PIC12F675- I/P- Microcontrol lers	 <p>Specs and Features:</p> <ul style="list-style-type: none"> ● MCU 8Bit ● PIC :PIC12 ● Flash:1.75KB ● Voltage: 2.5V/3.3V/5V <p>Accessories:</p> <ul style="list-style-type: none"> ● Programmer/debugger ● Jumper wires ● Breadboard 	Nos	5

		<ul style="list-style-type: none"> Resistors Capacitors <p>Warranty: OEM</p> <ul style="list-style-type: none"> Or Equivalent to Above Specs 		
8.	Keller: LEO5-IS Portable Pressure Sensor (56000 measuring points)	 <p>Feature: Accuracy: -1...1 to 0...1000 bar Total Error Band: ± 0,05 %FS ± 0,1 %FS @ 0...50 °C Interfaces: USB Special Characteristics: All-rounder Display: 5-digit LCD display Reading Capacity: 56'000 measuring points Warranty: OEM</p> <ul style="list-style-type: none"> Or Equivalent to Above Specs 	Nos	1
9.	USB Data Acquisition Device, NI DAQ, Multi Function	<p>Specs and Features:</p> <ul style="list-style-type: none"> AI Channels 8 SE / 4 DI Max Sample Rate 10 kS/s Resolution 12 bit, 8 gain levels AO Channels 2, 12 bit, 150 S/s DIO Channels 12 Counters/Timers 1, 32 bit  <p>Accessories :</p> <ul style="list-style-type: none"> USB cables Signal input connectors Mounting brackets Noise filter modules Calibration tools Protective carrying case Cable organizers Quick start guide Spare fuses External power supply <p>Warranty: OEM</p> <ul style="list-style-type: none"> Or Equivalent to Above Specs 	Nos	1
10.	Millimeter wave radar- IR24VDA	 <p>Specs and Features: Voltage(VCC) 4.5 6 Current(ICC) 90 100 Operating IO Input/Output Current (IIO +20 Operating Temperature(TOP) -20 to +60 Warranty: OEM</p> <ul style="list-style-type: none"> Or Equivalent to Above Specs 	Nos	1

11.	Millimeter Wave Radar (XDS110-based JTAG with serial-port interface for flash programming)	 <p>Specs and Features:</p> <ul style="list-style-type: none"> • Onboard antenna enables field testing • XDS110-based JTAG with serial-port interface for flash programming. • UART-to-USB interface for control, configuration, and data visualization. • TI Launchpad development-kit interface to seamlessly connect to TI MCUs. • CAN connector enables direct interface to car units. • Accessories: • DC Power Supply • USB-to-DC Adapters • Radar Antennas • Launchpad Kits • TI's MSP430 or TMS570 Development Boards • UART/I2C Bridge Modules • Wi-Fi or Ethernet Adapters • Graphical User Interface (GUI) Software • PC Interface Adapters • Weatherproof Enclosures • SD Card Adapters or Storage Modules • RF Amplifiers • Frequency Synthesizers • Warranty: OEM • Or Equivalent to Above Specs 	Nos	1
12.	DesignCore ® RS-L6432U 60 GHz mmWave Radar Sensor	 <p>Specs and Features:</p> <ul style="list-style-type: none"> • Embeddable Small Form Factor Design • Integrated PLL, Transmitter, Receiver, Baseband, A2D • Ultra-Accurate Chirp (Timing) Engine Based on Fractional-N PLL • I2C, SPI, UART, logic level I/O • MIMO Antenna-on-Fiberglass • 16 Mb QSPI Flash • Temperature Sensors • 5 VDC Power • Accessories: • Power Supply Modules • Development Boards (Arduino, Raspberry Pi, STM32) • Antenna Arrays • Connectivity Adapters (UART, SPI, I2C) • Mounting Kits (Wall, Pole, Vehicle) <p>Warranty: OEM</p> <ul style="list-style-type: none"> • Or Equivalent to Above Specs 	Nos	1
13.	Raspberry Pi 5 (Broadcom BCM2712)	 <p>Specs and Features:</p>	Nos	5

