

S.No	Component	Model	Features	Functions
1	Processor	Raspberry pi 4	A high-performance 64-bit quad-core processor	This is the main circuit board that controls the other hardware components and runs the software for the smart mailbox. It typically includes a microcontroller, which is a small computer that can be programmed to perform a wide range of tasks. We will identify a suitable microcontroller.
			Dual display support with resolutions up to 4K via a pair of micro-HDMI ports	
			Hardware video decoding up to 4Kp60	
			4 GB of RAM	
			A connection to the dual-band wireless local area network 2.4/5.0 GHz	
			Bluetooth 5.0 / Gigabit Ethernet / USB 3.0 / PoE features (via a separate HAT PoE add-on module)	
2	Camera	1080P IR-Cut Camera	Raspberry Pi Camera, supports all revisions of the Pi	All video (live or recorded) will sent back to the cloud and accessible from the mobile app.
			Embedded IR-CUT filter, eliminating color distortion due to IR light in the daylight	
			Comes with infrared LED, supports night vision	
			5-megapixel OV5647 sensor	
			Can Attach IR LEDs if Night Vision mode is required	
3	Microphone	Raspberry Pi USB Plug and Play Desktop Microphone	Made of plastic and metal, very light and durable.	This will allow the delivery guy to speak with the smart mailbox owner in case the box code is not working. Record audio from a microphone From the mobile app, the user will be able to activate the microphone to speak through the hardware device. From the mobile app, the user will be able to begin recording audio from the hardware microphone.
			Advanced digital USB provides superior clarity.	
			Simple to operate as a single USB plug-&play connection.	
			Noise-canceling microphone filters out unwanted background noise.	
			Power switch illuminates when the microphone is active.	
4	Speaker	SeeedStudio Grove Speaker Module	Operating voltage (DC): 4V to 5.5V	Enables 2 way communication. Transmit audio from app to hardware unit We will integrate 2-Way Audio i.e Twilio Programmable Voice and SIP (https://interactive.twilio.com/voip-lte-m-iot-twilio-sony)
			LM386 audio amplifier	
			Adjustable volume	
			Grove compatible interface	
5	LCD Touch Display	5 inch LCD Touch Screen Display with HDMI for Raspberry Pi	Very High Resolution - 800 x 480	Display the user that the box is locked or unlocked Allow Users the enter the code t to unlock the box
			Can be directly plugged into any version of Raspberry Pi (Except 1st Generation of Raspberry Pi Model B which requires HDMI Cable).	
			Back Light Control to lower Power Consumption.	
6	Wi-Fi dongle	Raspberry Pi WiFi dongle	Fantastic performance with strong wifi reception	
			Easy to use	
			compact in size 30 x 16 x 8 mm	
			NOOBS and Raspbian operating system supports	
			802.11 b/g/n	
			BCM43143 chip set	
			150 mbps maximum throughput	
			Iron Body Material	
			High quality ultra-compact electric lock.	
			Rustproof, durable, safe, convenient to use.	

7	Lock	Solenoid Door Lock using Raspberry Pi 4	Suction tightly sucks the iron, thus locking the door.	
			Applicable for being installed in the escape door or fire door electronic controlled system.	
			Adopts the principle of electric magnetism, when the current through the silicon, the electromagnetic lock will achieve a strong.	
8	Barcode/QR Scanner	Waveshare Barcode Scanner Module 1D/2D Codes Barcode	Requires no knowledges of image recognition	Will have the ability to scan tracking label/QR-code for unlocking of device.
			Decodes various common 1D/2D codes such as Barcode, QR code etc.	
			Onboard micro USB and UART serial port, allows to connect with computers or embedded device	
			Configurable via scanning 'configuration code'	
			Onboard light source, works in the dark	