IC/Module	Function	Description	Link						
PCA9548	I2C Mux	Three external address bits allow 8 devices to create 64 different I2C connections.	https://www.nxp.com/docs/en/data-sheet/PCA9548A.pdf	https://hallroad.org/cjmcu-9548-tca9548a- 1-to-8-i2c-8-channel-iic-multiplexer-multi- channel-expansion-development-board-for- arduino-in-pakistan.html	480	same	5\$		
FCA5346	12C WillX	RFID Reader to read the serial	https://www.nxp.com/docs/en/data-sneet/FCA5546A.pdr	https://www.majju.pk/product/pn532-nfc-	400	Sallie	Jφ		
PN5321A	RFID Reader	information for each cassette.	https://www.nxp.com/docs/en/nxp/data-sheets/PN532_C1.pdf	rfid-module-v3/	1300	same	8\$		
AS7262	Light Sensor	Multi-wavelength light sensor.	https://www.mouser. com/datasheet/2/588/AS7262_DS000486_2-00-1082195.pdf	https://hallroad.org/tcs34725-color-sensor- rgb-color-sensor-development-board- module-en.html	400	alternative	4\$		
MP3202DG	LED Driver	Constant current LED driver.	https://www.monolithicpower. com/en/documentview/productdocument/index/version/2/doc ument_type/Datasheet/lang/en/sku/MP3202/document_id/14 95						
MCP4561T	LED Current Control	Adjusts the constant current for the MP320DG.	https://ww1.microchip. com/downloads/aemDocuments/documents/OTH/ProductDoc uments/DataSheets/22096b.pdf						
PCA9533D	Door RGB LED Driver	I2C addressable RGB LED driver.	https://www.nxp.com/docs/en/data-sheet/PCA9533.pdf						
MAX31865	RTD Temp PCB	SPI addressable RTD temperature converter.	https://learn.adafruit.com/adafruit-max31865-rtd-pt100- amplifier/python-circuitpython	https://hallroad.org/max31865-pt100-rtd- temperature-sensor-amplifier-module-in- pakistan.html	1800+1350	same	21\$	https://hallroad. org/max31865-pt100-rtd- temperature-sensor- amplifier-module-in- pakistan.html	https://hallroad. org/rtd-pt100- temperature- sensors-in- pakistan.html
DRV8871	Mag Motor Driver	Uses two PWM outputs to drive the Mag Motor.	$\frac{https://learn.adafruit.com/adafruit-drv8871-brushed-dc-motor-}{driver-breakout}$	https://hallroad.org/monster-moto-shield- vnh2sp30-motor-driver.html	600	alternative	6\$		
DRV8834	Stepper Driver	Uses STEP and DIR signals to control the Cassette Lock Motor.	https://www.pololu.com/product/2134	https://hallroad.org/drv8825-stepper- motor-driver-with-aluminum-heat-sink-in- pakistan.html	470	alternative	5\$		
MP1014x	Park Sensor	Logic level to indicate when the Mag assembly is home.	https://switches-sensors.zf.com/us/wp- content/uploads/sites/7/2012/05/Datasheet_MP1014_Letter_E N_12_12_17.pdf	https://hallroad.org/ky-024-ky024-linear- magnetic-hall-effect-sensor.html	150	alternative	1\$		
DRV505x	Door Sensor	Logic level to indicate the door is closed.	https://www.ti.com/lit/ds/symlink/drv5053-q1.pdf	https://hallroad.org/hall-effect-sensor-44e- in-pakistan.html	20	alternative	2\$		
							52\$		