

Reflexes — Bill of Materials

Reaction game built on the Arduino UNO Q · lucadilo.com

Category	Component	Qty	Value / Spec	Link	Notes
Electronics	Arduino UNO Q	1	dual-brain STM32U585 + Linux	Arduino Store	Main controller
Electronics	Modulino LED Matrix	8	12x8 monochrome	Arduino Store	I2C 0x54-0x5B
Electronics	Modulino Pixels	4	RGB LEDs	Arduino Store	I2C 0x50-0x53
Electronics	Modulino Thermo	1	temp/humidity sensor (HS300x)	Arduino Store	I2C 0x44
Electronics	Qwiic / I2C cables	-	-	Arduino Store	Quantity depends on physical layout
Electronics	Arduino jumper wires	-	M-M / M-F / F-F		Misc connections
Buttons + LEDs	Tactile switch 6x6x4.3mm	19	momentary	Open	16 build the 4 game buttons (4 each) + 3 controls (Youmile 100pc)
Buttons + LEDs	LED	36	3.3V 20mA	Open	9 per game button (assorted LED kit)
Buttons + LEDs	Resistor	36	100 Ohm		In series with LEDs (~3.3V LEDs on 5V rail)
Buttons + LEDs	NPN transistor S8050	4	TO-92		Low-side, 1 per LED channel (~180mA/channel)
Buttons + LEDs	Resistor	4	470 Ohm		Transistor base
Power	DC-DC buck converter	1	Step-down 3A -> 5V	Open	From 11.1V/12V to 5V (LED rail + board)
Power	LiPo battery	1	11.1V 3S 2200mAh	Open	
Power	Battery connector	1	as per link	Open	Connector for the LiPo
Power	LiPo charger	1	for 3S pack	Open	Balance charging
Power	External power supply	1	DC	Open	Alternative to the battery
USB peripherals	USB camera	1	-	Open	Face detection (brick)
USB peripherals	USB speaker	1	-	Open	Audio: countdown/music/win-lose
USB peripherals	Powered USB hub	1	-	Arduino Store	Required: powers camera + speaker off the board
Mechanical / 3D	PETG filament, white	-	-	Open	Enclosure
Mechanical / 3D	PETG filament, purple	-	-	Open	Accents / panel
Mechanical / 3D	M3 screws	-	-	Open	Assembly

Note: the 4 large game buttons are built from tactile switches, LEDs, resistors and the 3D-printed parts — they are not a separate purchasable item.