

## MAIN BOARD

Qty	Part ID	Description	MFG Part Number	Digi-Key Part Number	Price	Ext
1	UGV V1.2 PCB	2-LAYER (55.3 x 28.6mm) 0.8mm PCB	JLCPCB	JLCPCB	\$1.00	\$1.00
1	C5	CAP CERAMIC 100PF 50V AXIAL	C410C101K1G5TA	399-9839-ND	\$0.24	\$0.24
4	C2,C3,C4,C6	CAP CERAMIC .1UF 50V AXIAL	C410C104M5U5TA	399-C410C104M5U5TA-ND	\$0.26	\$1.04
1	C1	CAP CERAMIC 10UF 25V RADIAL	C322C106K3R5TA	399-13968-ND	\$0.86	\$0.86
4	R1,R2,R3,R4	RES 75 OHM 1/8W 5% CF AXIAL	CF18JT75R0	CF18JT75R0CT-ND	\$0.10	\$0.40
1	R18	RES 100 OHM 1/8W 5% CF AXIAL	CF18JT100R	CF18JT100RCT-ND	\$0.10	\$0.10
1	R5	RES 150 OHM 1/8W 5% CF AXIAL	CF18JT150R	CF18JT150RCT-ND	\$0.10	\$0.10
2	R8,R9	RES 180 OHM 1/8W 5% CF AXIAL	CF18JT180R	CF18JT180RCT-ND	\$0.10	\$0.20
1	R12	RES 374 OHM 1/8W 1% CF AXIAL	RNF18FTD374R	RNF18FTD374RCT-ND	\$0.10	\$0.10
2	R6,R13	RES 750 OHM 1/8W 5% CF AXIAL	CF18JT750R	CF18JT750RCT-ND	\$0.10	\$0.20
2	R7,R10	RES 1.5K OHM 1/8W 5% CF AXIAL	CF18JT1K50	CF18JT1K50CT-ND	\$0.10	\$0.20
4	R11,R14,R15,R17	RES 3K OHM 1/8W 5% CF AXIAL	CF18JT3K00	CF18JT3K00CT-ND	\$0.10	\$0.40
1	R16	RES 4.7K OHM 1/8W 5% CF AXIAL	CF18JT4K70	CF18JT4K70CT-ND	\$0.10	\$0.10
1	D1	DIODE SCHOTTKY 40V DO35	SD103A-TR	SD103AVSCT-ND	\$0.37	\$0.37
1	U1	IC BUFFER VIDEO 3-CHAN 8SOIC	FMS6400	eBay or AliExpress	\$1.08	\$1.08
1	U2	IC MCU 8BIT 3.5KB FLASH 8SOIC	PIC12F1572-I/SN	PIC12F1572-I/SN-ND	\$0.85	\$0.85
1	U3	IC ANALOG SWITCH SPDT 8SOIC	DG419LEDY-T1-GE4	DG419LEDY-T1-GE4CT-ND	\$1.37	\$1.37
1	U4	IC GATE NAND OD 2CH 2-INP 8SOIC	CD40107BM	296-25937-5-ND	\$1.08	\$1.08
1	U5	IC GATE AND 4CH 2-INPUT 14SOIC	MC74HCT08ADR2G	MC74HCT08ADR2GOSCT-ND	\$0.55	\$0.55
1	P1	CONN IC DIP MP SKT 40POS GOLD	SA406000	ED3032-ND	\$1.75	\$1.75
1	J1	CONN MALE 0.1" HDR RA 6-POS	0022122061	23-0022122061-ND	\$1.31	\$1.31
1	J2	CONN MALE 0.1" HDR RA 5-POS	0022122051	WM2736-ND	\$1.07	\$1.07
1	SW1	SWITCH SLIDE DIP SPST	209-2LPST	CT2092LPST-ND	\$0.64	\$0.64
1	J1&J2 CONNECT	F/F Jumper Wires - 20 x 6" (152mm)	Adafruit 1950	1528-1961-ND	\$1.95	\$1.95
					<b>TOTAL=</b>	<b>\$16.96</b>

## S-VIDEO INTERFACE BOARD (optional)

1	UGV-SINTFC	2-LAYER (27.3 x 17.8mm) 1.6mm PCB	JLCPCB	JLCPCB	\$1.00	\$1.00
1	J1	CONN JACK FEMALE MINI DIN 4P	MDJ-004-FS	2057-MDJ-004-FS-ND	\$1.10	\$1.10
1	J2	CONN MALE 0.1" HDR RA 5-POS	0022122051	WM2736-ND	\$1.07	\$1.07
					<b>TOTAL=</b>	<b>\$3.17</b>

**IMPORTANT: If JOY2PIC Flashing of the PIC12F1572 is anticipated then leave out R14 during assembly (install it after flashing).**

All radial capacitors should have a lead spacing of 0.2" (5.08mm).

1/8 watt resistors were chosen for their small physical size. Larger wattage resistors will not fit the available space on the board.

The 40 pin IC socket (P1) will need to have both center supports removed.

The S-Video Interface board will require either 4-40 or 3mm mounting hardware. The exact type is dependent upon the mounting method chosen,