

Bill of Materials (BOM) for touchscreen

Category	Component	Specifications	Example P/N	Qty
Touch Sensor	PCAP Touch Panel	Size: 65 inch 40-point touch, G+F Structure	TPK GFF-1010	1
	Touch Controller IC	I ² C/SPI, Win Precision Certified	Cypress CY8C4014LQI-421	1
Display	LCD Module	65 inch IPS, 3480×2160, 30-pin LVDS	BOE NV101WXM-N41	1
Interface	USB 2.0 HUB IC	1-to-4 port, 480Mbps	Genesys GL850G	1
	I ² C Level Shifter	1.8V ↔ 3.3V bidirectional	TI TXS0108EPWR	1
Power	DC-DC Buck Converter	12V→3.3V, 1A, 90% efficiency	TI TPS54331DDAR	1
	LDO Regulator	3.3V→1.8V, 300mA	SGM2036-1.8YN5G/TR	1
Passives	MLCC Capacitors	0.1μF, 16V, X7R, 0603	Murata GRM188R71C104KA01D	12
	Chip Resistors	10kΩ, ±1%, 0402	Yageo RC0402FR-0710KL	6
	TVS Diode Array	24V clamp, 0.5pF (USB/I ² C protection)	Littelfuse SP0503BAHTG	2
Mechanical	OCA (Optical Clear Adhesive)	0.2mm, >92% transmittance	3M 8146-200um	1
	FPC Cable	20-pin, 0.5mm pitch, 50cm length	Avary AFPC-20P-05MM-50CM	1
Connectors	ZIF Connector	0.5mm pitch, 20-pin	Hirose FH12-20S-0.5SH	1
EMI/ESD	EMI Shielding Film	0.1mm PET, 60dB attenuation	Toray TFB-E100	1
Firmware	Touch Controller Firmware	Customized for Win/Linux/Android	Cypress PSoC Creator Project	1