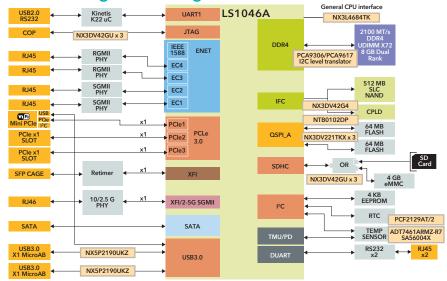
LS1046A - INTERFACE QUICK REFERENCE



LS1046A Reference Design Block Diagram



LS1046A Reference Design Interface Products

Device	Description	Key Features/ Differentiators
NX3L4684TK,115	Dual low-ohmic single-pole double-throw analog switch	Wide supply voltage: 1.4 V to 4.3 V; Low ON resistance -High noise immunity Latch-up performance exceeds 100 mA per JESD 78B Class II Level A Very low supply current, even when input is below VCC
NTB0102DP,125	2-bit, dual supply voltage level translator	 Bi-direction and auto sensing Wide supply voltage VCC(A): 1.2 V to 3.6 V and VCC(B): 1.65 V to 5.5 V Latch-up performance exceeds 100 mA per JESD 78B Class II
NX5P2190UKZ	Logic controlled high-side power switch	 Advanced power switch with adjustable current limit Under-voltage and over-voltage lockout, over-current, over-temperature, reverse bias, in-rush current protection 30 V tolerant on VBUS; Low-power mode (ground current 20 microA typical)
PCF2129AT/2,518	Real Time Clock (RTC) integrated temp compensated crystal	 I²C-bus or SPI-bus Backup battery switch-over circuit, a programmable watchdog, timestamp ±3 ppm from -15 °C to +60 °C
NX3DV42GU,115	Dual high-speed USB 2.0 double-pole double-throw analog switch	 Supply voltage: 3.0 V to 4.3 V 4 ohms typical ON resistance; 7.3 pF typical ON capacitance 950 MHz typical bandwidth or data frequency; Low crosstalk of -30 dB at 240 MHz
NX3DV221TKX	High-speed USB 2.0 switch with enable	 Switch voltage accepts signals up to 5.5 V;1.8 V control logic at VCC = 3.6 V Low-power mode when OE is HIGH (2 microA maximum) 6 ohms (maximum) ON resistance; 6 pF (typical) ON-state capacitance 0.1 ohms (typical) ON resistance mismatch between channels High bandwidth (1.0 GHz typical)advanced power switch with adjustable current limit
PCA9306DCUR-VSSP (Equivalent part on board)	Dual bidirectional I2C bus and SMBus voltage-level translator	Bidirectional voltage translation with no direction pin; Lock-up free operation Less than 1.5 ns maximum propagation delay to accommodate Standard-mode and Fast-mode I2C-bus devices and multiple masters To tolerant I2C-bus I/O ports to support mixed-mode signal operation
SA56004X (Equivalent part on board)	Remote/local digital temperature sensor	Over temperature alarms SMBus time-out protocol

INTERFACE DISCOVERY QUESTIONS

- Does your LS1046A design offer plug-in modules like SD Card or eMMC memory?
 - Analog switches enable multiple interface ports while utilizing minimum I/O pins
- Does your design use USB interface Type A, Micro B or Type-C?
 - Load switches offer the extra protection with OVP, OCP, OTP, very critical with Type-C
- Does your design need voltage level translators: I2C or general purpose?
 - Peripheral devices use different voltages than the processor voltage
- Does your design need temperature sensor with alerts capability?
- Does your system need a real time clock for time-keeping?
 - PCF85063A or PCF85263A for low power and PCF2129AT/2 for higher accuracy



For more information on the LS1046A reference design, visit nxp.com/LS1046ARDB

