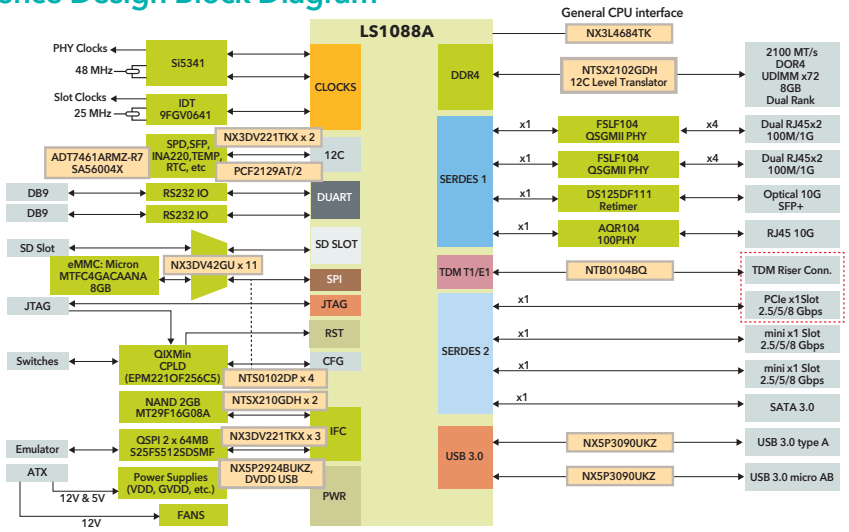
LS1088A – INTERFACE QUICK REFERENCE

LS1088A Reference Design Block Diagram



LS1088A Reference Design Interface Products

Device	Description	Key Features/ Differentiators
PCA9547PW,112	8-channel I2C-bus multiplexer	• Low Ron; Low standby current Ron • Voltage level translation between 1.8 V, 2.5 V, 3.3 V and 5 V buses • No glitch on power-up; Supports hot insertion
NX3L4684TK,115	Low-ohmic dual single-pole double-throw analog switch	• Wide supply voltage: 1.4 V to 4.3 V; Low ON resistance High noise immunity • Very low supply current, even when input is below VCC
NTS0102DP	Dual supply translating transceiver	• Auto direction sensing; Supply voltage :VCC(A) 1.65 V to 3.6 V and VCC(B): 2.3 V to 5.5 V • Latch-up performance exceeds 100 mA per JESD 78B Class II
NTSX2102GDH	Dual supply voltage level translator	• Auto direction sensing, bidirectional voltage level translation • Wide supply voltage: 1.65 V to 5.5 V and VCC(B): 1.65 V to 5.5 V
NTB0104BQ,115	4-bit, dual supply Voltage level translator	• Bi-direction and auto sensing • Wide supply voltage range: VCC(A): 1.2 V to 3.6 V and VCC(B): 1.65 V to 5.5 V
NX5P2924BUKZ	Logic controlled power switch or power switch	• Wide supply voltage range from 0.8 V to 5.5 V • High noise immunity; Turn-on slew rate limiting; Low ON resistance
NX5P3090UKZ	3A, 5V load switch	• 29V tolerance on VBUS and EN pin • Adjustable current limit from 400 mA to 3.3 A • Reverse Current Protection; Over Temperature Protection
PCF2129AT/2,518	Real Time Clock (RTC) with integrated 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 range from 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
SA56004X (Equivalent part on board)	Remote/local digital temperature sensor	• Over temperature alarms • SMBus time-out protocol

INTERFACE DISCOVERY QUESTIONS

- Does your LS1088A 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 LS1088A reference design, visit **nxp.com/LS1088ARDB**

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