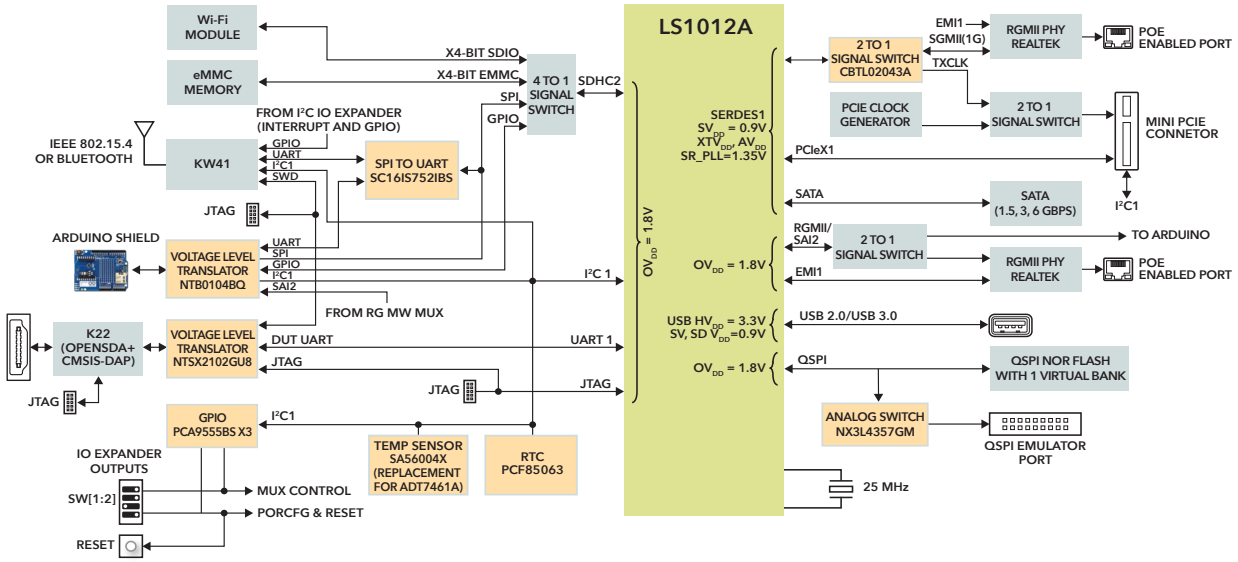
LS1012A – INTERFACE QUICK REFERENCE

LS1012A Reference Design Block Diagram

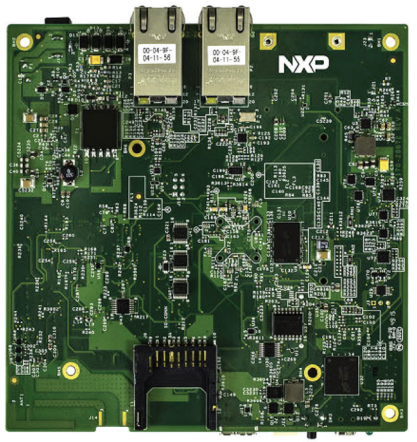


LS1012A Reference Design Interface Products

Device	Description	Key Features/ Differentiators
CBTL02043A	2 channel, 2 : 1 mux/demux; Differential High speed switch	• Minimized switch impedance causing attenuation through the switch is negligible • Minimized channel-to-channel skew and crosstalk • Allows expansion of existing high-speed ports for extremely low power.
SC16IS752IBS	Dual UART with I²C-bus/SPI interface	• Low operating and sleep current; additional programmable I/O pins • Very small HVQFN32 and TSSOP28 packages • Seamless protocol conversion from I²C-bus/SPI to RS-232/RS-485 and bidirectional
PCA9555BS	16 bit GPIO for I²C-bus/SMBus	• Higher drive capability, 5 V I/O tolerance, lower supply current, individual I/O configuration
NTSX2102GU8H	Dual supply voltage level translator	• Wide supply voltage range of 1.65 V to 5.5 V translating between 1.8 V, 2.5 V, 3.3 V and 5.0 V • Preventing the damaging backflow current through the device when it is powered down • Latch-up performance exceeds 100 mA per JESD 78B Class II
NX3L4357GM	Low-ohmic single-pole triple-throw analog switch	• Wide supply voltage range from 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
NTB0104BQ	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 • Latch-up performance exceeds 100 mA per JESD 78B Class II
SA56004X (Equivalent part on board)	Remote/local digital temperature sensor	• Over temperature alarms • SMBus time-out protocol

INTERFACE DISCOVERY QUESTIONS

- Does your LS1012A design need to accommodate multiple module options like Wi-Fi or eMMC memory etc.?
  - High speed switches will help optimize the use of the I/O from the DN Processor
- Does your design need UART interface?
  - SPI/I²C to UART bridge serves the purpose
- Does your design need voltage level translators to interface with different peripheral devices?
- Does your design need GPIO to extend the DN I/O capability?
- Does your design need temperature sensor with alerts capability?



For more information on the LS1012A reference design, visit **nxp.com/LS1012ARDB**

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