

# OnSpec

## xSil 269B Hi-Speed USB NAND Flash Controller Chip With AES Encryption Security Product Data Sheet

The xSil 269B is designed to connect an IDE/ATA device or NAND flash to USB with AES Encryption. It contains the following:

- 48-pin 7mm x 7mm LQFP package
- Single chip with integrated USB 2.0 PHY
- OnSpec's embedded AES encryption to optionally encrypt in-bound and out-bound data
- Serial EEPROM port
- Supports NAND, NAND MLC media
- NOP=1 support for MLC NAND
- 4-byte FEC (Forward Error Correction) in hardware (real time)
- Firmware enhancements can be stored on On-board NAND
- Serial port
- Two General Purpose Timers
- Watchdog Timer
- 16 bit Processor
- Internal RAM for supporting enhancements
- ROM with BIOS and Application code.
- Programmable Read and Write widths
- Optimum hardware controlled transfer for speed and scalability
- NAND/ NAND MLC
- Up to 4 Chip selects to allow extended addressing
- FEC Error detection and correction, which can correct up to 4-bytes of error per sector.
- Firmware enhancements can be stored on On-board NAND when populated.
- ROM has built in AES encryption support for SHA-256 based authentication

### **Embedded Encryption**

The xSil 269B device has OnSpec's embedded AES 128 bit encryption that encrypts and decrypts information. The encryption converts data to an unintelligible form and decrypting converts the data back into its original form.

### **Packaging**

The xSil 269B is a 48-pin LQFP package.

### **USB Engine**

The xSil 269B meets the Universal Serial Bus (USB) specification V2.0 and V1.1.

### **Support for NAND SLC / NAND MLC Flash**

Widespread support for popular NAND SLC / NAND MLC flash media is available. The xSil 269B processor comes with a 4-Byte FEC Error correction algorithm that detects and corrects up to 4 Bytes in a 512 byte block. A programmable clock speed is provided to set the clock speed based on the media's capabilities. The processor can load firmware from the NAND media itself thus obviating the need for an I2C component.

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**Patents:**

This product is covered by one or more of the following patents:

US Pat. 5784584, 5809336, 5841424, 6438638, 6598148, 6832281, 6859361, 6859369

Taiwan Pat. I 222564

China Pat. CN 018152163

S. Korea Pat. KR 476817

Other Foreign & US Patents Pending

**Disclaimer:**

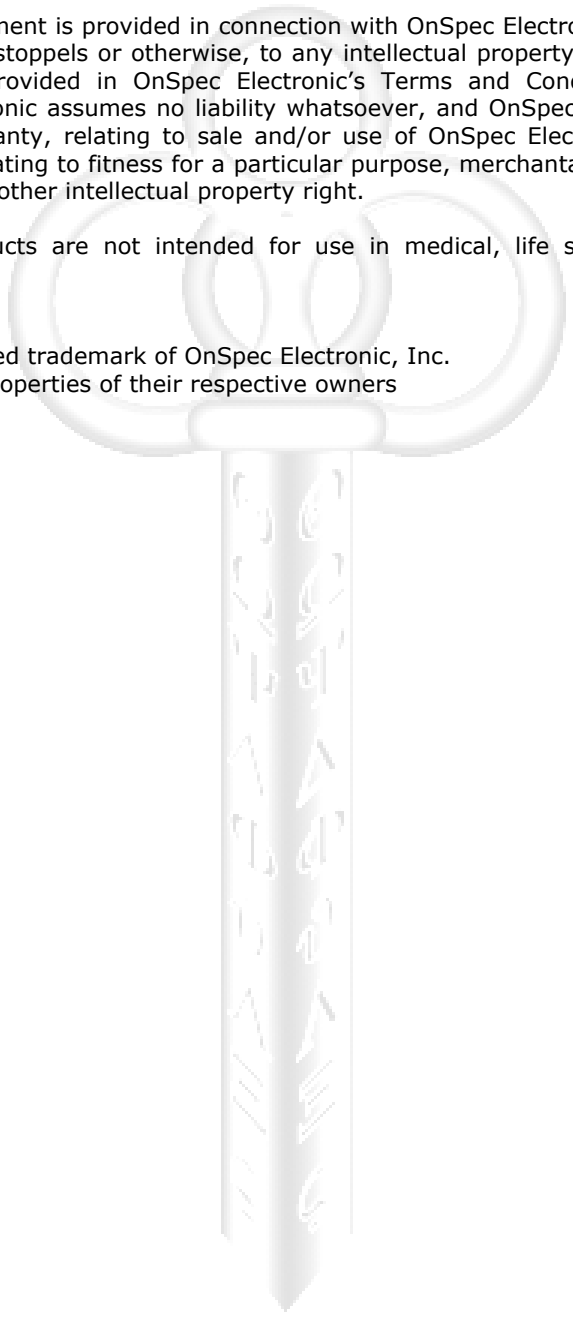
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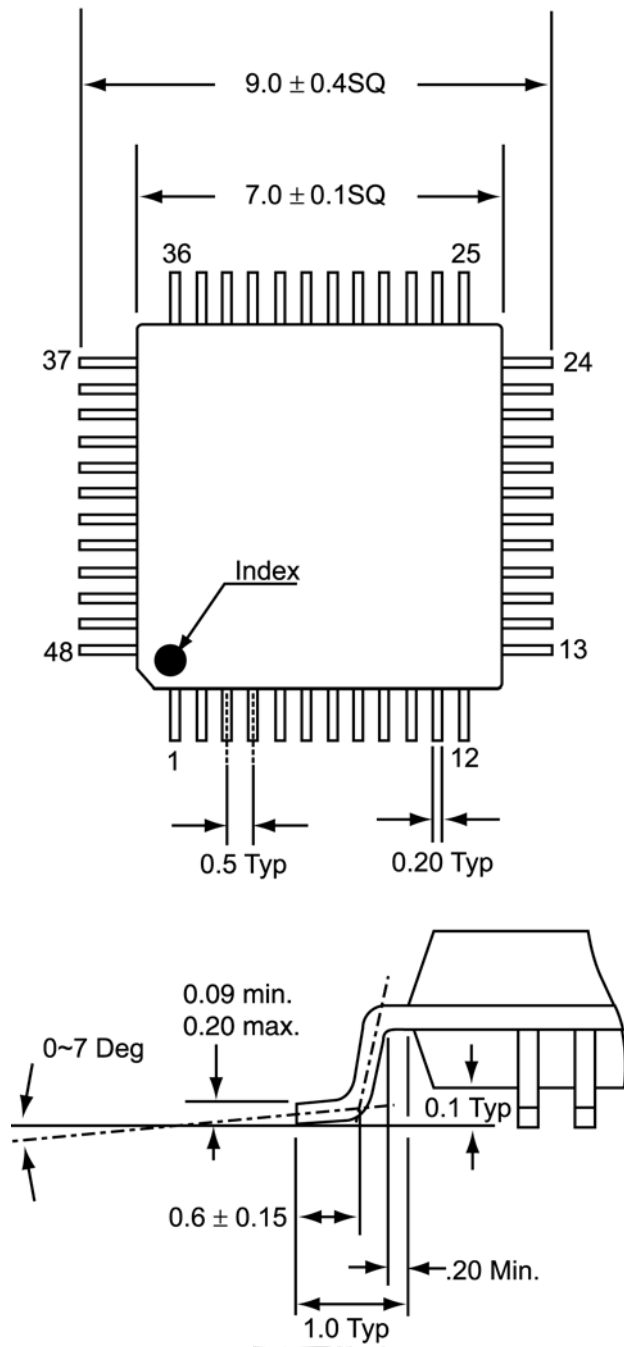
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## Mechanical Dimensions



Note: All Dimensions in mm