



Genesys Logic, Inc.

GL827S

USB 2.0 Single Slot SD/MMC/MS/xD-Picture Card Reader Controller



GENERAL DESCRIPTION

The GL827S is USB 2.0 Single Interface Flash Card Reader controller. It supports USB 2.0 high-speed transmission to Secure Digital™ (SD), SDHC, Mini SD™, Micro SD™ (T-Flash) , MultiMediaCard™ (MMC), RS MultiMediaCard™ (RS MMC), MMC Plus, MMC Micro, MMC-Mobile , Memory Stick™ (MS), Memory Stick Duo™ (MS Duo), High Speed Memory Stick™ (HS MS), Memory Stick PRO™ (MS PRO), Memory Stick PRO™ Duo (MS PRO Duo), Memory Stick PRO-HG™ (MS PRO-HG), Memory Stick ROM, MS PRO Micro, and xD-Picture Card™ (xD) on one chip. As a single chip solution for USB 2.0 flash card reader, the GL827S complies with Universal Serial Bus specification rev. 2.0, USB Storage Class specification ver.1.0, and flash card interface specification each.

The GL827S can support different kinds of interfaces in single slot and integrates a high speed 8051 microprocessor and a high efficiency hardware engine for the best data transfer performance between USB and flash card interfaces.

The GL827S pin assignment design fits to card sockets to provide easier PCB layout. 48 Pin LQFP (7mm x 7mm) , QFN28 (5mm x 5mm) and QFN24 (4mm x 4mm) are available package types.



FEATURES

- USB specification compliance
 - Comply with 480Mbps Universal Serial Bus specification rev. 2.0.
 - Comply with USB Storage Class specification rev. 1.0.
- Integrated USB building blocks
 - USB2.0 transceiver macro (UTM), Serial Interface Engine (SIE), Build-in power-on reset (POR) and low-voltage detector (LVD)
- Embedded 8051 micro-controller
- Secure Digital™ and MultiMediaCard™
 - Supports SD specification v1.0 / v1.1 / v2.0 (SDHC)
 - Supports MMC specification v3.X / v4.0 / v4.1 / v4.2.
 - x1 / x4 / x8 data transmission. (For QFN24/QFN28 up to x4)
 - Automatic CRC7 generation for command and CRC7 verification for response on CMD
 - Support automatic CRC16 generation and verification on DAT0:7
 - In addition to full packet transaction, optional single byte / bit operation on both CMD and DAT line / lines
 - Process data in block or byte
- Memory Stick™ / Memory Stick PRO / Memory Stick PRO Duo / Memory Stick Micro /Memory Stick PRO-HG
 - Comply with Memory Stick™ Rev.1.43, Memory Stick PRO™ Rev.1.04, Memory Stick Micro™ Rev.1.06, Memory Stick PRO-HG™ Rev.1.02
 - Support INS signal
 - Support automatic CRC16 generation and verification
 - Memory Stick PRO-HG 60MHz 8bit for LQFP48 / 40MHz 4bit for QFN24/QFN28
- xD-Picture (Only for LQFP48)
 - xD-Picture specification v1.21A. Type-H /Type-M /Type-M+
- On board 12 MHz Crystal driver circuit or 12/48 MHz Clock input.
- On-Chip 5V to 3.3V and 3.3V to 1.8V regulator. No external regulator required.
- On-Chip power MOSFETs for supplying flash media card power.
- Available in 48 Pin LQFP (7x7 mm) package
- Available in 28 Pin QFN (5x5 mm) package
- Available in 24 Pin QFN (4x4 mm) package