



Long-Term Support
World Class Quality



512Mb SPI Flash (1.8V/3V)

Complete Offering from 256Kb to 512Mb
Automotive Grade Flash Available up to 125°C

The ISSI LP [2.5/3V] and WP [1.8V] series of Serial flash families now include the 512Mbit Quad SPI flash with DTR. The LP and WP family builds upon the success of ISSI's IS25LQ [2.5/3V] and IS25WQ [1.8V] family by introducing leading edge features such as double data rate [DTR/DDR] interface modes, SFDP support, and the popular 2 cycle instruction input [QPI mode].

The new device offers read speeds up to 133Mhz in Single/Dual/Quad I/O and 80 MHz in double data rate [DTR/DDR] modes, delivering up to 532Mb/s [equivalent 67MB/sec] of read throughput.

ISSI's SPI NOR Flash are an ideal solution for a broad range of applications and used in markets such as Automotive, Industrial, Medical, Communications, and Networking. The family is also ideal for code shadowing, execute in place [XIP], and data storage operations and has performance that matches or exceeds conventional parallel I/O NOR flash.

The 512Mbit is offered in Industry standard packages that allow easy density migration and compatibility while maintaining backwards compatibility to legacy solutions.

Applications

- Instrument Clusters
- Infotainment consoles
- Telematics
- Safety Systems [ADAS]
- Smart TV STB
- HDD
- Printers
- Gaming
- Industrial Controls
- Medical Devices
- Military & Aerospace
- Wireless Access Points
- 4G LTE Base Stations
- Routers & Switches
- Home Networking
- Energy Smart Grid Management

Industry Standard Serial Interface with Flexible and Efficient Memory Architecture

- IS25LP[WP]512M: 512M-bit/164M-byte
- Chip Erase: Uniform: Sector and Block Erase [4K/32K/64K-Byte]
- Program 1 to 256 bytes per page
- Program/Erase Suspend & Resume

Efficient Read and Program Modes

- Low Instruction Overhead Operations
- Continuous Read 8/16/32/64-Byte Wrap
- Selectable burst length
- QPI for reduced instruction overhead
- Allows XIP operations [execute in place]

Low Power with Wide Temp. Ranges High Performance Serial Flash (LP/WP Series)

- 80MHz Normal and up to 133Mhz Fast Read
- 532 MHz equivalent QPI SPI
- DTR [Dual Transfer Rate] up to 80MHz
- Single Voltage Supply
- Low Standby Current
- Deep Power Down mode
- Temperature Grades:
 - Extended: -40°C to +105°C
 - Auto Grades: up to +125°C
- Selectable dummy cycles
- Configurable drive strength
- Supports SPI Modes 0 and 3
- More than 100,000 erase/program cycles
- More than 20-year data retention



Long-Term Support
World Class Quality



512Mb SPI Flash (1.8V/3V)

Complete Offering from 256Kb to 512Mb
Automotive Grade Flash Available up to 125°C

Advanced Security Protection

- Software and Hardware Write Protection
- Power Supply lock protect
- 4x256-Byte dedicated security area with user-lockable bits, [OTP] One Time Programmable Memory
- 128 bit Unique ID for each device [Call Factory]

Serial Flash Clock Rate & Data Throughput

SPI Protocols	256K	512K	1M	2M	4M	8M	16M	32M	64M	128M	256M	512M
Single I/O	104	104	104	104	104	104	104	133	133	133	166	133
	104	104	104	104	104	104	104	133	133	133	166	133
Dual I/O	208	208	208	208	208	208	208	266	266	266	332	266
	104	104	104	104	104	104	104	133	133	133	166	133
Dual I/O with Double Transfer Rate								264	264	264	320	320
								66	66	66	80	80
Quad I/O	416	416	416	416	416	416	416	532	532	532	664	532
	104	104	104	104	104	104	104	133	133	133	166	133
Quad I/O with Double Transfer Rate								528	528	528	640	640
								66	66	66	80	80

Throughput

Unit: Mb/s

Clock Rate

Unit: MHz

