



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
QuadI/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
QuadI/O with Double Transfer Rate								528	528	528	640	640
								66	66	66	80	80

Throughput Unit: Mb/s

Clock Rate Unit: MHz

