ISSI

Long-Term Support
World Class Quality

SPI Flash (1.8/3V)
Complete Offering from 256Kb to 256Mb
Automotive Grade Flash Available up to 125°C

ISSI introduces its new Family of IS25LP (2.5/3V) and IS25WP (1.8V) series of flash devices. The 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 product family offers read speeds up to 166Mhz in Single/Dual/Quad I/O and 80 MHz in double data rate (DTR/DDR) modes, delivering up to 664Mb/s (equivalent 83MB/sec) of read throughput (IS25LP/WP256D).

ISSI's SPI NOR Flash are ideal for a broad range of applications, such as Automotive, Industrial, Medical, Communications, Networking, Smart Meters, FPGA, Digital Cameras, Printers, Bluetooth, and IOT. The family is also ideal for code shadowing, execute in place (XIP), and data storage operations.

Applications
- Instrument Clusters
- Infotainment consoles
- 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
- Automotive Control Systems
- Automotive Infotainment Telematics

Industry Standard Serial Interface
- IS25LP(WP)256D:256M-bit/32M-byte
- IS25LP(WP)128:128M-bit/16M-byte
- IS25LP(WP)064A: 64M-bit/8M-byte
- IS25LQ032B/IS25WP032A: 32M-bit/4M-byte
- IS25LQ016B/IS25WP016: 16M-bit/2M-byte
- IS25LP(WP)080D: 8M-bit/1M-byte
- IS25LQ040B/IS25WQ040: 4M-bit/512K-byte
- IS25LQ020B/IS25WQ020: 2M-bit/256K-byte
- IS25LQ010B: 1M-bit/128K-byte
- IS25LQ512B: 512K-bit/64K-byte
- IS25LQ025B: 256K-bit/32K-byte

High Performance Serial Flash (SPI)
- 50MHz Normal and up to 166Mhz Fast Read
- 664 MHz equivalent QPI SPI
- DTR (Dual Transfer Rate) up to 80MHz
- 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

Flexible & Efficient Memory Architecture
- 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
- Single Voltage Supply
- Low Standby Current
- Deep Power Down mode
- Temp Grades:
    Extended: -40°C to +105°C
    Auto Grades: 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
Single I/O	104	104	104	104	104	104	104	133	133	133	166
	104	104	104	104	104	104	104	133	133	133	166
Dual I/O	208	208	208	208	208	208	208	266	266	266	332
	104	104	104	104	104	104	104	133	133	133	166
Dual I/O with Double Transfer Rate								264	264	264	320
								66	66	66	80
Quad I/O	416	416	416	416	416	416	416	532	532	532	664
	104	104	104	104	104	104	104	133	133	133	166
Quad I/O with Double Transfer Rate								528	528	528	640
								66	66	66	80

Throughput	Unit: Mb/s
Clock Rate	Unit: MHz