



ISSI's Octal Memory is a portfolio of high-speed, low pin count memory products that utilize the JEDEC xSPI interface. The Octal [xSPI] interface enhances system performance, simplifies design, and reduces system cost. ISSI's new family of Octal products include: Octal [xSPI] Flash, Octal RAM, and Octal MCP solutions.

Octal [xSPI] Flash memory delivers the performance needed from embedded systems that require fast instant boot times. ISSI's Octal flash delivers 400 MB/s of read bandwidth, which is over 4x times faster than a Quad SPI Flash. Octal RAM memory also delivers 400 MB/s of read throughput in a space savings package. These devices are ideal for SoCs with limited on-board RAM and provide the system with fast read and write operations.

MCP solutions that implement both Octal [xSPI] Flash and Octal RAM devices are available from ISSI. The combined solution further shrinks the necessary footprint needed by having two separate devices combined into one on the board. The combined devices share a single xSPI bus and are available in a space savings 24-BGA package.

The new family of Octal Bus xSPI compliant devices meet the demand for instant-on high performance applications that are required by the Automotive, Industrial, Medical, Networking, and Consumer Markets. AEC-Q100 support with temperatures up to 125°C are available.

Key Features

- Interface: JEDEC xSPI standard compliant
- Single Supply Voltage: 1.8V [1.7-1.95V] or 3V [2.7-3.6V] support
- Densities:
 - xSPI Flash: 32Mb to 2Gb
 - Octal RAM: 128Mb - 256Mb
- Performance: Up to 200 MHz in x8 double data rate [DDR] with DQS [data strobe], up to 400 MB/s read throughput

Temperature Grades

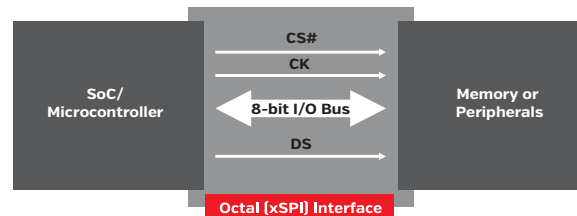
- Industrial Temp Grade [-40°C to +85°C]
- Extended Temp Grade [-40°C to +105°C]
- Automotive Grade A3 [-40°C to +125°C]

Industry Standard Package

- 24-TFBGA

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
- Smart Grid



Octal [xSPI] Interface - Low Pin Count

xSPI (Octal) Flash

Den	Part Number	Type	Vcc	Frequency	Temp. Range	Package Type	ECC available
32M	IS25LX032	xSPI	2.7-3.6V	133Mhz	-40 to 125°C	24-TFBGA	YES
	IS25WX032	xSPI	1.7-2.0V	200Mhz	-40 to 125°C	24-TFBGA	YES
64M	IS25LX064	xSPI	2.7-3.6V	133Mhz	-40 to 125°C	24-TFBGA	YES
	IS25WX064	xSPI	1.7-2.0V	200Mhz	-40 to 125°C	24-TFBGA	YES
128M	IS25LX128	xSPI	2.7-3.6V	133Mhz	-40 to 125°C	24-TFBGA	YES
	IS25WX128	xSPI	1.7-2.0V	200Mhz	-40 to 125°C	24-TFBGA	YES
256M	IS25LX256	xSPI	2.7-3.6V	133Mhz	-40 to 125°C	24-TFBGA	YES
	IS25WX256	xSPI	1.7-2.0V	200Mhz	-40 to 125°C	24-TFBGA	YES
512M	IS25LX512M	xSPI	2.7-3.6V	133Mhz	-40 to 125°C	24-TFBGA	YES
	IS25WX512M	xSPI	1.7-2.0V	200Mhz	-40 to 125°C	24-TFBGA	YES
1G	IS25LX01G	xSPI	2.7-3.6V	133Mhz	-40 to 125°C	24-TFBGA	YES
	IS25WX01G	xSPI	1.7-2.0V	200Mhz	-40 to 125°C	24-TFBGA	YES
2G	IS25LX02GA	xSPI	2.7-3.6V	133Mhz	-40 to 125°C	24-TFBGA	YES
	IS25WX02GA	xSPI	1.7-2.0V	200Mhz	-40 to 125°C	24-TFBGA	YES

