



IS25DLP256M

IS25DWP256M

256Mb (2 x 128Mb)
3.3V/1.8V SERIAL FLASH MEMORY
WITH 166MHZ TWIN QUAD SPI (X8) INTERFACE

CONCEPT DATA SHEET

**256Mb (2 x 128Mb)****3.3V/1.8V SERIAL FLASH MEMORY WITH 166MHZ TWIN QUAD SPI (X8) INTERFACE****CONCEPT INFORMATION****FEATURES**

- **Industry Standard Serial Interface**
 - IS25DLP/DWP256M: 256Mbit/32Mbyte
 - Dual Die Stack of two IS25LP/WP128F
 - Supports standard SPI and QPI protocols
 - Double Transfer Rate (DTR) : SPI DTR, Dual I/O SPI DTR , and Quad I/O SPI DTR
 - Supports Serial Flash Discoverable Parameters (SFDP)
 - Support Hardware RESET# Feature
- **High Performance Serial Flash (SPI)**
 - 80MHz Normal Read
 - Up to 166MHz Fast Read:
 - Up to 80MHz DTR (Dual Transfer Rate)
 - Equivalent Throughput of 664 Mb/s
 - 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 with Uniform: Sector/Block Erase (4/32/64 Kbyte)
 - Program 1 to 256 bytes per page per die
 - Program/Erase Suspend & Resume
- **Efficient Read and Program modes**
 - Low Instruction Overhead Operations
 - QPI for reduced instruction overhead
 - Continuous Read 8/16/32/64-Byte Burst Wrap
 - Selectable burst length
- **Low Power with Wide Temp. Ranges**
 - Single Voltage Supply
 - IS25DLP: 2.30V to 3.60V
 - IS25DWP: 1.65V to 1.95V
 - 10 mA Active Read Current per die
 - 8 μ A Standby Current per die
 - 1 μ A Deep Power Down per die
 - Temp Grades:
 - Extended: -40°C to +105°C
 - Auto Grade: up to +125°C
- **Advanced Security Protection**
 - Software and Hardware Write Protection
 - Power Supply lock protect
 - 4x256-Byte dedicated security area per die with user-lockable bits, (OTP) One Time Programmable Memory
 - 128 bit Unique ID for each device (Call Factory)
- **Industry Standard Pin-out & Packages**
 - M = 16-pin SOIC 300mil
 - H = 24-ball TFBGA 6x8mm 5x5 (Call Factory)



GENERAL DESCRIPTION

This document contains for the IS25DLP/DWP256M device. The device is a dual die stack of two IS25LP/WP128F dies.

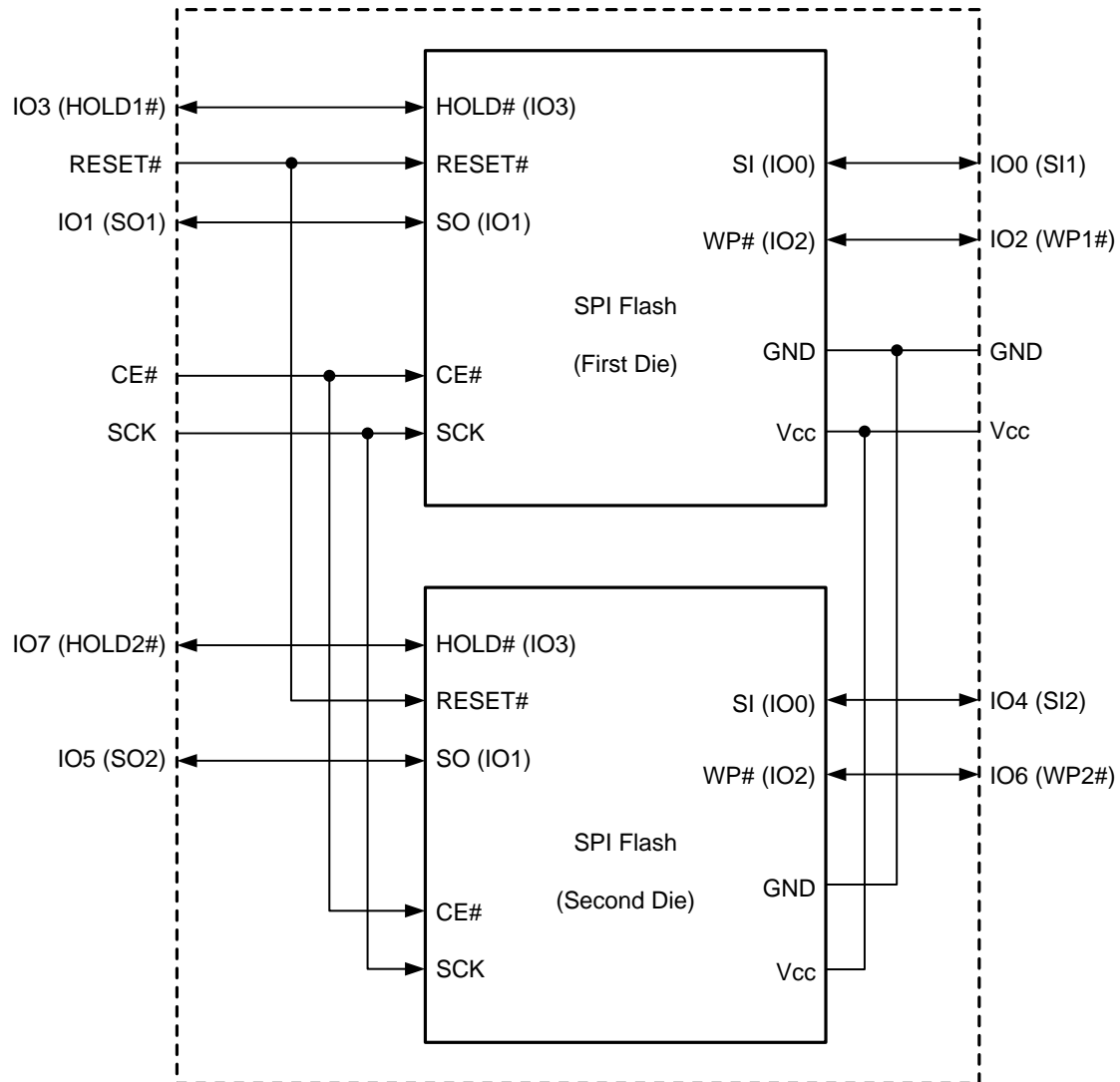
For detailed specifications, please refer to the discrete die datasheet linked below.

Document	Datasheet
IS25LP128F Datasheet	Call Factory
IS25WP128F Datasheet	Call Factory

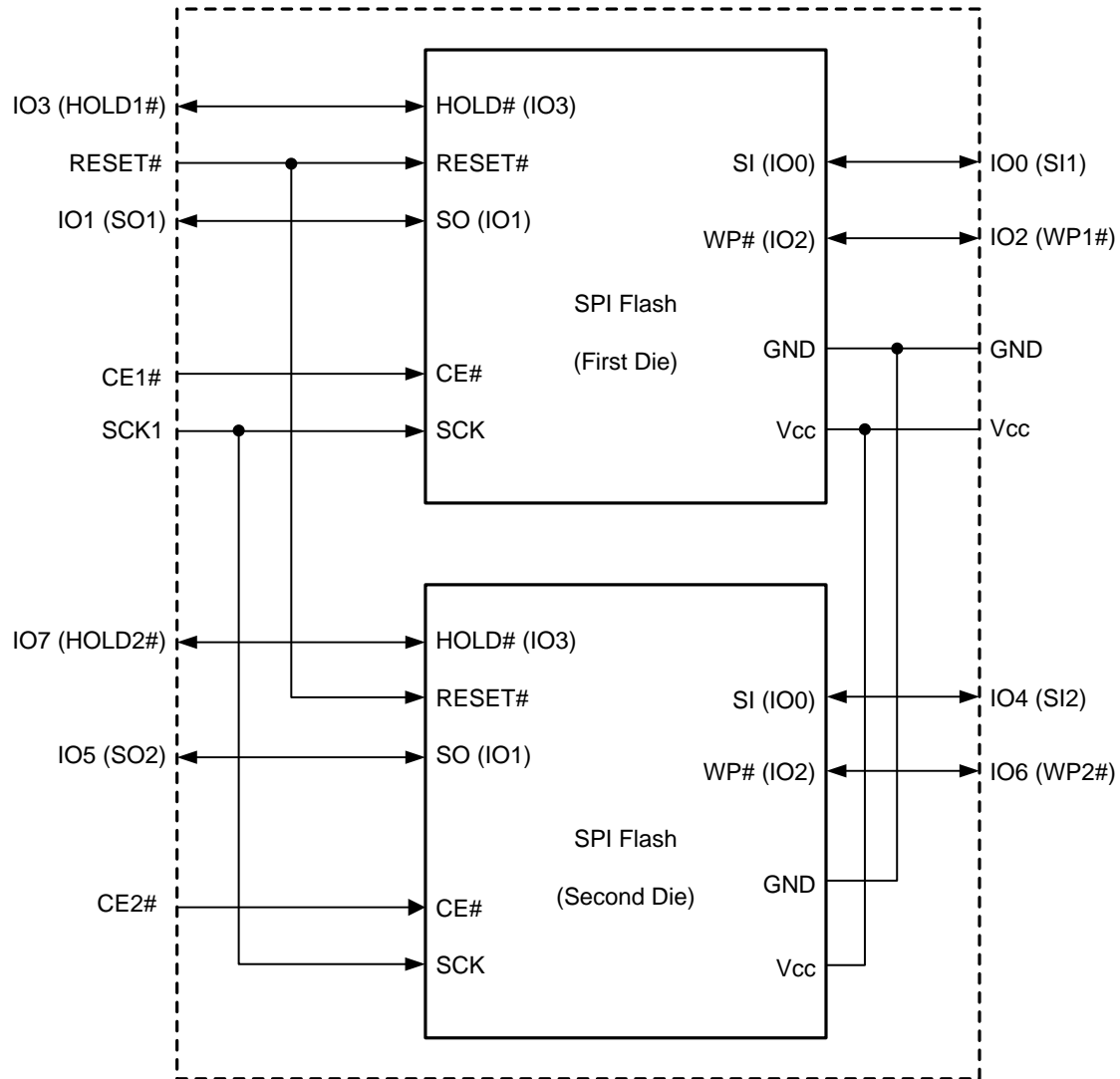
1. All specification noted are per IS25LP/WP128F device

BLOCK DIAGRAM

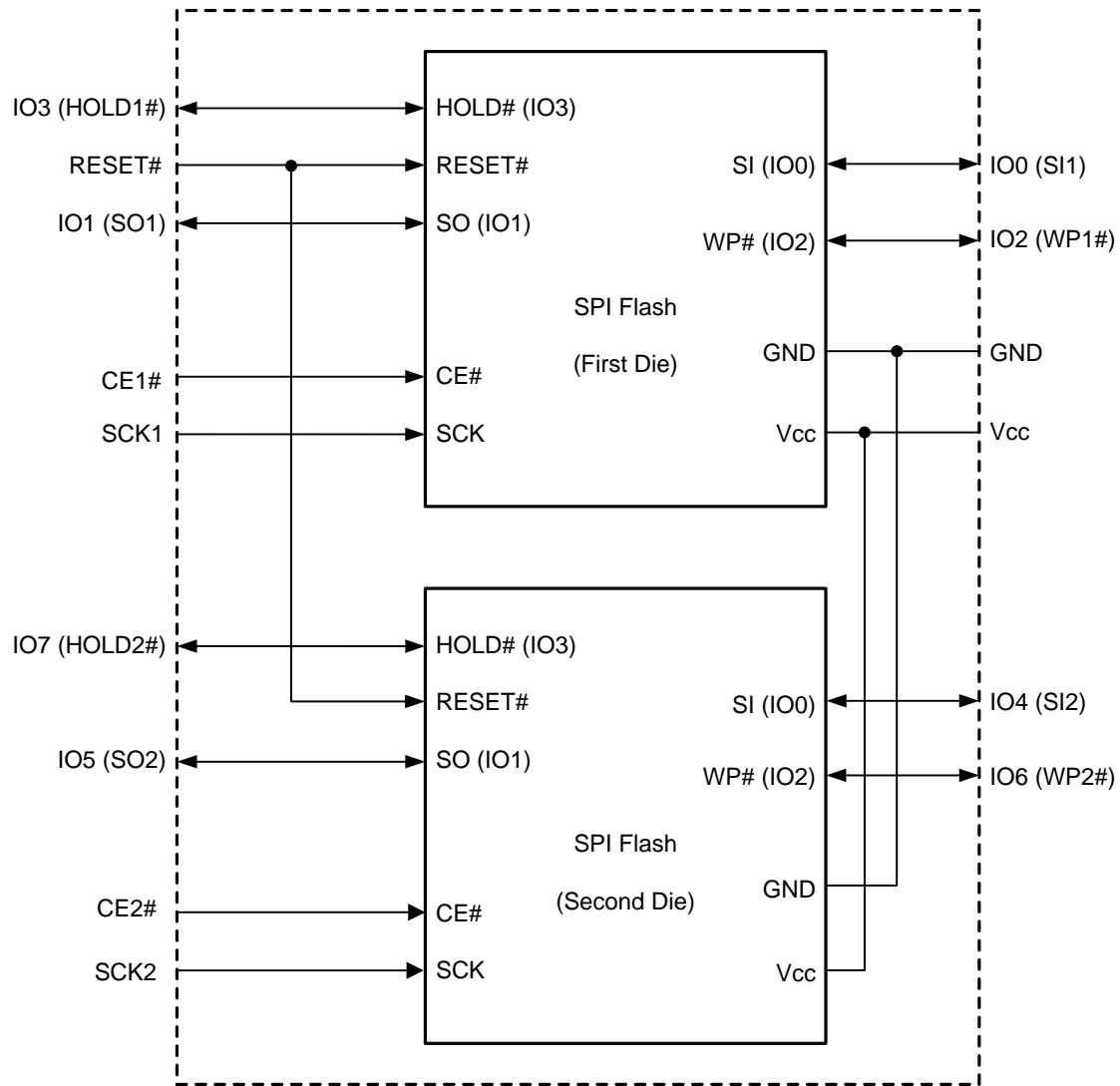
BLOCK DIAGRAM for 16-pin SOIC (1 CE# & 1 SCK)



BLOCK DIAGRAM for 16-pin SOIC (2 CE# & 1 SCK)



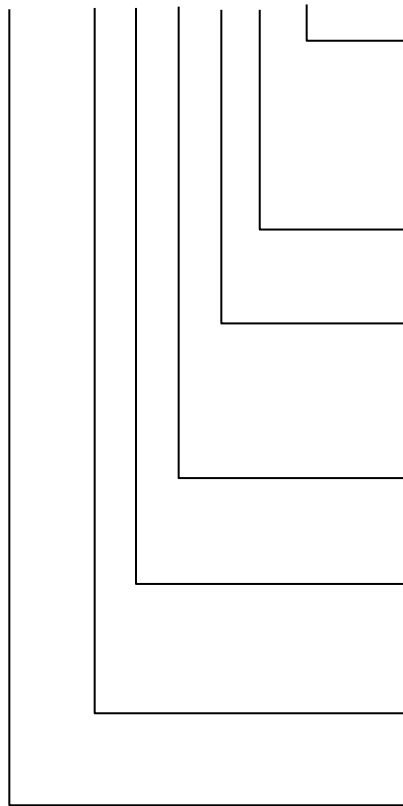
BLOCK DIAGRAM for 24-ball BGA (2 CE# & 2 SCK)





ORDERING INFORMATION- Valid Part Numbers

IS25DWP 256M - C M L E



TEMPERATURE RANGE

E = Extended (-40°C to +105°C)
A2 = Automotive Grade (-40°C to +105°C)
A3 = Automotive Grade (-40°C to +125°C)

PACKAGING CONTENT

L = RoHS compliant

PACKAGE Type

M = 16-pin SOIC 300mil
H = 24-ball TFBGA (6x8mm) 5x5 (Call Factory)

Option

J = Standard (1 CE#) (Call Factory)
C = 2 CE#

Die Revision

Blank = First Gen.

Density

256M = 256 Mb

BASE PART NUMBER

IS = Integrated Silicon Solution Inc.

25DLP = Twin SPI FLASH, 2.30V ~ 3.60V, QPI

25DWP = Twin SPI FLASH, 1.65V ~ 1.95V, QPI

Density	Voltage	Order Part Number	Package
256Mb	3.0V	IS25DLP256M-CMLE	16-pin SOIC 300mil
		IS25DLP256M-CMLA2	16-pin SOIC 300mil
		IS25DLP256M-CMLA3	16-pin SOIC 300mil
	1.8V	IS25DWP256M-CMLE	16-pin SOIC 300mil
		IS25DLP256M-CMLA2	16-pin SOIC 300mil
		IS25DLP256M-CMLA3	16-pin SOIC 300mil