IS25DLP256M
IS25DWP256M

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

CONCEPT DATA SHEET
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 µA Standby Current per die
  - 1 µA 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.

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<th>Datasheet</th>
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<tr>
<td>IS25LP128F Datasheet</td>
<td>Call Factory</td>
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<tr>
<td>IS25WP128F Datasheet</td>
<td>Call Factory</td>
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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
256Mb = 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

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<th>Density</th>
<th>Voltage</th>
<th>Order Part Number</th>
<th>Package</th>
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<td>3.0V</td>
<td>IS25DLP256M-CMLE</td>
<td>16-pin SOIC 300mil</td>
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<td>IS25DLP256M-CMLA2</td>
<td>16-pin SOIC 300mil</td>
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<td>1.8V</td>
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