Product Description:

ISSI eMMC product family provides the ideal embedded storage solution for the Automotive, Industrial and Medical applications, which require high performance, endurance across a wide range of operating temperatures, and long-term support. These products are available in Industrial as well as Automotive grade in both 100-ball BGA and 153-ball BGA.

The eMMC integrates MLC NAND Flash memory and an intelligent e.MMC controller inside one JEDEC standard package, providing a standard interface to the host. The controller directly manages the NAND flash, implementing functions like bad block management, error handling (ECC), static and dynamic wear-leveling, IOPS optimization and read sensing. ISSI eMMC devices support Enhanced Mode where the device can be configured as pseudo-SLC (pSLC) for higher read/write performance, endurance and reliability.

Applications:

- Infotainment
- Telematics
- Satellite Radio
- Cluster/Center Stack Displays
- Body Electronics
- Safety Systems (ADAS)
- Industrial Machine
- Medical Imaging
- Test instruments
- Switches & Routers
- Set-top boxes
- Gaming boxes

ISSI eMMC Part Numbers and Specifications:

<table>
<thead>
<tr>
<th>Density</th>
<th>Part Number</th>
<th>Package</th>
<th>Temp. Grade</th>
<th>MMC</th>
<th>Seq Rd/Wr (MB/s)*</th>
<th>Ran Rd/Wr (IOPS)*</th>
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<tbody>
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<td>4GB</td>
<td>IS21ES04G-JCLI</td>
<td>100 BGA</td>
<td>Auto Grade</td>
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<td>153 BGA</td>
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<td>5293 / 1563</td>
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<td>258 / 28</td>
<td>5128 / 1371</td>
</tr>
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<td>5128 / 1371</td>
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<tr>
<td></td>
<td>IS22ES16G-JCLI</td>
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<td>Auto Grade</td>
<td></td>
<td>258 / 49</td>
<td>5128 / 1371</td>
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<td>5193 / 1615</td>
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<td>Auto Grade</td>
<td></td>
<td>256 / 95</td>
<td>5117 / 1793</td>
</tr>
</tbody>
</table>

*performance with eMMC_Write_Reliability ON

Key Features:

- eMMC 5.0 interface
- Density: 4GB up to 64GB
- Error Free memory access
- Security features
- Simplify system design
- Reduce Time-To-Market
- Improved system performance
- Enhanced Mode (pSLC)

Applications:

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Feature Summary:

ISSI eMMC Features | eMMC 5.0
--- | ---
Interface Speed / Max Bandwidth | 400MB/s
Clock Frequency | 200MHz
Data Rate, Mode | HS400, DDR
Bus Width | x4, x8
H/W Reset | Yes
Partitioning | Yes
Enhanced Mode [pseudo-SLC / SLC + MLC] | Yes
Alternative Boot | Yes
Security Features [Trim, RPMB, Secure Erase, Secure Trim] | Yes
High Priority Interrupt | Yes
Back Ground Operation | Yes
Packed Command | Yes
Cache Handling | Yes
Discard | Yes
Dynamic Capacity | Yes
Sanitize | Yes
Power OFF Notification | Yes
Smart Reporting | Yes
Device Health Report | Yes
Field Firmware Update [FFU] | Yes