### Features
- Organized as eight banks of 128Kx8bit.
- Single +5V ± 10% power supply.
- Access time 150ns (max).
- Power dissipation:
  - Active 20mW/MHz (typ).
  - Standby 1mW (max).
- On-chip latches: address, data, #CE, #OE, #WE.
- Automatic byte write: 10ms (max).
- Automatic page write (128 bytes): 10ms (max).
- Data polling and RDY/#Busy.
- Reliable CMOS with MNOS cell technology.
- 10^4 erase/write cycles (in page mode for fast programming access).
- 10 years data retention
- Software data protection.
- Write protection by #RES pin.
- Variable Temperature range
  0°C to 70°C
  -40°C to +85°C
  -55°C to +125°C
- Available with screening option for high reliability application (Space, etc...)

### General Description
The 3DEE8M08CS8020 is a 1,048,576 words of 8bits. Electrically Erasable and Programmable CMOS ROM. It is organized as eight banks of 1Mbit (128Kx32). Each bank has 8bit interface and is selected with specific #CE. All other signals are common to the eight 1Mbit EEPROM. The device is manufactured using 3D PLUS well-known MCM-V patented technology. It is particularly well suited for use in high reliability, high performance and high density system applications. The 3DEE8M08CS8020 module is packaged in a 40 pins SOP.
MEMORY MODULE
EEPROM 1Mx8-SOP

EEPROM MODULE

8Mbit EEPROM organized as 1Mx8, based on 128Kx8

3DEE8M08CS8020

Mechanical Drawing

Test Tools

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage</td>
<td>VCC</td>
<td>4.5</td>
<td>5.5</td>
<td>V</td>
</tr>
<tr>
<td>Input logic high Voltage</td>
<td>VIH</td>
<td>2.2</td>
<td>0.3</td>
<td>V</td>
</tr>
<tr>
<td>Input logic low Voltage</td>
<td>VIL</td>
<td>-0.3</td>
<td>0.8</td>
<td>V</td>
</tr>
<tr>
<td>Output logic high Voltage</td>
<td>VOH</td>
<td>2.4</td>
<td>-</td>
<td>V</td>
</tr>
<tr>
<td>Output logic low Voltage</td>
<td>VOL</td>
<td>-</td>
<td>0.4</td>
<td>V</td>
</tr>
</tbody>
</table>

DC operating conditions and characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage on any pin relative to VSS</td>
<td>Vt</td>
<td>-0.5</td>
<td>7.0</td>
<td>V</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>Tstg</td>
<td>-55</td>
<td>125</td>
<td>°C</td>
</tr>
<tr>
<td>Junction Temperature</td>
<td>TJ</td>
<td>150</td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Thermal resistance,Junction-to-case</td>
<td>ΘJC</td>
<td>19</td>
<td></td>
<td>°C/W</td>
</tr>
</tbody>
</table>

Absolute maximum ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Package Power dissipation permitted</td>
<td>PD</td>
<td>1</td>
<td>W</td>
</tr>
</tbody>
</table>

DC Characteristics @1MHz

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby Current (One bank active)</td>
<td>Icc3</td>
<td>57</td>
<td>mA</td>
</tr>
<tr>
<td>TLL Standby Current</td>
<td>Icc2</td>
<td>8</td>
<td>mA</td>
</tr>
<tr>
<td>CMOS Standby Current</td>
<td>Icc1</td>
<td>160</td>
<td>µA</td>
</tr>
</tbody>
</table>

3DEE8M08CS8020

Temperature Range
C = 0°C ~ +70°C
I = -40°C ~ +85°C
M=55°C ~ +125°C
S= Specific

Quality Level
N = Commercial Grade
B = Industrial Grade
S = Space Grade
C= Custom

Module Marking

<table>
<thead>
<tr>
<th>Part Number Marking</th>
<th>Date Code (WWYY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMXX00000000XXXXXX</td>
<td></td>
</tr>
<tr>
<td>0000</td>
<td></td>
</tr>
<tr>
<td>0000</td>
<td></td>
</tr>
</tbody>
</table>

Main Sales Office

FRANCE
3D PLUS
408, rue Hélène Boucher
78532 BUC Cedex
Tel : 33 (0)1 30 83 26 50
Fax : 33 (0)1 39 56 25 89
Web : www.3d-plus.com
e-mail : sales@3d-plus.com

USA
3D PLUS USA, Inc
151 Callan avenue Suite #310, San Leandro, CA 94577 USA
Tel : (510) 824-5591
Tel : (510) 824-5591
e-mail : sales@3d-plus.com

3D Plus SA reserves the right to cancel product or specifications without notice
3DFP 0020-REV 5-JUN 2017