### PATA NANDrive (LD Series)

<table>
<thead>
<tr>
<th>GLS 85</th>
<th>LD</th>
<th>001T</th>
<th>-</th>
<th>60</th>
<th>-</th>
<th>RI</th>
<th>-</th>
<th>LBTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>XX</td>
<td>XX</td>
<td>X</td>
<td>XXXX</td>
<td>-</td>
<td>XX</td>
<td>-</td>
<td>XX</td>
<td>-</td>
</tr>
</tbody>
</table>

- **Environmental Attribute**: $E = \text{non-Pb}$
- **Package Modifier**: $T = 88 \text{ ball positions (nearest letter code to total ball count of 91)}$
- **Package Type**: $LB = \text{LBGA (max. package height 1.40mm)}$
- **Operation Temperature**: $I = \text{Industrial: -40°C to +85°C}$
- **Write Cycles per Group**: $R = 100M$
- **Host Access Time**: $60 = 60\text{ns, UDMA Mode-4}$
- **Version**
- **Capacity**: $512 = 512 \text{ MByte}$
  $001 = 1 \text{ GByte}$
- **MByte or GByte Designator**: $0 = \text{MByte}$
  $1 = \text{GByte}$
- **Interface**: $D = \text{Parallel ATA/IDE (PATA)}$
- **Voltage**: $L = 3.3V$
- **Product Series**: $85 = \text{NANDrive}$
# PATA NANDrive (LP Series)

| GLS | 85 | LP | 1 | 0xxB | - | M | - | C | - | LBTE | - | NDxxx |
|-----|----|----|---|------|--|--|--|--|--|--|--|--|--|
| XX  | XX | X | XXXX | - | X | - | XXXX | - | XXXXX |

## Ordering Code
- **NDxxx**: NANDrive Revision
- **EDxxx**: Evaluation Board Revision

## Environmental Attribute
- **E**: non-Pb solder (RoHS Compliant)

## Package Modifier
- **T**: 88 ball positions (nearest letter code to total ball count of 91)

## Package Type
- **F**: BGA (max. package height 1.90mm)
- **LF**: LBGA (max. package height 1.45mm)
- **LB**: LBGA (max. package height 1.40mm)

## Operation Temperature
- **I**: Industrial: -40°C to +85°C
- **C**: Commercial: 0°C to +70°C

## NAND configuration
- **M**: 2 bits per cell
- **S**: 1 bit per cell

## Generation / Product Configuration
- **B**: Device Version

## Capacity
- **512**: 512 MByte
- **001**: 1 GByte
- **002**: 2 GByte
- **004**: 4 GByte
- **008**: 8 GByte
- **016**: 16 GByte
- **032**: 32 GByte

## MByte or GByte Designator
- **0**: MByte
- **1**: GByte

## Interface
- **P**: Parallel ATA/IDE (PATA)

## Voltage
- **L**: 3.3V

## Product Series
- **85**: NANDrive

---

1) Note that the top side marking on the package typically does not include ordering codes (e.g. NDxxx), unless it is a special C-SPEC (custom specification) which is required by the end-customer to be marked on the device.
NANDrive™ Part Numbering Guide

SATA NANDrive (LS Series)

<table>
<thead>
<tr>
<th>GLS</th>
<th>LS</th>
<th>1</th>
<th>0xxB</th>
<th>-</th>
<th>M</th>
<th>-</th>
<th>C</th>
<th>-</th>
<th>LBJE</th>
<th>-</th>
<th>NDxxx</th>
</tr>
</thead>
</table>

Ordering Code 1)

- NDxxx = NANDrive Revision
- EDxxx = Evaluation Board Revision

Environmental Attribute

- E = non-Pb solder (RoHS Compliant)

Package Modifier

- BJI/ZJ = 145-ball positions

Package Type

- L = LBGA (max. package height 1.40mm)
- F = FBGA (max. package height 1.45mm)

Operation Temperature

- I = Industrial: -40°C to +85°C
- C = Commercial: 0°C to +70°C

NAND Configuration

- M = 2 bits per cell
- S = 1 bit per cell

Generation / Product Configuration

- B = Device Version

Capacity

- 008 = 8 GByte
- 016 = 16 GByte
- 032 = 32 GByte
- 064 = 64 GByte
- 128 = 128 GByte

MByte or GByte Designator

- 0 = MByte
- 1 = GByte

Interface

- S = Serial ATA (SATA)

Voltage

- L = 3.3V

Product Series

- 85 = NANDrive

1) Note that the top side marking on the package typically does not include ordering codes (e.g. NDxxx), unless it is a special C-SPEC (custom specification) which is required by the end-customer to be marked on the device.
## eMMC NANDrive (VM Series)

<table>
<thead>
<tr>
<th>GLS</th>
<th>VM</th>
<th>1</th>
<th>XXX</th>
<th>B</th>
<th>M</th>
<th>I</th>
<th>LFWE</th>
<th>NDxxx</th>
</tr>
</thead>
</table>

### Ordering Code
1. **NDxxx** = NANDrive Revision
2. **EDxxx** = Evaluation Board Revision

### Environmental Attribute
- **E** = non-Pb solder (RoHS Compliant)

### Package Modifier
- **W** = 100-ball positions
- **Y** = 153-ball positions

### Package Type
- **LF** = LBGA (max. package height 1.40mm)
- **BZ** = LFBGA (max. package height 1.35mm)

### Operation Temperature
- **I** = Industrial: -40°C to +85°C

### NAND Configuration
- **M** = 2 bits per cell
- **S** = 1 bit per cell

### Generation / Product Configuration
- **B** = Device Version

### Capacity
- **008** = 8 GByte
- **016** = 16 GByte
- **032** = 32 GByte
- **064** = 64 GByte
- **128** = 128 GByte

### MByte or GByte Designator
- **0** = MByte
- **1** = GByte

### Interface
- **M** = eMMC

### Voltage
- **V** = 2.7V to 3.3V

### Product Series
- **85** = NANDrive

---

1) Note that the top side marking on the package typically does not include ordering codes (e.g. NDxxx), unless it is a special C-SPEC (custom specification) which is required by the end-customer to be marked on the device.