



**Features**

- MLC-NAND flash technology
- Optional rugged metal frame
- Support Trim command set
- Support Native Command Queuing (NCQ)
- Support LDPC (Low Density Parity Check) ECC algorithm
- Support S.M.A.R.T. command set and utility
- Support Power Loss Protection
- Capacities from 32GB up to 128GB

**Specification**

- **Compatibility**
  - SATA Revision 3.2
  - CFAST™ Specification v2.0
  - ATA-8 ACS4 command set
- **Declarations**
  - RoHS & REACH compliant
- **Flash technology**
  - MLC-NAND flash technology
- **Form-factor**
  - CFAST™ Type I
- **Host interface**
  - 7 pins (data) + 17 pins (power)
  - CFAST™ connector
- **Performance**
  - **Data transfer rate**
    - SATA 1.5Gb/s, 3.0Gb/s, 6.0Gb/s
  - **Sequential read**
    - 555 MB/sec (Max.)
  - **Sequential write**
    - 465 MB/sec (Max.)
- **Environmental**
  - **Operating temp.**
    - STD. 0°C~+70°C/W.T. -40°C~+85°C
  - **Non-operating temp.**
    - STD. -20°C~+80°C/W.T. -50°C~+95°C
  - **Humidity**
    - 10% ~ 95% non-condensing
  - **Vibration**
    - 80 Hz to 2K Hz, 20G, 3axes
  - **Shock**
    - 0.5ms, 1500 G, 3 axes
  - **Altitude**
    - 70,000 feet

- **Power consumption**
  - **Power requirement**
    - +3.3V ± 5%
  - **Reading mode**
    - 1,090 mW (Max.)
  - **Writing mode**
    - 1,475 mW (Max.)
  - **Idle mode**
    - 260 mW (Max.)
- **Reliability**
  - **Wear-leveling**
    - Static and Dynamic wear-leveling algorithms
  - **TBW**
    - Up to 87 TBW at 128GB Capacity
    - (Client workload by JESD-219A)
  - **Erase counts**
    - Up to 3,000 times
  - **ECC**
    - LDPC (Low Density Parity Check)
- **Physical specification**
  - **Weight (Max.)**
    - Plastic frame : 10g
    - Rugged metal frame : 13g
  - **Dimension (WxLxH)**
    - 42.8 x 36.4 x 3.5 (mm)
- **Conformal coating**
  - Optional
- **Warranty**
  - 2 years or within 3,000 erasing counts

**Part Number List**

| Standard plastic frame CFA |                     |                      | Optional rugged metal CFA |                     |                      |
|----------------------------|---------------------|----------------------|---------------------------|---------------------|----------------------|
| Capacity                   | 0°C~+70°C           | -40°C~+85°C          | Capacity                  | 0°C~+70°C           | -40°C~+85°C          |
| 32GB                       | SPCFA032G-PKCTM-(T) | WPCFA032G-PKCTM-(T)C | 32GB                      | SRCFA032G-PKCTM-(T) | WRCFA032G-PKCTM-(T)C |
| 64GB                       | SPCFA064G-PKCTM-(T) | WPCFA064G-PKCTM-(T)C | 64GB                      | SRCFA064G-PKCTM-(T) | WRCFA064G-PKCTM-(T)C |
| 128GB                      | SPCFA128G-PKCTM-(T) | WPCFA128G-PKCTM-(T)C | 128GB                     | SRCFA128G-PKCTM-(T) | WRCFA128G-PKCTM-(T)C |

**Part Number Decoder**

|    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| X1 | X2 | X3 | X4 | X5 | X6 | X7 | X8 | X9 | X10 | X11 | X12 | X13 | X14 | X15 | X16 | X17 | X18 | X19 | X20 |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

**Example**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| W | R | C | F | A | 1 | 2 | 8 | G | — | P | K | C | T | M | — | T | C |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|

- X1 Grade**
  - S : Standard grade operating temp. 0°C~+70°C
  - W : Wide temp. grade operating temp. -40°C~+85°C
- X2 The material of casing**
  - P : Plastic frame
  - R : Rugged metal frame
- X3 X4 X5 Product category**
  - CFA : CFAST™ card
- X6 X7 X8 X9 Capacity**
  - 032G : 32GB
  - 064G : 64GB
  - 128G : 128GB
- X11 Controller**
  - P : PHANES Series

- X12 Controller version**
  - A, B, C, D.....K
- X13 Controller grade**
  - C : Commercial grade
- X14 Flash IC brand**
  - T : Toshiba NAND flash IC
- X15 Flash IC type**
  - M : MLC-NAND flash IC
- X17 X18 X19 X20 Reserved for specific requirements**
  - Blank : Standard product w/o thermal sensor and conformal-coating
  - T : Thermal Sensor (optional)
  - C : Conformal coating (optional)

SLC  
 oSLC  
 MLC  
 3D-NAND  
 DRAM Module  
 Adapter  
 Card-drive