

PRODUCT BRIEF | eUSB, eUSB (eMMC) SSD

# EMBEDDED USB (eUSB)

The embedded USB (eUSB) module from Viking Technology provides a rugged, reliable and cost effective non-volatile memory solution to OEM customers in the Networking, Embedded and Industrial markets. eUSB modules are secure pluggable USB 2.0/3.0 devices with built-in ECC and global wear-leveling for exceptional reliability and product lifetime. Viking eUSB modules are available in capacities up to 128GB and deliver performance up to 35 MB/s.

## FEATURES

- ▶ Reduced size eUSB
- ▶ Optimized for space constraint routers/switches
- ▶ Available in iTemp & cTemp configurations
- ▶ Cost effectiveness utilizing eMMC Flash
- ▶ ECC and Data Management
- ▶ Extremely low cost alternative

## APPLICATIONS SERVED

|                                   |                                         |                                            |
|-----------------------------------|-----------------------------------------|--------------------------------------------|
| Screw mountable for ruggedization | Cost effectiveness utilizing eMMC Flash | Low-cost endurance alternative to SLC NAND |
| ECC & Data Management             | Highest endurance                       | Extremely low cost alternative             |



# EMBEDDED USB (eUSB)

| CAPACITY             |                                  |
|----------------------|----------------------------------|
| SLC                  | Up to 128GB                      |
| PERFORMANCE          |                                  |
| Sustained Read       | Up to 35MB/s                     |
| Sustained Write      | Up to 23MB/s                     |
| Interface            | USB 2.0 / USB 3.0                |
| RELIABILITY          |                                  |
| ECC                  | Embedded 8-bit ECC               |
| MTBF                 | >2,500,000 hours                 |
| Data Retention       | 10 years                         |
| Bit Error Rate (BER) | <1 in 10 <sup>14</sup> bits read |

| ENVIRONMENTAL            |                                              |
|--------------------------|----------------------------------------------|
| Shock                    | 1500g                                        |
| Vibration                | 20g                                          |
| Operating Temp           | 0°C to 70°C (Ctemp)<br>-40°C to 85°C (Itemp) |
| Altitude                 | 80,000 ft                                    |
| Humidity                 | 5% to 95%, non-condensing, relative          |
| Safety/Agency/Compliance | FCC, CE, RoHS                                |
| POWER                    |                                              |
| Voltage                  | 5V Standard, 3.3V Optional                   |
| DIMENSIONS               |                                              |
| 37.8mm x 26.6mm x 7.8mm  |                                              |

## eUSB PART NUMBERS

| FORM FACTOR     | INTERFACE | TEMP         | CAPACITY | P/N                | CONTROLLER   | NAND         |
|-----------------|-----------|--------------|----------|--------------------|--------------|--------------|
| eUSB LowProfile | USB2.0    | 0°C to +70°C | 2GB      | VRFDUC3L2048YCE3A8 | SMI3252      | TSB 24nm SLC |
| eUSB LowProfile | USB2.0    | 0°C to +70°C | 4GB      | VRFDUC3L4096YCH3A6 | SMI3252      | TSB 24nm SLC |
| eUSB LowProfile | USB2.0    | 0°C to +70°C | 8GB      | VRFDUC3L8192ACQ3TH | SMI3252      | TSB 24nm SLC |
| eUSB LowProfile | USB2.0    | 0°C to +70°C | 16GB     | VRFDUC3L016GACR3TH | HyperstoneU8 | TSB 24nm SLC |
| eUSB LowProfile | USB2.0    | 0°C to +70°C | 30GB     | VRFDUC3L030GACSTH  | HyperstoneU8 | TSB 24nm SLC |
| eUSB LowProfile | USB2.0    | 0°C to +70°C | 30GB     | VRFDUC3L030GAISTH  | HyperstoneU8 | TSB 24nm SLC |

## eUSB (eMMC) PART NUMBERS

| FORM FACTOR     | INTERFACE | TEMP           | CAPACITY | P/N              | CONTROLLER   | NAND         |
|-----------------|-----------|----------------|----------|------------------|--------------|--------------|
| eUSB StdProfile | USB2.0    | 0°C to +70°C   | 8GB      | VRFDUC38192ACSTH | HyperstoneU8 | TSB 24nm SLC |
| eUSB StdProfile | USB2.0    | -40°C to +85°C | 8GB      | VRFDUC38192AISTH | HyperstoneU8 | TSB 24nm SLC |
| eUSB StdProfile | USB2.0    | 0°C to +70°C   | 16GB     | VRFDUC3016GACSTH | HyperstoneU8 | TSB 24nm SLC |
| eUSB StdProfile | USB2.0    | -40°C to +85°C | 16GB     | VRFDUC3016GAISTH | HyperstoneU8 | TSB 24nm SLC |
| eUSB StdProfile | USB2.0    | 0°C to +70°C   | 30GB     | VRFDUC3030GACSTH | HyperstoneU8 | TSB 24nm SLC |
| eUSB StdProfile | USB2.0    | -40°C to +85°C | 30GB     | VRFDUC3030GAISTH | HyperstoneU8 | TSB 24nm SLC |

For price and availability, please email us at [sales@vikingtechnology.com](mailto:sales@vikingtechnology.com).



| Global Locations                                                                              |                                                |                                                    |                                                                                       |                                           |
|-----------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------|
| US Headquarters                                                                               | Canada Office                                  | Texas Office                                       | India Office                                                                          | Singapore Office                          |
| 2950 Red Hill Avenue<br>Costa Mesa, CA 92626<br>Main: +1 714 913 2200<br>Fax: +1 714 913 2202 | 500 March Road<br>Ottawa, ON K2K 0J9<br>Canada | 1201 W. Crosby Road<br>Carrollton, TX 75006<br>USA | A 3, Phase II, MEPZ-Special Economic Zone<br>NH 45, Tambaram, Chennai-600045<br>India | No 2 Chai Chee Drive<br>Singapore, 109840 |

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