swissbit®

Product Fact Sheet

Industrial CFexpress Card

G-26 Series

CFexpress v2.0, Type B, 3D pSLC

Industrial Temperature Grade

Date: December 05, 2022
Revision: 1.01



Made in Germany

Product Summary

- **Capacities:** 5 GBytes, 10 GBytes, 20 GBytes, 40 GBytes, 80 GBytes, 160 GBytes
- **Form Factor:** CFexpress® Type B card (38.5mm x 29.6mm x 3.8mm)
- **Compliance[1]:** CFexpress v2.00
- **Interface:** PCIe Gen3 x 2 Lanes
- **Command Sets:** Supports NVMe 1.3
- **Performance**:
  - Read Performance: Sequential Read up to 1,620 MBytes/s, Random Read 4K up to 128,000 IOPS
  - Write Performance: Sequential Write up to 700 MBytes/s, Random Write 4K up to 121,000 IOPS
- **Host Memory Buffer (HMB): Support for increased random performance**
- **Operating Temperature Range[2]:**
  - Industrial: -40 °C to 85 °C
- **Storage Temperature Range:** -40°C to 85°C
- **Operating Voltage:** 3.3V supply voltage
- **Low Power Consumption**
- **Power**:
  - Power States PS0, PS1, PS2, PS3 and PS4
  - Thermal Throttling supported
- **Data Retention:** 10 Years @ Life Begin; 1 Year @ Life End
- **High-Performance Processor with Integrated, Parallel Flash Interface Engines:**
  - 3D NAND Flash
  - LDPC Code ECC (up to 120bit corrections per 1KByte page)
- **High Reliability**
  - Designed for Industrial and Automotive market
  - Ideal for applications like automation, embedded computing, gaming, IIoT and NetCom
  - Optimized for long life cycle that requires superior data retention as well as power fail safety
  - Mean Time Between Failure: >2,000,000 hours
  - Data Reliability: < 1 non-recoverable error per 10^{16} bits read
  - Number of insertion/removal cycles: up to 12,000

[1] The verification of host system and storage device compatibility is in customer's responsibility. Swissbit can provide guidance and support on request.
[2] Adequate airflow is required to ensure the drive temperature, as reported in the S.M.A.R.T. data, does not exceed the specified maximum operating temperature.

Product Features

- Dynamic and Static Wear Leveling
- Subpage Mode Flash Translation Layer (FTL)
- Data Care Management
  - Active: Adaptive Read Refresh
  - Passive: Background Media Scan
- Lifetime Enhancements
  - Dynamic Bad Block Remapping
  - Write Amplification Reduction
- Power Fail Data Loss Protection
- Data set management support (TRIM)
- Active State Power Management (ASPM) Support
- In-Field Firmware Update[3]
- Enterprise-Grade Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.)
- Gold-Plated Connector (IPC-6012B Class 2 Compliant)
- End-to-End (E2E) Data Protection
- AES256 Encryption (on request)
- Life Cycle Management, Controlled "Locked" BOM
- RoHS / REACH compliant
- Swissbit Device Manager (SBDM) Tool and SDK for SBLTM (on request)



Order Information for G-26

Density	Part Number	Temp. Range	Flash Technology
5GB	SFCE005GW1EB1T0-I-5E-11P-STD	-40°C to 85°C	3D NAND Flash SLC-mode
10GB	SFCE010GW1EB1T0-I-5E-11P-STD		
20GB	SFCE020GW1EB2T0-I-5E-11P-STD		
40GB	SFCE040GW1EB4T0-I-5E-11P-STD		
80GB	SFCE080GW1EB4T0-I-6F-11P-STD		
160GB	SFCE160GW1EB4WD-I-6F-11P-STD		

Why Swissbit?

Swissbit is focused on the design, development, manufacture, and support of leading edge memory and storage solutions for the worldwide OEM/ODM marketplace. As a global supplier, Swissbit recognizes and addressees the higher level of application requirements of today's industrial, Netcom, and automotive customers by providing best-in-class products and services, with uncsompromised attention to driving overall value and quality.

[3] The support of In-Field FW update capabilities on host systems is recommended.