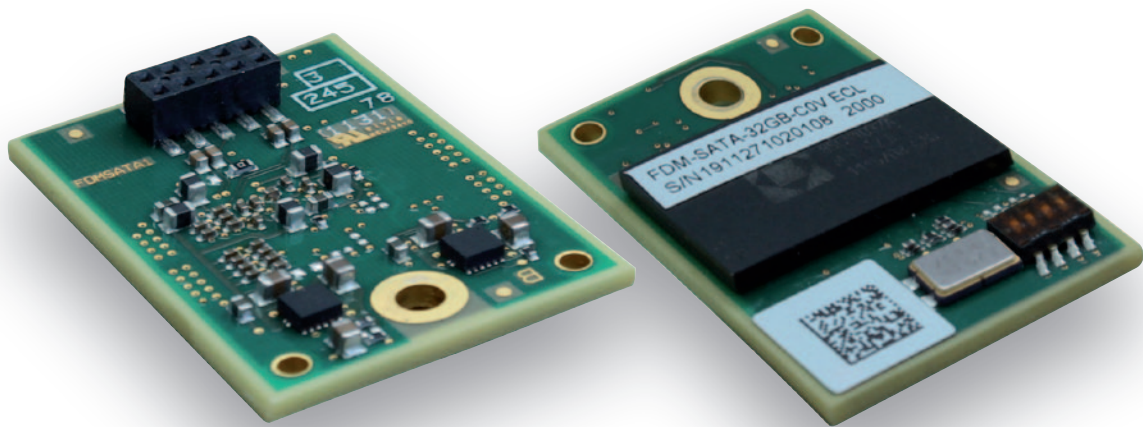# » FDM-SATA «
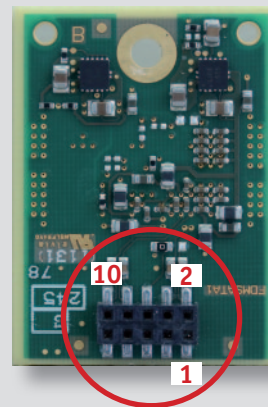

Nand Flash Module

» 4 to 32 GBytes NAND Flash capacity

» Single Level Cell and Multi Level Cell design

» High Speed SATA 2 Link

» Commercial and Industrial Temperature

Product Overview

These NAND Flash modules are using Greenliant SATA NAND drive flash devices, allowing to store up to 32 Gbytes of data on a small onboard mezzanine form factor, compatible with Kontron Single Board Computer Cards. Single level Cells and Multi Level Cells are proposed in various capacities and ope-rating temperature range. Please refer to ordering information. The power dissipation is limited to 1.5 Watts.

Pin	Description
1	+5V
2	SATA_TX+
3	Not Connected
4	SATA_TX-
5	Not Connected
6	GND
7	GND
8	SATA_RX+
9	Not Connected
10	SATA_RX-

Microswitches Description

	Function	Description
1	Sata link speed	off: sata 1 or 2 (default) on: sata 1
2	Write protect	off: no write protect (default) on: write protect
3	Power down notification (not available on all models)	off: no early powerdown notification (default) on: enable early power down notification
4	Power down notification (not available on all models)	Shall be set identically to switch 3.

In addition, switch 2 and 3/4 shall not be all on. The same pin is used on the NAND Flash device for both functions, write protect and early power down noti-fication. The pin function is selected by software, the default is write protect / no write protect function when no software setting is performed to specify the pin function.

When operating under Linux, it is strongly recommended to disable the file system journaling in order to avoid unnecessary wear of the device due to write cycles issued by the journaling of the filesystem. This will also help to limit unwanted erase/write cycle throughput which might lead a significative performance limitation. For example, to disable the journal on a **ext4** filesystem, issue the following command:

```
tune2fs -O '^has_journal' /dev/mapper/vg_lnx9-lv_root
```

Alternativly, to avoid any write access after deployement, an installation of a read-only root file system is recommended (like, for example, Fedora LiveUSB).

Ordering Information

Article	Part.-No.	Description
FDM-SATA	FDM-SATA-32GB-C0V	32 Gbytes NAND Flash, MLC technology, 0° to +55°C operation, coated
FDM-SATA	FDM-SATA-8GB-I0V	8 Gbytes NAND Flash, SLC technology, -40° to +85°C operation, coated
FDM-SATA	FDM-SATA-4GB-I0	4 Gbytes NAND Fash, SLC technology, -40° to +85°C operation, non coated

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