

FB3 Digital Video Recorder



Single & Dual SD Card Miniature H.264 Digital Video Recorder

- **Highly compact and rugged SD card digital video recorder (DVR) with IP streaming capability**
- **Full resolution PAL or NTSC recording**
- **Advanced H.264/AVC video compression - the new video standard used by QuickTime, Blu-ray etc**
- **Real-time and time-lapse record modes**
- **Ethernet IP networking for streaming and configuration**
- **Internal battery options with programmable camera power**
- **USB interface for easy download of files**
- **RS232 interface for connection to GPS receivers etc**

The FB3 is the latest digital video recorder from Drivedata. With its small dimensions, advanced H.264/AVC video compression and the ability to operate over IP networks, the FB3 is the obvious choice for covert law enforcement, extreme sports, TV production and avionics applications. FB3 utilises the latest H.264 video compression format, sometimes known as AVC (Advanced Video Codec). H.264/AVC is the video standard destined to replace MPEG-2 as it has been adopted by Blu-Ray, the next generation of high capacity video disks. H.264 is an extremely efficient compression system, typically offering over 1 hour of record time per GB of full resolution, high quality video and audio. Record times can be increased even further by user configurable time-lapse modes. H.264 is also ideal for streaming over IP networks.

For flexibility, FB3 is available with either single or dual SD card slots. The Single is the most compact, but still manages to retain valuable features including local or remote record switch with vibration feedback, programmable camera power, USB and Ethernet (via adapter) interfaces and optional internal

battery and Knowles microphone. The Dual has the same feature set together with a second SD card slot, to increase record time and an RJ45 socket for easy networking. The Dual also supports Power Over Ethernet (PoE) that allows the recorder and associated cameras to function with just one cable connect

Features:

- Full resolution PAL/NTSC video and stereo audio recording to SD memory cards in H.264 video and AAC stereo audio.
- Simultaneous record and streaming of video and audio over Ethernet at CIF resolution.
- Configurable video quality (bit rate) and time-lapse modes
- Line level, external stereo microphones or built-in mono microphone audio recording.
- 100Mbps Ethernet interface supporting video streaming, control, configuration and file download.
- Single or dual SD memory card slot options. Supports high capacity SDHC cards.
- Onscreen display of coordinates from external GPS receiver.
- Record start / stop by local buttons, remotely wired switches / triggers, internal timer, internal motion detection or web interface.
- Built in vibration feedback for body-worn applications.
- USB-2 port allows the SD card to be viewed as a mass storage device on an external PC.
- Ability to provide regulated 5, 9, 12 or 16 Volts to an external video camera, microphones, GPS receiver, etc.
- Optional Power over Ethernet converter (Standard in Dual units).
- Wide input voltage range (6 to 28 V) and low operating power consumption (typically less than 2 Watts).
- Optional internal battery charger with temperature and current monitoring.

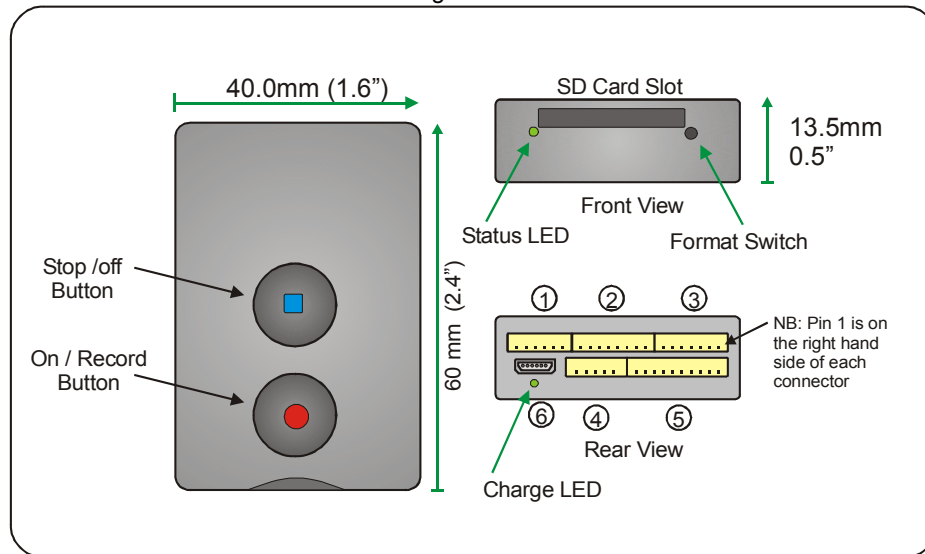
Specifications

Mechanical size	Single; L:60 x W:40 x H:13.5 mm (Height 18.5 mm with internal battery option). Dual; L:80 x W:75 x H:13.5 mm (Height 18.5 mm with internal battery option).
Finish	Hard anodised black aluminium
Weight	Single; 45g (without card and battery) Dual: 67g (without cards and battery)
DC power input	6 - 28 V DC
Current consumption	< 100µA stand-by. < 1.8 Watts in stop (155 mA typical at 12V). < 2.4 Watts recording & streaming (200 mA typical at 12V).
DC outputs	External camera power off; 5, 9, 12 or 16 V. 500 mA at 5 Volts, 200 mA at 12V. GPS power; off, 3.3 or 5 V at 500 mA max.
Operating temperature	-10 to +50°C when suitable SD card is fitted (eg SanDisk Extreme III). 0 to + 35°C with internal battery option.
Record control	Local record start / record stop buttons 2 external inputs activated by contact to ground. Default: Input 1; record switch, Input 2; record on trigger. Option: Input 1; start recording, Input 2; stop recording. Internal vibration alert on record and stop.
Internal battery option	Single: 1 x lithium-polymer cell proving approximately 1.5 hours record time. (without powering external cameras / GPS etc). Dual: 1 x lithium-polymer cell proving approximately 2 hours record time
Configuration	Browser interface via Ethernet connection

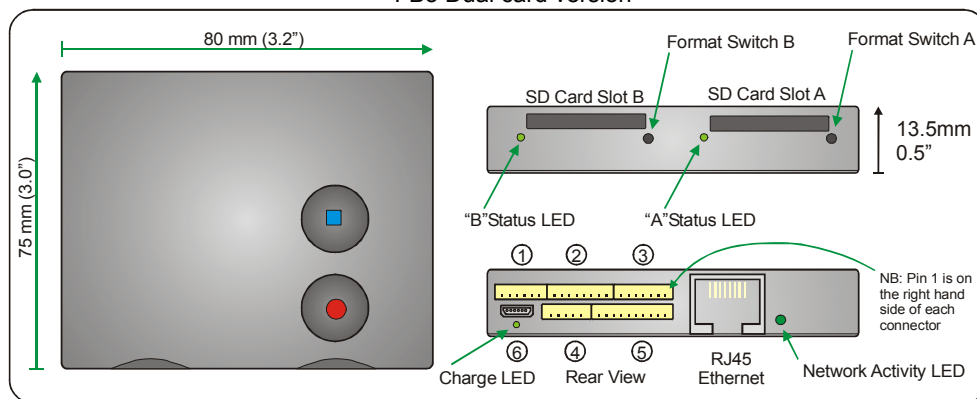
Recording media	Single and dual flash memory card(s) with support for SDHC (Secure Digital High Capacity) Cards should be at least x 133 speed.
Connections	Molex 1.25mm pitch headers. See Mates with Molex 51021 connectors. Interfacing cable clamp assembly to various connector combinations available. Mini USB-2 RJ45 Ethernet connector (Single RJ45 connector via adapter)
Video/Audio:	
Video input	NTSC or PAL, composite or Y/C
Video compression	H.264 / AVC, MPEG-4 part 10. Playable in QuickTime, VLC etc
Video record rate	Real-time (25/30 frames per second) and user configurable time-lapse modes to 1 frame per second..
Video resolution	Full standard definition (NTSC 720 x 488, PAL 720 x 576)
Record rates / times	Extra High 4.5 Mbps (29 minutes/GB) High: 3.0 Mbps (44 minutes / GB) Medium: 2.0 Mbps (66 minutes / GB) Low: 1.0 Mbps (2 hours 12 minutes / GB)
Video streaming	Full rate CIF resolution H.264 streaming of live video input. Can record and stream simultaneously. Bit rates from 100 kbps to 800 kbps
Onscreen display	Recorded text overlay of date and time (in European & US formats) and GPS coordinates. User configurable position, text colour etc
Audio input	Microphone / line level, user configurable. Automatic gain control (AGC) on/off
Audio format	Stereo 44.1 kHz 16 bits per sample, AAC compression
Motion detection (option)	16 user configurable zones with selectable sensitivity
Data Interfaces	
Ethernet interface	RJ45 socket Dual, RJ45 adapter cable on Single. Programmable IP address (DHCP optional). HTML Web page configuration (password protected). Download of files via HTTP. Secure web and file download (via future upgrade). Dual recorder can be powered by Power over Ethernet (PoE).
Other Interfaces	USB-2 slave interface for file download. Shows the SD card as an external drive. RS232 port, can interface to GPS receiver to show coordinates onscreen or to control external PTZ camera etc.

Dimensions & Interfaces

FB3 Single card version



FB3 Dual card version



FB3 Interfaces

Connector 1 Power/control

- 1 6-28V DC In
- 2 Control Input 1 (default: record on ground)
- 3 Control Input 2 (default: trigger on ground)
- 4 Control Input 3 (switch off on ground)
- 5 Recording OK Out, 3.0V 300mA switchable
- 6 Power Ground

Connector 2 - Other Digital.

- 1 GPS Power Out
- 2 RS232 TX
- 3 RS232 RX
- 4 UART BOOT enable
- 5 Unconnected
- 6 Unconnected
- 7 Battery connection
- 8 Power Ground

Connector 3 Ethernet Network.

(Single Only - external adapter to RJ45 required)

Connector 4 Audio/Video Output.

- 1 Video Out (Composite)
- 2 Video Ground
- 3 Audio Out Left
- 4 Audio Out Right
- 5 Audio Ground

Connector 5 Audio/Video In.

- 1 Video In / S-Video Y
- 2 S-Video C In
- 3 Video Ground
- 4 Camera Power out - 5/9/12/16V/Off
- 5 Power Ground
- 6 Mic Bias L
- 7 Audio In Left
- 8 Mic Bias R
- 9 Audio In Right
- 10 Audio Ground

Connector 6 mini-USB-2.

Drivedata (UK) Ltd reserves the right to change specifications without notice. E&OE