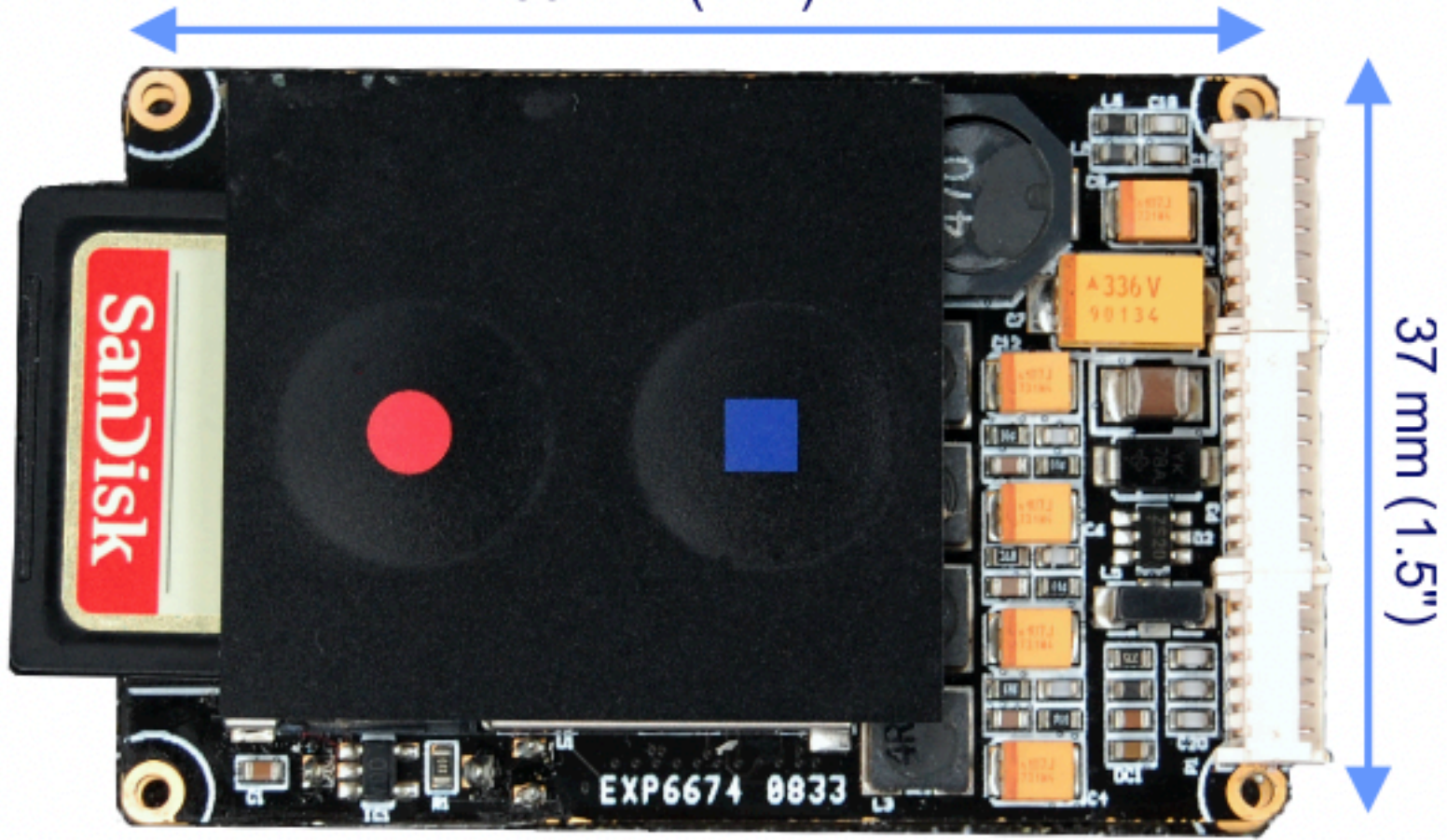


Miniature digital video recorder PCBs for integration into larger systems.

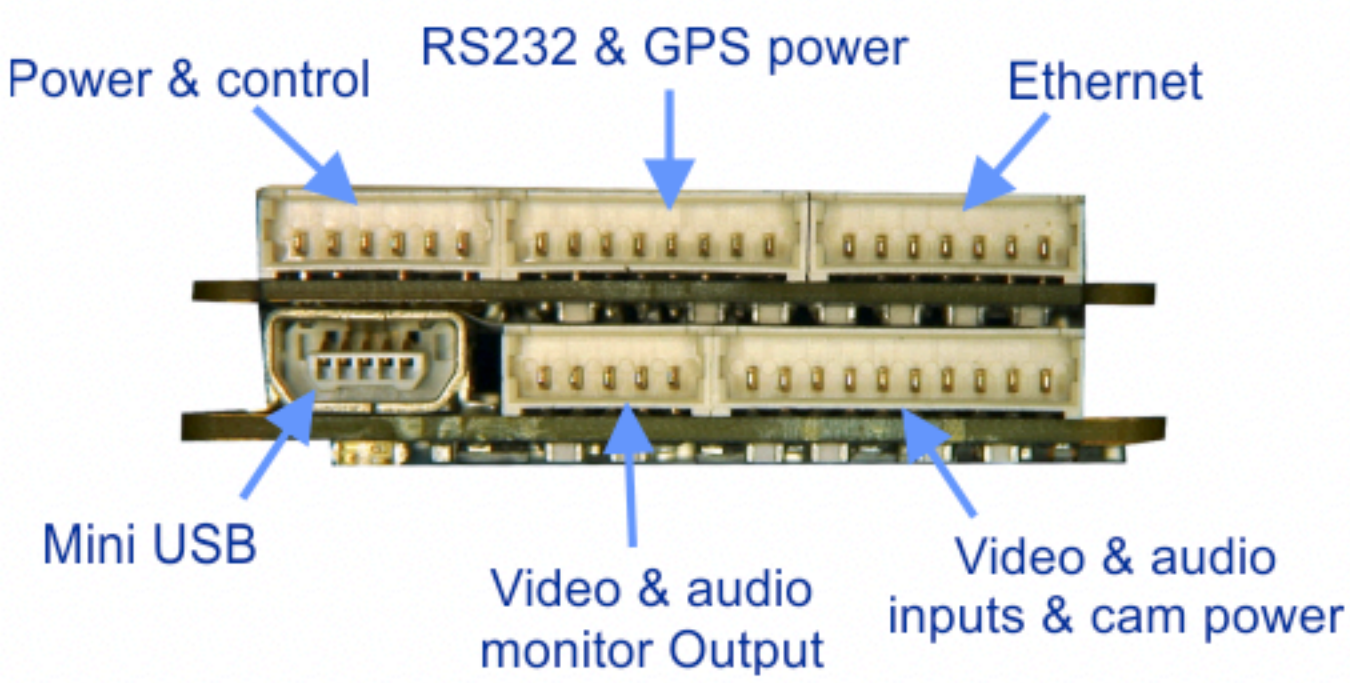
Ovation Systems produce a range of miniature video recorders which can be supplied as PCBs. The range includes SD card recorders with either standard and high definition inputs. Each has networking interfaces for remote control and configuration via a webpage interface as well as the ability to stream. To aid design-in, full CAD models are provided along with wiring diagrams, control protocols etc. The DVRs feature a set of edge connectors with all the input and output group together for ease of installation.

[PCB Dimensions Diagram](#) [Pin-outs](#)

60 mm (2.4")



37 mm (1.5")



Specification Summary:

Feature	Version 3	Version 4
PCB set size	60 x 37 x 11 mm	60 mx 56 x 10 mm
DC Input range	6 to 28 V DC	6 to 28 VDC
Power consumption when recording	2 Watts typ (SD)	3 Watts typ (HD)
Video inputs	1 x SD (NTSC/PAL)	1 to 4 SD (NTSC/PAL) HD: HDMI or dedicated range of miniature HD cameras (1080p30)
Audio Inputs	2, mic & line level	2, mic & line level
Recording medium	Removable SD card up to 128GB	Removable SD card up to 256GB
Compression	H.264 recording to FLV files	H.264 recording to FLV files
SD card encryption	No	AES 128 / 256 bit
Networking	Ethernet, optional 3G modem	Ethernet, WiFi optional 4G modem
Webpage interface for control & configuration	Yes	Yes
Streaming	H.264 to dedicated server / PC application	H.264 using RTSP
OEM control interfaces (protocols provided)	RS232, Ethernet	RS232, IP (via SSH)
Internal IP Sec VPN	No	Yes.

12 Connectors

Connector 1 – Power/control

- 1 RED - 6-28V DC in.
- 2 YELLOW - Record In
- 3 BLUE - Record Stop IN
- 4 GREEN - Input 3
- 5 ORANGE - REC OUT – 300mA
- 6 BLACK - Power Ground

Connector 2 - Other Digital

- 1 ORANGE - GPS Power Out
- 2 YELLOW - RS232 TX
- 3 GREEN - RS232 RX
- 4 BLUE - UART BOOT enable
- 5 xxx - Unconnected
- 6 xxx - Unconnected
- 7 PINK - Battery
- 8 BLACK - Power Ground

Connector 3 - Network:

- 1 PINK - PWR_5V0 Out
- 2 ORANGE - PWR_3V3 Out
- 3 YELLOW - TXD+
- 4 VIOLET - TXD-
- 5 BLUE - RXD+
- 6 GREEN - RXD
- 7 BLACK - Power Ground

USB – Miniature USB type.

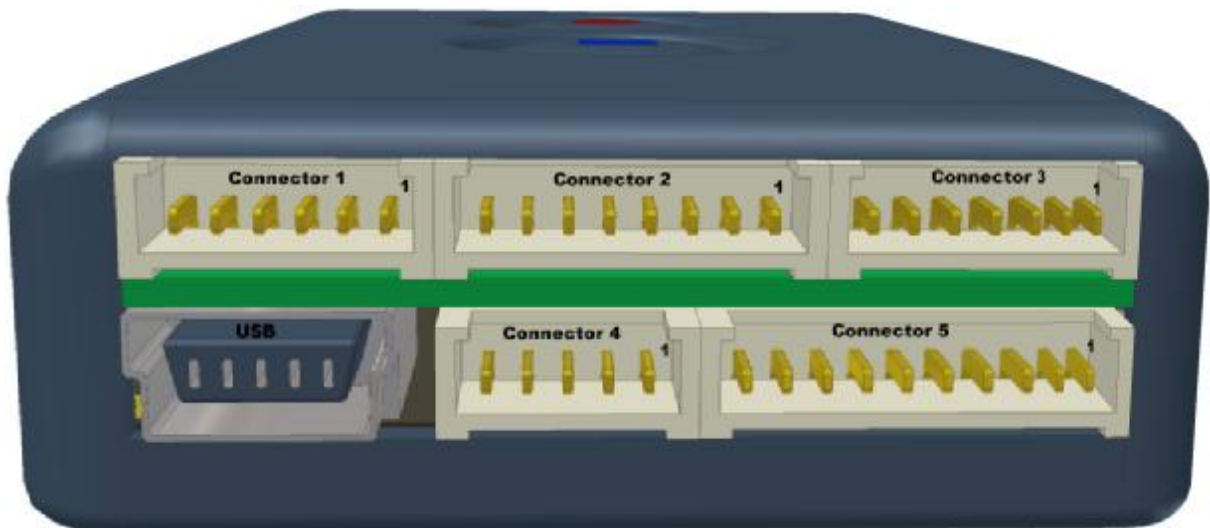
- 1 Spare
- 2 USB DM
- 3 USB DP
- 4 USB Power
- 5 USB Ground

Connector 4 – Audi/Video Output.

- 1 VIOLET - Video Out (Composite)
- 2 BROWN - Video Ground
- 3 WHITE - Audio Out Left
- 4 YELLOW - Audio Out Right
- 5 GREY - Audio Ground

Connector 5 – Audio/Video In.

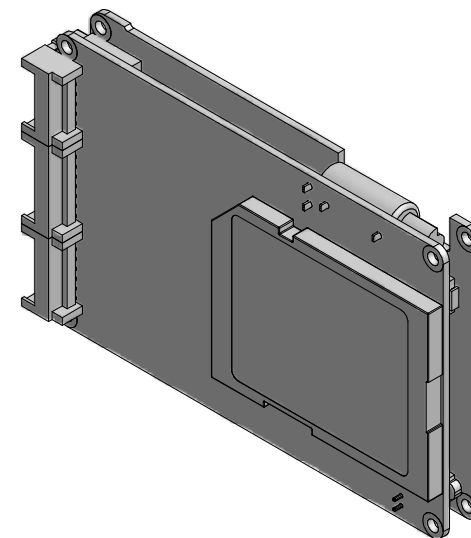
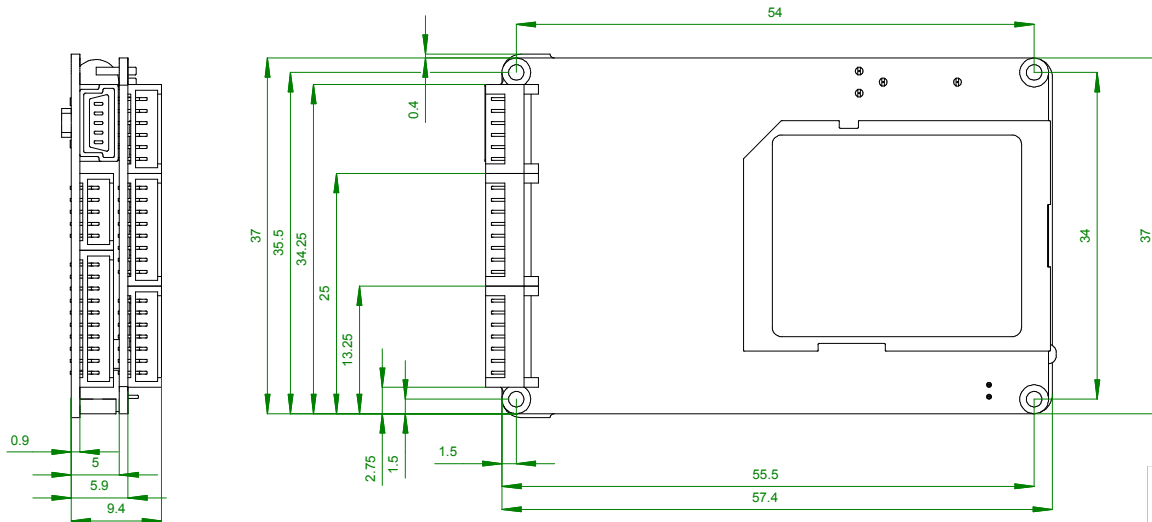
- 1 BLUE - Video In / S-Video Y
- 2 GREEN - S-Video C
- 3 BROWN -Video Ground
- 4 ORANGE - CAM PWR OUT
- 5 BLACK - Power Ground
- 6 PINK - Mic Bias L
- 7 WHITE - Audio Left
- 8 PINK - Mic Bias R
- 9 YELLOW - Audio Right
- 10 GREY - Audio Ground



Notes: Network TXD+,-,RXD+,- must be connected to a network through an isolating transformer only.

RECORD and RECORD STOP are active LOW signals, pulled high to 3.3V by 10K resistors. External switches should connect these signals to GROUND to be active.

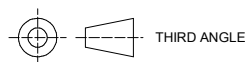
CAUTION: Take care not to incorrectly plug a smaller connector into a larger socket. Connector 1 in particular, should not be indvertibly plugged into Socket 3.



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PROJECT	MATERIAL	OVATION SYSTEMS LTD	
D.A.	FINISH	Springfield Barn	
MECHANICAL	SCALE (ORIGINAL)	London Road, Milton Common	
ELECTRICAL	DIMENSIONS IN MM	Oxon OX9 2JY	
CHECKED	DO NOT SCALE	UNITED KINGDOM	
DRAWN	TOLERANCES:	DRAWING TITLE:	
ECN No	CHECKED	FB3 Board Pair	
		DRAWING NO: PCB_SET1	
		REV SHEET 1 OF 1	
		DATE 25/06/2009	