

# Router

## BVRD2M

Certified to BSEN54



The BVRD2M DSP-controlled router is well-established and has been installed in many prestigious sites Worldwide.

## VIGIL 2

### FEATURES:

- DSP control.
- Eight electronically balanced inputs. Inputs one and two are configurable with 'all call' processor bypass and are normally reserved for fire microphone(s). All inputs have both independent priority and level settings.
- Up to fifteen priority levels are available. If two concurrent routes are set at the same priority they will be treated on a 'first come first served' basis. Priorities are changeable.
- Three band parametric plus bass and treble equalisation on all inputs (with limiter/compressor), enhancing the intelligibility of the system.
- 'All call' failsafe emergency message generator (twenty second EPROM).
- Seven electronically balanced audio outputs with ten band parametric equalisation and audio delay of up to one second.
- Fully monitored surveillance at either 30Hz or 20kHz (faults are recorded in the history log). All inputs, outputs and DSP messages can be aurally monitored through a loudspeaker on the front panel.
- Built-in realtime clock enables detailed logging and reporting, including detected faults. Indicates time, date, month and year. Also used for night time volume reduction, timed message trigger and to control external inputs. The history log can be accessed via the USB2 port on the front panel.
- Six flash stored (57 second) messages with independent level, surveillance and timing. (For longer, non-critical messages, up to three can be combined.) Settings and messages are changeable (password protected) via the USB2 port.
- Nine selectable chimes / pre-announcement tones of up to eight seconds in length.
- Expandable with BVRD25 (slave router) and CANBUS modules.

- Up to 126 EVAS routers can be networked using fibre or copper to produce a truly sophisticated digital VA network.
- Message synchronisation, even on a decentralised system.
- Ambient noise sensing.
- Amplifier changeover (one in ten).
- Two RS485 ports for networking, microphones, etc.
- Zone grouping and barring on BVRD voice alarm controller.

### HARDWARE FACILITIES:

#### Audio:

- 8 x electronically balanced line -20dB audio inputs (inputs 1 and 2 with processor bypass).
- 'All call' failsafe emergency message generator (20 second EPROM) in the event of DSP failure.
- 7 x electronically balanced 0dBm audio outputs.
- 2 x opto-coupled sounder circuit programmable inputs from the fire detection system.
- 6 x analogue voltage sensing inputs for monitored input access, ambient noise sensors, remote volume controls.
- 3 x contact inputs for unmonitored zone access or PTT.

#### Control Outputs:

- 6 x NPN collector outputs 40V @ 100mA for busy, etc.
- 1 x volt free relay changeover contact for common fault.

#### Serial Ports:

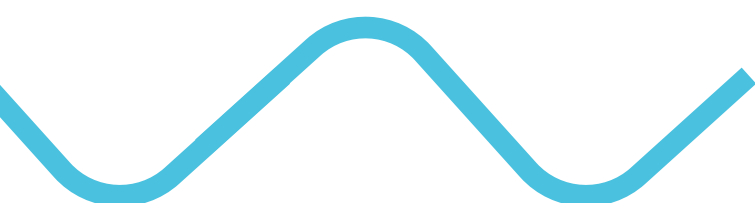
- 2 x RS485 half-duplex ports for communicating to control microphones, fire detection systems, network control, fault reporting.
- 1 x front panel USB2 port to configure the system, fault diagnostics, fault reporting, message download, etc.

# Specifications:

Audio input and output processing using DSP analogue devices ADSP2116 operating at 100MHz.

AUDIO INPUTS	
Input sensitivity	80mV (-20dB) to 3V (+12dB)
Frequency response	-3 dB @ 30Hz and 20kHz
Signal to noise ratio	Better than 70dB
Phantom power	12V
Three band parametric equalisation	
Frequency	50Hz, 63Hz, 80Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1kHz, 1.25kHz, 1.6kHz, 2kHz, 2.5kHz, 3.15kHz, 4kHz, 5kHz, 6.3kHz, 8kHz, 10kHz, 12.5kHz, 16kHz
Bandwidth	0.05oct, 0.1oct, 0.2oct, 0.33oct, 0.5oct, 0.66oct, 1oct & 2oct
Lift and cut	± 12dB in 1dB steps
Low filter	
Frequency	250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1kHz, 1.2kHz, 1.6kHz, 2kHz, 2.5kHz
Slope	3dB/oct & 6dB/oct
Lift and cut	± 12dB in 1dB steps
High filter	
Frequency	500Hz, 630Hz, 800Hz, 1kHz, 1.25kHz, 1.6kHz, 2kHz, 2.5kHz, 3.15kHz, 4kHz, 5kHz
Lift and cut	± 12dB in 1dB steps
High pass filter	
Frequency	100Hz, 150Hz, 200Hz, 250Hz, 300Hz
Slope	18dB/oct, 12dB/oct, 6dB/oct
Compressor	
Ratio	1.4:1, 2:1, 4:1, 8:1 & limiter
Attack	0-99mS
Release	0-999mS
Messages flash PROM	
Storage medium flash PROM (non-volatile) 57 seconds	
Frequency response	-3dB @ 50Hz & 18kHz
Signal to noise ratio	Better than 65dB

AUDIO OUTPUTS	
Nominal output level	0.775V (0dB)
Max output level	1.5V (+6dBm) @ 400 ohms source = 400 ohms
Frequency response	-3dB @ 30Hz & 20kHz
Output to noise ratio	Better than -85dB
Ten band parametric equalisation	
Frequency	50Hz, 63Hz, 80Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1kHz, 1.25kHz, 1.6kHz, 2kHz, 2.5kHz, 3.15kHz, 4kHz, 5kHz, 6.3kHz, 8kHz, 10kHz, 12.5kHz, 16kHz
Bandwidth	0.05oct, 0.1oct, 0.2oct, 0.33oct, 0.5oct, 0.66oct, 1oct & 2oct
Lift and cut	± 12dB in 1dB steps
Low filter	
Frequency	250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1kHz, 1.25kHz, 1.6kHz, 2kHz, 2.5kHz
Slope	3dB/oct & 6dB/oct
Lift and cut	± 12dB in 1dB steps
High filter	
Frequency	500Hz, 630Hz, 800Hz, 1kHz, 1.25kHz, 1.6kHz, 2kHz, 2.5kHz, 3.15kHz, 4kHz, 5kHz
Lift and cut	± 12dB in 1dB steps
Audio delay	
Selectable from 0 to 1 second	
Front panel	
Monitor speaker to listen to inputs or outputs	
Common fault indicator, sounder and fault accept button	
LCD display 40x2 characters, backlit, Rotary encoder to ease configuration, setting levels, entering text, etc.	
POWER	
DC requirements	22V-35V @ 500mA
Dimensions HxWxD	42.5 x 480 x 280 mm
Weight	3.42 kg
Finish	RAL 9005



**BALDWIN BOXALL**  
LEADING THE WAY TO SAFETY

Baldwin Boxall Communications Ltd  
Wealden Industrial Estate, Farningham Road,  
Crowborough, East Sussex, TN6 2JR, United Kingdom

T: +44 (0) 1892 664422  
E: hello@baldwinboxall.co.uk  
W: www.baldwinboxall.co.uk