	ACS LaserWave Nucleus 16	Adaptec AudioEdge	Adaptec SCSI AudioMachine	Advanced Gravis UltraSound Max	Antex Z1e
List price	$79.00	$249.00	$349.00	$249.00	$595.00
General Features					
Maximum sampling rate (kHz)	44.1	44.1	44.1	48	48
Sound chip set	ESS 688F	Crystal Semiconductor 4248	Crystal Semiconductor 4248	ICS GF1	Crystal Semiconductor 4216
Manufacturer of on-board DSP	N/A(1)	Analog Devices	Analog Devices	ICS	Texas Instruments
Amplifier (watts per channel)	4	4	4	4	N/A(1)
IRQ levels supported	2, 5, 7, 10	2 or 9, 3, 5, 7, 10–12	2 or 9, 3, 5, 7, 10–12	2–5, 7, 9–11, 12, 15	2, 3, 5, 7, 10, 11
Number of selectable addresses	4	4	4	6	4
User can set all IRQs and DMAs via software	n	n	n	y	n
Compatibility built into hardware or software:					
Ad Lib	Hardware	Hardware	Hardware	Software	Hardware
Creative Labs Sound Blaster	Hardware	Hardware	Hardware	Software	N/A(1)
Microsoft Windows Sound System	Both	Hardware	Hardware	Software	Software
Roland MPU-401	N/A(1)	Hardware	Hardware	Software	Hardware
Compression support built into hardware or software:					
ADPCM	Hardware	Software	Software	Hardware	Hardware
A-Law	N/A(1)	N/A(1)	N/A(1)	Hardware	N/A(1)
Mu-Law	N/A(1)	N/A(1)	N/A(1)	Hardware	N/A(1)
MPEG compression	N/A(1)	N/A(1)	N/A(1)	N/A(1)	Hardware
MPEG decompression	N/A(1)	N/A(1)	N/A(1)	N/A(1)	Hardware
MIDI Synthesizer					
MIDI synthesizer chip	Yamaha OPL3	Analog Devices DSP 2115	Analog Devices DSP 2115	ICS GF1	Yamaha OPL3
Synthesizer type	FM (wavetable option, $99)	FM, wavetable	FM, wavetable	Wavetable	FM (wavetable option, $195)
Number of operators for FM synthesis	4	2	2	N/A(1)	4
Provides MIDI interface/Supports General MIDI	y y	y y	y y	y y	y y
Number of channels for recording/playback	16, 16	16, 16	16, 16	2, 34	16, 16
Number of MIDI instruments provided	175	128	128	192	128
Storage location	Hard disk	On-board ROM	On-board ROM	Hard disk	On-board ROM
Number of simultaneously supported instruments	20	32	32	32	16
Number of voices	20	32	32	32	20
3-D sound technology	None	None	None	None	None
Mixing Capabilities					
Mixes audio from:					
CDs/Microphone	y y	y y	y y	y y	y y
PC internal speaker/Stereo DAC	y y	n n	n n	n y	n y
Stereo line-in/Stereo synthesizer	y y	y y	y y	y y	y y
Connectors and Ports					
CD-ROM drive interfaces	Proprietary Mitsumi, Panasonic, Sony; optional SCSI connector, $29	SCSI-2	SCSI-2	Proprietary Mitsumi, Panasonic, Sony	SCSI-1
Joystick/Variable line-out	y y	y y	y y	y y	y n
Microphone/Low-level line-out	y y	y y	y y	y y	y n
Low-level line-in	y	y	y	y	y
Technical Support					
Toll-free technical support	y	y	y	n	y
Technical-support hours (eastern time)	12:00–8:00 M–F	9:00–8:00 M–F	9:00–8:00 M–F	11:00–7:30 M–F	12:00–8:00 M–F
Warranty	2 years	5 years	5 years	3 years	1 year
	N/A(1)—Not applicable: The product does not have this feature.				

	Aztech WaveRider 32+	Best Data ACE 5000	Boca Sound-Expression 14.4VSp	Creative Labs Sound Blaster 16 Value Edition
List price	$199.00	$299.00	$199.00	$139.95
General Features				
Maximum sampling rate (kHz)	48	44.1	44.1	44.1
Sound chip set	Aztech AZT2316A	IBM Mwave	Crystal Semi-conductor 4231, Opti Media 929	Proprietary Creative Labs
Manufacturer of on-board DSP	N/A(1)	IBM	N/A(1)	Creative Labs
Amplifier (watts per channel)	4	N/A(1)	4	4
IRQ levels supported	2, 5, 7, 10	3–5, 10, 11, 15	5, 7, 10, 11	2, 5, 7, 10
Number of selectable addresses	2	2	4	4
User can set all IRQs and DMAs via software	y	n	n	n
Compatibility built into hardware or software:				
Ad Lib	Hardware	N/A(1)	Both	Hardware
Creative Labs Sound Blaster	Hardware	Software	Both	Hardware
Microsoft Windows Sound System	Hardware	Software	N/A(1)	N/A(1)
Roland MPU-401	Hardware	N/A(1)	Hardware	Hardware
Compression support built into hardware or software:				
ADPCM	Hardware	Software	Hardware	Software
A-Law	Hardware	N/A(1)	Hardware	Software
Mu-Law	Hardware	N/A(1)	Hardware	Software
MPEG compression	N/A(1)	N/A(1)	N/A(1)	N/A(1)
MPEG decompression	Software	N/A(1)	N/A(1)	N/A(1)
MIDI Synthesizer				
MIDI synthesizer chip	ICS WaveFront, Yamaha OPL3	IBM Mwave	Yamaha OPL3	Yamaha OPL3
Synthesizer type	FM, wavetable	Wavetable	FM	FM
Number of operators for FM synthesis	4	N/A(1)	4	4
Provides MIDI interface/Supports General MIDI	y y	n y	y y	y y
Number of channels for recording/playback	16, 16	2, 2	16, 16	16, 16
Number of MIDI instruments provided	128	128	128	128
Storage location	On-board ROM	Hard disk	Hard disk	Hard disk
Number of simultaneously supported instruments	32	8	20	20
Number of voices	32	8	20	20
3-D sound technology	Optional SRS, $39	None	None	None
Mixing Capabilities				
Mixes audio from:				
CDs/Microphone	y y	y y	y y	y y
PC internal speaker/Stereo DAC	y y	y y	n y	y y
Stereo line-in/Stereo synthesizer	y y	y y	y y	y y
Connectors and Ports				
CD-ROM drive interfaces	IDE; proprietary Mitsumi, Panasonic, Sony	Proprietary Panasonic; TEAC SuperQuad 4X	IDE; proprietary Mitsumi, Panasonic, Sony	Proprietary Panasonic
Joystick/Variable line-out	y y	n n	y y	y y
Microphone/Low-level line-out	y y	y y	y y	y y
Low-level line-in	y	y	y	y
Technical Support				
Toll-free technical support	y	n	n	n
Technical-support hours (eastern time)	11:00–8:00 M–F	8:00–4:30 M–F	8:00–6:30 M–F	9:00 A.M.–1 A.M. 7 days
Warranty	1 year	2 years	5 years	1 year

	Creative Labs Sound Blaster AWE32 Value Edition	Creative Labs Sound Blaster AWE32	Ensoniq Soundscape	Genoa AudioBlitz 3D
List price	$329.00	$399.00	$219.00	$179.00
General Features				
Maximum sampling rate (kHz)	44.1	44.1	44.1	48
Sound chip set	E-mu 8000	E-mu 8000	Ensoniq OTTO	Opti Media 929
Manufacturer of on-board DSP	E-mu	E-mu	N/A(1)	N/A(1)
Amplifier (watts per channel)	4	4	N/A(1)	4
IRQ levels supported	2, 5, 7, 10	2, 5, 7, 10	2, 5, 7, 10	5, 7, 11
Number of selectable addresses	4	4	5	2
User can set all IRQs and DMAs via software	n	n	n	n
Compatibility built into hardware or software:				
Ad Lib	Hardware	Hardware	Both	Both
Creative Labs Sound Blaster	Hardware	Hardware	Both	Both
Microsoft Windows Sound System	N/A(1)	N/A(1)	Both	N/A(1)
Roland MPU-401	Hardware	Hardware	Both	Both
Compression support built into hardware or software:				
ADPCM	Software	Hardware	Software	Software
A-Law	Software	Hardware	Hardware	Software
Mu-Law	Software	Hardware	Hardware	Software
MPEG compression	N/A(1)	N/A(1)	N/A(1)	N/A(1)
MPEG decompression	N/A(1)	N/A(1)	N/A(1)	N/A(1)
MIDI Synthesizer				
MIDI synthesizer chip	E-mu 8000, Yamaha OPL3	E-mu 8000, Yamaha OPL3	Ensoniq OTTO	Yamaha OPL3
Synthesizer type	FM, wavetable	FM, wavetable (wavetable upgrade, $249)	FM, wavetable	FM (wavetable option, $99)
Number of operators for FM synthesis	4	4	4	4
Provides MIDI interface/Supports General MIDI	y y	y y	y y	y y
Number of channels for recording/playback	16, 16	16, 16	16, 16	2, 2
Number of MIDI instruments provided	128	128	128	128
Storage location	On-board ROM	On-board ROM	On-board ROM	Hard disk
Number of simultaneously supported instruments	16	16	16	20
Number of voices	32	32	32	20
3-D sound technology	Q-Sound	Q-Sound	None	SRS
Mixing Capabilities				
Mixes audio from:				
CDs/Microphone	y y	y y	y y	y y
PC internal speaker/Stereo DAC	y y	y y	n y	y y
Stereo line-in/Stereo synthesizer	y y	y y	y y	y y
Connectors and Ports				
CD-ROM drive interfaces	Proprietary Mitsumi, Panasonic, Sony	Proprietary Mitsumi, Panasonic, Sony	Proprietary Mitsumi, Panasonic, Sony	IDE; proprietary Mitsumi, Panasonic, Sony
Joystick/Variable line-out	y y	y y	y n	y y
Microphone/Low-level line-out	y y	y y	n y	y y
Low-level line-in	y	y	y	y
Technical Support				
Toll-free technical support	n	n	n	n
Technical-support hours (eastern time)	9:00 A.M.–1 A.M. 7 days	9:00 A.M.–1 A.M. 7 days	8:30–5:30 M–F	11:00–8:00 M–F
Warranty	1 year	1 year	3 years	2 years

	KYE Genius SoundMaker 16E/Value Edition	Logitech SoundMan Wave	MediaMagic Telemetry-32	Mediatrix Audiotrix Pro
List price	$99.95	$249.00	$299.00	$295.00
General Features				
Maximum sampling rate (kHz)	44.1	44.1	44.1	48
Sound chip set	ESS 688F	Media Vision Jazz 16	AT&T 3210	Crystal Semi-conductor 4231
Manufacturer of on-board DSP	N/A(1)	N/A(1)	AT&T	Crystal Semi-conductor
Amplifier (watts per channel)	2	4	4	4
IRQ levels supported	5, 7, 9, 10	2, 3, 5, 7, 10, 15	5, 7, 9–11, 15	7, 9–11
Number of selectable addresses	4	4	4	4
User can set all IRQs and DMAs via software	n	y	y	y
Compatibility built into hardware or software:				
Ad Lib	Hardware	Hardware	Both	Hardware
Creative Labs Sound Blaster	Hardware	Hardware	Software	Hardware
Microsoft Windows Sound System	N/A(1)	N/A(1)	Software	Hardware
Roland MPU-401	N/A(1)	Hardware	Hardware	Hardware
Compression support built into hardware or software:				
ADPCM	Hardware	Hardware	Software	Hardware
A-Law	N/A(1)	Hardware	Software	Hardware
Mu-Law	N/A(1)	Hardware	Software	Hardware
MPEG compression	N/A(1)	N/A(1)	Software	N/A(1)
MPEG decompression	N/A(1)	N/A(1)	Software	N/A(1)
MIDI Synthesizer				
MIDI synthesizer chip	Yamaha OPL3	Yamaha OPL4	AT&T 3210	Yamaha OPL4
Synthesizer type	FM	FM, wavetable	FM, wavetable	FM, wavetable
Number of operators for FM synthesis	4	4	4	4
Provides MIDI interface/Supports General MIDI	y y	y y	y y	y y
Number of channels for recording/playback	4, 4	5, 5	10, 10	32, 32
Number of MIDI instruments provided	128	128	128	128
Storage location	On-board ROM	On-board ROM	On-board ROM	On-board ROM
Number of simultaneously supported instruments	4	20	24	32
Number of voices	16	44	20	44
3-D sound technology	None	None	None	Optional SRS, $90
Mixing Capabilities				
Mixes audio from:				
CDs/Microphone	y y	y y	y y	y y
PC internal speaker/Stereo DAC	n y	y y	n n	n n
Stereo line-in/Stereo synthesizer	y y	y y	y y	y y
Connectors and Ports				
CD-ROM drive interfaces	Proprietary Mitsumi, Panasonic, Sony	Proprietary SCSI	IDE; proprietary Mitsumi, Panasonic, Sony	Optional connec-tors: proprietary Mitsumi, Pana- sonic, Sony, $30; SCSI-2, $48; Phil- ips CM206, $55
Joystick/Variable line-out	y y	y y	y y	y y
Microphone/Low-level line-out	y y	y y	y y	y y
Low-level line-in	y	y	y	y
Technical Support				
Toll-free technical support	n	n	y	n
Technical-support hours (eastern time)	8:00–5:00 M–F	24 hours, 7 days	7:00 A.M.– 1:00 A.M. M–F	9:00–5:00 M–F
Warranty	1 year	3 years	1 year	1 year

	Media Vision Premium 3-D	Media Vision Pro 3-D	miroSound PCM 1 PRO	Multiwave Audiowave Green 16
List price	$199.00	$379.00	$229.00	$99.00
General Features				
Maximum sampling rate (kHz)	48	48	44.1	44.1
Sound chip set	Media Vision MVD1216	Media Vision MVD1216	Crystal Semi-conductor 4231	ESS 688F
Manufacturer of on-board DSP	N/A(1)	N/A(1)	N/A(1)	N/A(1)
Amplifier (watts per channel)	1–4	1–4	4	4
IRQ levels supported	1, 3, 5, 7, 11, 15	1, 3, 5, 7, 11, 15	7, 9–11	2, 5, 7, 10
Number of selectable addresses	6	6	4	4
User can set all IRQs and DMAs via software	y	y	y	n
Compatibility built into hardware or software:				
Ad Lib	Software	Software	Hardware	Hardware
Creative Labs Sound Blaster	Software	Software	Hardware	Hardware
Microsoft Windows Sound System	Software	Software	Hardware	Both
Roland MPU-401	Software	Software	Software	N/A(1)
Compression support built into hardware or software:				
ADPCM	Hardware	Hardware	Hardware	Hardware
A-Law	Hardware	Hardware	Hardware	N/A(1)
Mu-Law	Hardware	Hardware	Hardware	N/A(1)
MPEG compression	N/A(1)	N/A(1)	N/A(1)	N/A(1)
MPEG decompression	N/A(1)	N/A(1)	N/A(1)	N/A(1)
MIDI Synthesizer				
MIDI synthesizer chip	Yamaha OPL3	Korg wavetable, Yamaha OPL3	Yamaha OPL4	Yamaha OPL3
Synthesizer type	FM (wavetable option, $199)	FM, wavetable	FM, wavetable	FM (wavetable option, $79)
Number of operators for FM synthesis	4	4	4	4
Provides MIDI interface/Supports General MIDI	y y	y y	y y	y y
Number of channels for recording/playback	16, 16	16, 16	32, 32	16, 16
Number of MIDI instruments provided	128	128	128	175
Storage location	On-board ROM	On-board ROM	On-board ROM	Hard disk
Number of simultaneously supported instruments	20	20	32	20
Number of voices	20	32	44	20
3-D sound technology	SRS	SRS	None	None
Mixing Capabilities				
Mixes audio from:				
CDs/Microphone	y y	y y	y y	y y
PC internal speaker/Stereo DAC	n n	n n	y y	y y
Stereo line-in/Stereo synthesizer	y y	y y	y y	y y
Connectors and Ports				
CD-ROM drive interfaces	SCSI-2; proprietary Mitsumi, Panasonic, Sony	SCSI-2	IDE; proprietary Mitsumi, Panasonic, Sony	Proprietary Mitsumi, Panasonic, Sony; optional SCSI connector, $25
Joystick/Variable line-out	y y	y y	y y	y y
Microphone/Low-level line-out	y y	y y	y y	y y
Low-level line-in	y	y	y	y
Technical Support				
Toll-free technical support	y	y	n	n
Technical-support hours (eastern time)	9:00–11:00 M–F, 11:00–7:00 Sat.–Sun.	9:00–11:00 M–F, 11:00–7:00 Sat.–Sun.	10:00–9:00 M–F	10:00–9:00 M–F
Warranty	3 years	3 years	2 years	1 year

	New Media .WAVjammer	Orchid SoundWave 32 Pro SCSI	Orchid SoundWave 32+ Studio	Reveal SoundFX
List price	$399.00	$279.00	$399.00	$69.99
General Features				
Maximum sampling rate (kHz)	44.1	48	48	44.1
Sound chip set	Crystal Semi-conductor 4248	Analog Devices DSP-2115	Analog Devices DSP-2115	Reveal proprietary
Manufacturer of on-board DSP	N/A(1)	Analog Devices	Analog Devices	N/A(1)
Amplifier (watts per channel)	N/A(1)	4	4	4
IRQ levels supported	0–15	3–5, 7, 9–12	3–5, 7, 9–12	2, 5, 7, 9, 11, 15
Number of selectable addresses	N/A(2)	8	8	2
User can set all IRQs and DMAs via software	y	y	y	y
Compatibility built into hardware or software:				
Ad Lib	Software	Both	Both	Both
Creative Labs Sound Blaster	N/A(1)	Hardware	Hardware	Both
Microsoft Windows Sound System	Software	Hardware	Hardware	Both
Roland MPU-401	N/A(1)	Both	Both	N/A(1)
Compression support built into hardware or software:				
ADPCM	Both	Both	Both	Hardware
A-Law	Both	Hardware	Hardware	Hardware
Mu-Law	Both	Hardware	Hardware	Hardware
MPEG compression	N/A(1)	N/A(1)	N/A(1)	N/A(1)
MPEG decompression	N/A(1)	N/A(1)	N/A(1)	N/A(1)
MIDI Synthesizer				
MIDI synthesizer chip	Yamaha OPL3	Analog Devices DSP 2115	Analog Devices DSP 2115	Reveal proprietary
Synthesizer type	FM	FM, wavetable (wavetable upgrade, $129–$219)	FM, wavetable	FM
Number of operators for FM synthesis	4	8	2	4
Provides MIDI interface/Supports General MIDI	n y	y y	y y	y n
Number of channels for recording/playback	6, 6	16, 16	16, 16	4, 4
Number of MIDI instruments provided	128	208	722	128
Storage location	On-board ROM	On-board ROM	On-board ROM	On-board ROM
Number of simultaneously supported instruments	20	16	32	4
Number of voices	20	32	56	20
3-D sound technology	None	Q-Sound	Q-Sound	None
Mixing Capabilities				
Mixes audio from:				
CDs/Microphone	y y	y y	y y	y y
PC internal speaker/Stereo DAC	n y	n n	n n	y y
Stereo line-in/Stereo synthesizer	y n	y y	y y	y y
Connectors and Ports				
CD-ROM drive interfaces	None	SCSI; proprietary Mitsumi	SCSI; proprietary Mitsumi	Proprietary Mitsumi, Panasonic, Sony
Joystick/Variable line-out	n n	y y	y y	y y
Microphone/Low-level line-out	y y	y y	y y	y y
Low-level line-in	y	y	y	y
Technical Support				
Toll-free technical support	n	n	n	y
Technical-support hours (eastern time)	9:00–9:00 M–F	10:00–8:00 M–F	10:00–8:00 M–F	24 hours, 7 days
Warranty	Lifetime	4 years	4 years	1 year

	Reveal SoundFX Wave	Turtle Beach Monte Carlo	Turtle Beach Tropez	Turtle Beach MultiSound Monterey
List price	$160.00	$149.00	$249.00	$399.00
General Features				
Maximum sampling rate (kHz)	44.1	48	48	44.1
Sound chip set	Reveal proprietary	Crystal Semi-conductor 4231	Crystal Semi-conductor 4231	Turtle Beach proprietary
Manufacturer of on-board DSP	N/A(1)	N/A(1)	N/A(1)	Motorola
Amplifier (watts per channel)	N/A(1)	4	N/A(1)	N/A(1)
IRQ levels supported	2, 5, 7, 9–11	2, 5, 7, 9, 11	2, 5, 9–12, 15	5, 7, 9–12, 15
Number of selectable addresses	4	5	5	6
User can set all IRQs and DMAs via software	y	y	y	y
Compatibility built into hardware or software:				
Ad Lib	Both	Hardware	Hardware	N/A(1)
Creative Labs Sound Blaster	Both	Hardware	Hardware	N/A(1)
Microsoft Windows Sound System	Both	Hardware	Hardware	Hardware
Roland MPU-401	Both	N/A(1)	Hardware	N/A(1)
Compression support built into hardware or software:				
ADPCM	Hardware	Hardware	Hardware	Hardware
A-Law	Hardware	Hardware	Hardware	N/A(1)
Mu-Law	Hardware	Hardware	Hardware	N/A(1)
MPEG compression	N/A(1)	N/A(1)	N/A(1)	N/A(1)
MPEG decompression	N/A(1)	N/A(1)	N/A(1)	N/A(1)
MIDI Synthesizer				
MIDI synthesizer chip	Reveal proprietary	Yamaha OPL3	ICS WaveFront, Yamaha OPL3	ICS WaveFront
Synthesizer type	FM, wavetable	FM	FM, wavetable	Wavetable
Number of operators for FM synthesis	4	4	4	N/A(1)
Provides MIDI interface/Supports General MIDI	y y	y y	y y	y y
Number of channels for recording/playback	4, 4	16, 32	32, 48	16, 48
Number of MIDI instruments provided	228	128	128	128
Storage location	On-board ROM	Hard disk	On-board ROM	On-board ROM
Number of simultaneously supported instruments	24	32	32	32
Number of voices	24	32	32	32
3-D sound technology	None	None	None	None
Mixing Capabilities				
Mixes audio from:				
CDs/Microphone	y y	y y	y y	y y
PC internal speaker/Stereo DAC	y y	n y	n y	n y
Stereo line-in/Stereo synthesizer	y y	y y	y y	y y
Connectors and Ports				
CD-ROM drive interfaces	IDE, proprietary Mitsumi, Panasonic, Sony	Proprietary Mitsumi, Panasonic, Sony	IDE	None
Joystick/Variable line-out	y n	y y	y n	n n
Microphone/Low-level line-out	y y	y y	y y	n y
Low-level line-in	y	y	y	y
Technical Support				
Toll-free technical support	y	n	n	n
Technical-support hours (eastern time)	24 hours, 7 days	9:00–6:00 M–F	9:00–6:00 M–F	9:00–6:00 M–F
Warranty	1 year	1 year	1 year	1 year