

■ CI-710 Comparison Chart

	CID Bio-Science	StellarNet Inc.	ASD	Ocean Optics
Specification	CI-710 Miniature Spectrometer	BLUE-Wave Spectrometer	FieldSpec 4	Jaz Handheld Spectrometer for UV-Vis Measurements with SpectroClip
Dimensions	89.1 x 63.3 x 34.4 mm	25 x 75 x 125 mm	12.7 x 368 x 292 mm	109.2 mm x 63.5 mm x 57 mm
Weight	290 grams	397 grams	5440 grams	352 grams
DETECTOR SPECIFICATIONS				
Detector	Toshiba TCD1304AP Linear CCD array	CCD	VNIR detector (350-1000 nm): 512 element silicon array; SWIR 1 detector (1000-1800 nm): Graded Index InGaAs Photodiode, TE Cooled; SWIR 2 detector (1800- 2500 nm): Graded Index InGaAs Photodiode, TE Cooled	Jaz Spectrometer
Wavelength range	400-950 nm	200-1150 nm	350-2500 nm	350-1000 nm
Pixels	3648 pixels	2000-3000 pixels	n/a	n/a
Pixels size	8 um x 200 um	14 x 200 um or 7 x 200 um	n/a	n/a
Pixel well depth	100,000 electrons	n/a	n/a	n/a
Signal-to-noise ratio	300:1 (at full signal)	1000:1 (at full signal)	n/a	250:1 (at full signal)

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A/D resolution	16 bit	16 bit	n/a	16 bit
Dark noise	50 RMS counts	n/a	n/a	50 RMS counts
Corrected linearity	>99.8%	n/a	n/a	n/a
Sensitivity	130 photons/count at 400 nm; 60 photons/count at 600 nm	n/a	n/a	75 photons/count at 400 nm; 41 photons/count at 600 nm
Optical resolution	~0.3-10.0 nm FWHM (grating dependent)	to 0.2 nm	3 nm @ 700 nm; 10 nm @ 1400/2100 nm	~0.3-10.0 nm FWHM
Integration time	3.8 ms - 10 seconds	1 ms - 65 seconds	100 ms	n/a
Dynamic range	2 x 10 ⁶ (system), 1300:1 for a single acquisition	2000:1 with 6 decades		8.5 x 10 ⁷ (system); 1300:1 for a single acquisition
Stray light	<0.05% at 600 nm; 0.10% at 435 nm	<0.1% at 435nm; <0.05% at 600 nm	VNIR 0.02%, SWIR 1 & 2 0.01%	<0.05% at 600 nm; <0.10% at 435 nm
Power supply	USB powered by included tablet or PC	USB powered via PC	Requires power input or external NiMH battery	Wall transformer (+5VDC); Power over Ethernet (Class III PoE provides 12 Watts); Solar charger and external batteries
Power consumption	250 mA @ 5 VDC	<100 mA	12 VDC (60W)	+5 VDC
Data transfer speed	Full spectrum to memory every 4 ms with USB 2.0 port	n/a	n/a	n/a

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Trigger modes	4 modes	n/a	n/a	
Operating systems	Windows 7 with USB port	Windows XP/Vista/7	Windows 7 64 bit laptop	Windows, Mac, Linux
Computer interface	USB 2.0 @ 480 Mbps (USB 1.1 compatible)	USB or USB Hub	Ethernet cross-over cable or wireless network	4 onboard digital user-programmable GPIOs, mini-usb
Software	Yes, SpectraSnap!	Yes, SpectraWiz	Yes, RS ³ and ViewSpec Pro	Yes, Jaz standard operating software and custom SpectroClip software script