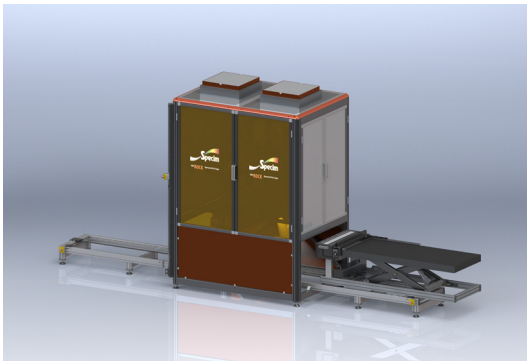


sisu **ROCK** *Hyperspectral Core Logger*

SisuROCK is the next generation step in the drill core logging. This workstation acquires data from hundreds of meters of core per day without any sample preparation. Acquired hyperspectral imaging data can be turned into consistent and objective mineral maps along the core and across the site.



Key benefits

- Turnkey hyperspectral drill core imaging
- Objective and consistent data wherever you are
- Creates digital and remotely accessible image library
- No sample preparation required
- Data acquisition required only once
- High speed production-like instrument for large scale projects
- Built-in data QA/QC routines
- Versatile tool for industry and geological research
- Thermal imaging available

Performance specifications

	SWIR	VNIR	RGB	LWIR-HS	LWIR-C
Spectral range	970 – 2 500 nm	400 - 1 000 nm	Not applicable	8 - 12 μm	8 - 12 μm
Number of spectral bands	256	96 (8 x binning)	3	30	84
Spectral resolution	10 nm	2.8 nm	Not applicable	400 nm	100 nm ¹⁾
Pixel size on target ²⁾	HR: 0.2 mm	HR: 0.09 mm	HR: 0.016 mm	HR: N.A.	HR: N.A.
	HS: 2.0 mm	HS: 0.64 mm	HS: 0.16 mm	HS: 1.7 mm	HS: 1.7 mm
Number of pixels/image line	320	1000	4 000	384	384
Scan rate	HR: 20 mm / s	HR: 15 mm / s	HR: 20 mm / s	HR: N.A.	HR: N.A.
	HS: 200 mm / s	HS: 110 mm / s	HS: 200 mm / s	HS: 100 mm / s	HS: 170 mm / s
Scan time for single core box ³⁾	15 s	20 s	15 s	22 s	17 s
Max sample size	1 500 x 640 x 200 mm (L x W x H), 50 kg				
System dimensions	5 490 x 1 394 x 2 504 mm (L x W x H)				
Overall system weight	~ 500 kg depending on camera configuration				
Cooling requirements	No external cooling required. Air conditioned room recommended.				
Operating conditions	Laboratory type environment. Small amount of dust accepted.				
Operating temperature	0 to +40°C, non-condensing				
Operating voltage	110 to 220 V and 50/60 Hz clean power supply				
Output data format	BIL file format, ENVI/Evince compatible				
Instrument calibration	Spectrally calibrated data. Normalization		White balance	Spectrally calibrated data. Normalization	

¹⁾ Diffraction limited

²⁾ HR stands for High Resolution mode for single core measurement. HS stands for High Speed mode for single core box measurement.

³⁾ 1.5 m long core box. Including calibration measurements.

Mineral identification on different wavelength ranges

	Silicate structure	Mineral Group	Example	VNIR	SWIR	TIR / LWIR Response	
Silicates	Inosilicates	Amphibole	Actinolite	Non-Diagnostic	Good	Moderate	
		Pyroxene	Diopside	Good	Moderate	Good	
	Cyclosilicates	Tourmaline	Elbaite	Non-Diagnostic	Good	Moderate	
	Nesosilicates	Garnet	Grossular	Moderate	Non-Diagnostic	Good	
		Olivine	Forsterite	Good	Non-Diagnostic	Good	
	Sorosilicates	Epidote	Epidote	Non-Diagnostic	Good	Moderate	
	Phyllosilicates	Mica	Muscovite	Non-Diagnostic	Good	Moderate	
		Clay Minerals	Chlorite	Clinchlore	Non-Diagnostic	Good	Moderate
			Illite		Non-Diagnostic	Good	Moderate
	Tectosilicates	Feldspar	Orthoclase	Non-Diagnostic	Non-Diagnostic	Good	
			Albite	Non-Diagnostic	Non-Diagnostic	Good	
		Silica	Quartz	Non-Diagnostic	Inferred	Good	
	Non-Silicates	Carbonates	Calcite	Calcite	Non-Diagnostic	Moderate	Good
Dolomite			Dolomite	Non-Diagnostic	Moderate	Good	
Hydroxides			Gibbsite	Non-Diagnostic	Good	Moderate	
Sulphates		Alunite	Alunite	Moderate	Good	Moderate	
			Gypsum	Non-Diagnostic	Good	Good	
Borates			Borax	Non-Diagnostic	Moderate	TBD	
Halides		Chlorides	Halite	Non-Diagnostic	TBD	TBD	
Phosphates			Apatite	Moderate	Non-Diagnostic	Good	
Hydrocarbons			Bitumen	TBD	Moderate	TBD	
Oxides		Hematite	Hematite	Good	Non-Diagnostic	Non-Diagnostic	
	Spinel	Chromite	Non-Diagnostic	Non-Diagnostic	Non-Diagnostic		
Sulphides		Pyrite	Inferred	Non-Diagnostic	Non-Diagnostic		

SisuROCK dimensions

