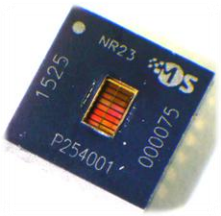
Product Leaflet

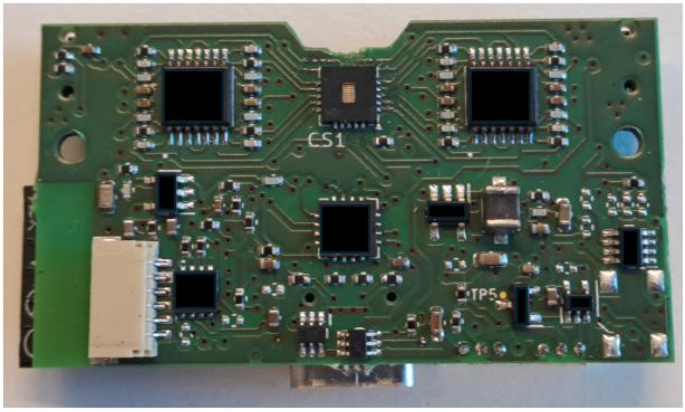
Nibble™ PCBA 2.0

ChipSense™ Evaluation Device

Broadband Hyperspectral fingerprint data capturing module, including:

- Hyperspectral Sensor ChipSense™ 2.x
- Electronics front/back end
- Light source drivers





Compatible with SpectraByte™ (Desktop app) and SpectraWeb™ (Browser app)

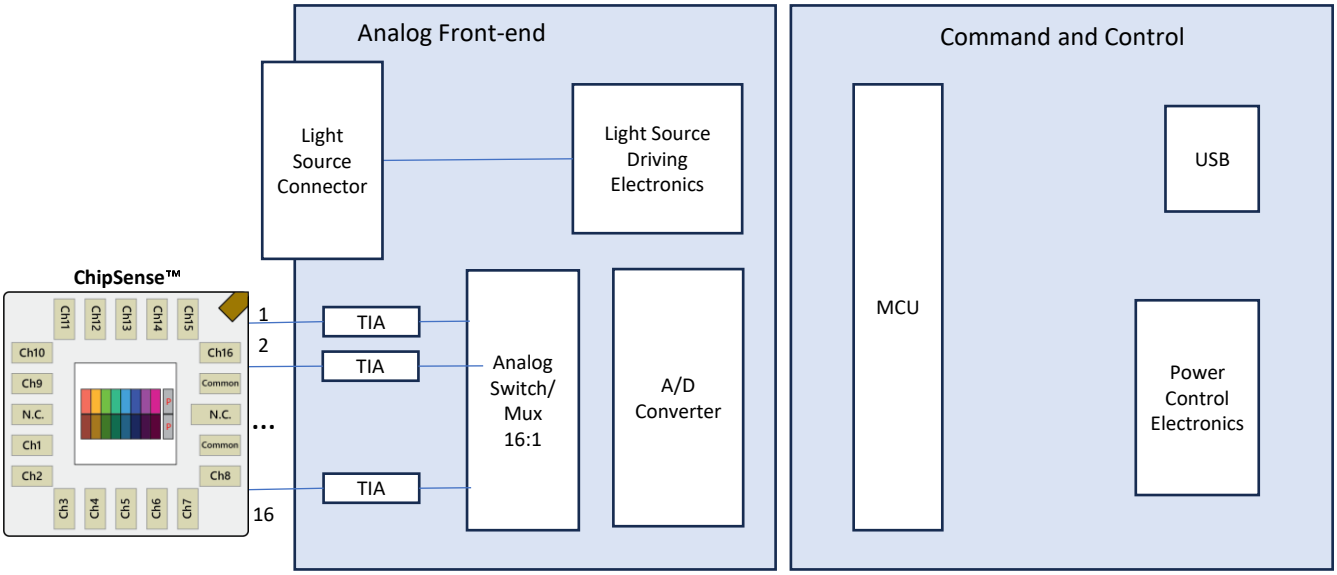
Parameter	Unit	Specifications
Typical use case/application		Hyperspectral fingerprint data capturing
Certifications		CE/FCC (see Remark 1)
ChipSenseTM product on-board		2.1-16
Wavelength range configuration options		None
Wavelength range configuration Full Range	nm	500-1700
Light Source Type support		LED/Filament
Light Source max current	mA	150
Light Source max voltage	V	5
Light Source dimmable		yes, 64 levels
Light Source Operation Mode		Current driven, Continuous/Triggered
Signal acquisition method		Sequential
Acquisition Time per Channel Range	ms	0.5-192
Max Total Noise at 1Hz	pA/rtHz	3
Optical window dimension	mm	1.2x1
Wired Connectivity		USB-C / 6 pole SH
USB-C Protocol		USB serial port (115.2 kbps to 921.6 kbps)
6 pole SH protocol		Default: RS485 (115.2 kbps) HW enabled: UART (115.2 kbps up to 921.6 kbps)
Wireless Connectivity		Wi-Fi (2.4 GHz)
Power supply		DC (USB) or External Battery
Voltage Supply	V	3.7 - 5.1
Current Consumption Stand-by	mA	60 (Radio Disabled) 130(Radio Enabled)
Size (l x w x h)	mm	46.5 x 26.5 x 9
Recommended Operating Temperature	°C	10 - 40
Operating temperature	°C	0 - 50
Accessories delivered in package		USB-C Cable
Software companion		SpectraByte, SpectraWeb, FW update tool
Remarks		1 - WiFi not certified CE/FCC

Copyright © MantiSpectra B.V. 2026, All rights reserved

Nibble™ PCBA 2.0

ChipSense™ Evaluation Device

Block Diagram



Legal and Application Notice

Product specifications and documentation may be changed without notice, including changes intended to improve reliability, functionality, performance, manufacturability or design.

MantiSpectra B.V. (“MantiSpectra”) believes the information provided in this datasheet and related product documentation to be accurate and reliable at the date of publication. However, to the maximum extent permitted by applicable law, MantiSpectra does not accept responsibility for errors, omissions or inaccuracies.

Development kits, evaluation boards, reference designs, software and firmware are intended for evaluation, development and demonstration purposes unless expressly stated otherwise. They are not qualified end products and should not be relied upon as such

Copyright © MantiSpectra B.V. 2026, All rights reserved