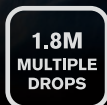# CIPHER LAB
Smarter

2500 series

Precise Performance Built with Durable Toughness

With higher demands for updated scanning abilities in many industries such as retail, warehousing and light industry, CipherLab has attentively designed the durable 2500 series handheld scanner as your solution. CipherLab's 2500 series provides superior scanning abilities that allow users to consistently capture data faster. Along with business-rugged durable designs, its high performance is combined with the ability to easily connect to computer interfaces. Users can enjoy fast workflow without any worries. All of these features make the 2500 series an obvious choice for efficient operations in applications such as receiving, point of sale, shipping, inventory checking and work in process.

LINEAR IMAGER | 2D IMAGER | 3MIL BARCODE | 1.8M MULTIPLE DROPS | IP54 | CORDED | Bluetooth®

2500 series

Business-Rugged Handheld Scanner

Superior Performance Simplifying Industrial Applications with Reliable Durability

CipherLab's 2500 series scanner instantly updates your business data collection process with a 578 scan rate, IP54 rating, 1D/2D reader option, and automatic cable detection. It seamlessly combines its superior scanning performance with business-rugged designs. Additionally, the 2500 series scanner provides easy deployment and corded/*Bluetooth*® connections for users to enjoy. More than just these advantages, its enhanced ESD (electrostatic discharge) protection, built-in removable battery and other user-friendly features help take your scanning experience to new and higher levels.

Superior Scanning Capabilities Create Ease of Mind

The 2500 series 1D and 2D scanner is a device built with superior scanning capabilities that provide easy operations. It features a high-speed read rate of a snappy 578 scans per second on 1D barcodes. For small-item applications, the 2500 series has the ability to read high-density 1D barcodes up to 3-mil and 2D barcodes up to 5-mil on tiny objects. Built with a scan beam of 3mm in width from 15 cm away, the 2500 series eases its aiming for scanning and prevents the probabilities of misreads. The thin scan beam works extremely well when barcodes are placed close to each other. On top of it all, it is capable of reading low contrast images, such as barcodes that are poorly printed or printed on reflective surfaces, down to PCS (Print Contrast Signal) 15%. Another important advantage the 2500 series possess is the ability to scan barcodes shown on mobile phones. With these advantages, CipherLab 2500 series users can easily collect data with all of its superior and up-to-date scanning resources.

Durable Designs with Comfortable Operation

The CipherLab 2500 scanner has been thoroughly tested for its durability. It has passed the IP testing and rated a durable IP54 that is dust protected and able to sustain water splashing. These features come in handy with harsher conditions of high humidity. The 2500 series also has a 1.8m drop resistance that offers continuous functionality without the stressful worries of accidental falls onto rough surfaces.

Moreover, the device comes with an optional tether plate and wrist strap which enables users to attach the device to a mounting bracket or around the user's wrist. All of the 2500 series' durability is ultimately coupled with comfortable operational designs to create a productive experience for its users.

Easy Deployment Generate Faster Workflow

CipherLab's 2500 series 1D and 2D scanners are built with the intentions of fast and easy deployments for its users. It features the capabilities for users to connect their host systems by using USB, RS232 and keyboard wedge interface cables. With the appropriate interface cable connected to a computer, the 2500 series can automatically detect the cables and allow the users to easily access the information acquired.

User Friendly Features of the 2500 Series

The CipherLab's 2500 series provide flexibility for its users with its features. It comes with a built-in *Bluetooth*® that keeps the device connected to a computer up to a line-of-sight distance of 100 meters. The *Bluetooth*® scanner users can easily move around its working area while still being connected. Its built-in removable battery can easily provide 24 hours of continuous work and offer an ideal solution for businesses that need extended hours of operations.

Its enhanced ESD (electrostatic discharge) protection can handle up to ±10 kV(contact), ±20 kV (air) of ESD surge which protects sensitive electronic damages caused by electronic discharge events. Simply put, the CipherLab 2500 series is a durable device with superior features that will update your business to new grounds.

2500 series

Business-Rugged Handheld Scanner

Model	2500	2560	2504	2564	2504MR	2564MR
Category	Linear Imager		2D Imager		2D Imager	
	Corded	*Bluetooth*® V4.0 Dual mode (2.1 + EDR/ BLE)	Corded	*Bluetooth*® V4.0 Dual mode (2.1 + EDR/ BLE)	Corded	*Bluetooth*® V4.0 Dual mode (2.1 + EDR/ BLE)
RF Communication of *Bluetooth*®-Scanner — Coverage[1]	--	100 m[1] / 328 ft. line of sight	--	100 m[1] / 328 ft. line of sight	--	100 m[1] / 328 ft. line of sight
Standard profile		SPP, HID, GATT		SPP, HID, GATT		SPP, HID, GATT

Performance

Optical sensor	CCD Linear Sensor 2500 pixels (2500/2560); CMOS Image Sensor 1280x800 pixels (2504/2564); CMOS Image Sensor 1280 x 960 pixels (2504MR/2564MR)
Light source	Red LEDs 625 nm (2X) (Linear); Warm White LEDs (2x) (2D)
Resolution	3 mil (Linear); 3 mil- 1D barcode / 5 mil - 2D barcode (2D)

Depth of field

2500 / 2560:
- Code 39 3 mil : 3 to 10 cm / 1.2 to 3.9 in.
- Code 39 5 mil : 2 to 14 cm / 0.8 to 5.5 in.
- UPCA 13mil : 0.5 to 38 cm / 0.2 to 15 in.
- Code 39 20mil : 1.5 to 60 cm / 0.6 to 23.6 in.

2504 / 2564:
- Code 39 3 mil : 4 to 10 cm / 1.6 to 3.9 in.
- Code 39 5 mil : 3.5 to 17 cm / 1.4 to 6.7 in.
- UPCA 13 mil : 4 to 28 cm / 1.6 to 11 in.
- PDF417 5 mil : 3.5 to 10.5 cm / 1.4 to 4.1 in.
- QR Code 10 mil : 1.5 to 16.5 cm / 0.6 to 6.5 in.

2504MR / 2564MR:
- Code 128 5 mil : 18.5 to 37.5 cm / 7.3 to 14.8 in.
- PDF 417 5 mil : 21 to 26.5 cm / 8.3 to 10.4 in.
- Data Matrix 7.5 mil : 17 to 35 cm / 6.7 to 13.8 in.
- Data Matrix 10 mil : 15.5 to 45.5 cm / 6.1 to 17.9 in.
- UPCA 13 mil : 8 to 94 cm / 3.2 to 37 in.
- Code 39 100 mil : 28 to 425 cm / 11 to 167.3 in.
- Data Matrix 160 mil : 29.5 to 384 cm / 11.6 to 151.2 in.

Scanning angle	Pitch ± 70° Skew ± 70° (Linear); Pitch ± 70°, Skew ± 60° (2504/2564); Pitch ± 60°, Skew ± 60° (2504MR/2564MR)
Minimum PCS	15% (Linear); 25% (2D)
Scan rate	578 scans/ second (Linear); 60 scans/second (2D)
Ambient illumination	100,000 lux
Hands-free scanning	Auto-sense and continuous modes (Linear); Auto-sense and presentation modes (2D)

Barcodes support

2500 / 2560: Codabar, Code 39, Code 93, Code 128, GS1 DataBar (RSS), Industrial 2 of 5, Interleave 2 of 5, ISBT-128, Italian and French Pharmacodes, Matrix 2 of 5, MSI, Plessey, Telepen, UPC/EAN/GS1-128, Code 11 and more

2504 / 2564: 1D: All of the bacodes that 2500 series 1D scanners can support. 2D: PDF417, MicroPDF417, Data Matrix, QR code, Micro QR Code, Aztec, MaxiCode, Han Xin Code

2504MR / 2564MR: 1D: All of the bacodes that 2500 series 1D scanners can support except French Pharmacodes, Plessey and Telepen. 2D: PDF417, MicroPDF417, Composite, TLC-39, Datamatrix, QR code, Micro QR code, Aztec, MaxiCode, Han Xin Code. Postal Codes: US PostNet, US Planet, UK Postal, Australian Postal, Japan Postal Dutch Postal (KIX)

Programmable features	Data editing, interface selection, symbology configuration
Language support	US and UK English, French, Italian, Belgian, Norwegian, Swedish, Spanish, Portuguese, German, Swiss German, Japanese, Turkish, Hungarian, Danish

Physical

	2500	2560	2504	2564	2504MR	2564MR
Dimension L x W x H	16.1 x 6.6 x 9.6 cm / 6.3 x 2.6 x 3.8 in.					
Weight (without cabe/ with battery)	145 g / 4.9 oz.	185g / 6.5 oz.	145 g / 4.9 oz.	185g / 6.5 oz.	166 g / 5.9 oz	198 g / 7.0 oz.
Color	Black, Register White					
Switch	Tactile Switch					

Electrical

	2500	2560	2504	2564	2504MR	2564MR
Memory for *Bluetooth*® scanner reserver buffer / batch mode	--	10 K / 4 MB	--	10 K / 4 MB	--	10 K / 4 MB
Working hours for *Bluetooth*®-Scanner	--	60 hours based on 1 scan / 5 seconds	--	35 hours based on 1 scan / 5 seconds	--	25 hours based on 1 scan / 5 seconds
Voltage	3.7 V 800mAh Li-ion battery					
Power consumption[2] Standby / Operating	20 mA / 255 mA	12 mA / 250 mA	55 mA / 400 mA	30 mA / 600 mA	16 mA/ 270 mA	17 mA/ 280 mA

User Environment

Temperature	Operating: 0 °C to 50°C / 32°F to 122°F Storage: -40°C to 70°C / -40°F to 158°F (w/o battery)
Humidity	Operating: 10% to 90% Storage: 5% to 95%
Impact resistance	1.8 m mutliple drops onto concrete, 1000 (1 m) tumbles
Ingress protection	IP54
Electrostatic discharge	±10 kV contact ±20 kV air

Regulatory compliance	2500	2560	2504	2564	2504MR	2564MR
	FCC, IC,CE, RCM, BSMI, KC	FCC, IC, CE, RCM, BSMI, NCC, KC, SRMC	FCC, IC,CE, RCM, BSMI, KC	FCC, IC, CE, RCM, BSMI, NCC, KC, SRMC	FCC, IC,CE, RCM, BSMI, KC	FCC, IC, CE, RCM, BSMI, NCC, KC, SRMC

REACH, WEEE, ErP, Eurpoe RoHS, Taiwan RoHS, China RoHS

Configuration	Setup options include Windows®-based ScanMaster software
Accessories	USB, RS232 and keyboard wedge cables, hands-free adjustable stand. Communication cradle with battery charger option(*Bluetooth*® connection up to 7 scanners), single battery charger for *Bluetooth*® scanner
Warranty	5 year (2500/2560); 3 year (2504/2564); 3 year (engine 1 year) (2504MR/2564MR)

1. It is based on communication cradle.   2. The data is tested with USB interface.

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