CIPHERLAB
Smarter

ANTIMICROBIAL
protection series



8000H 8200H 1500H 1600H



When Cleanliness Counts

CipherLab Safeguards Products with Antimicrobial Protection



Fighting Microbes While Delivering High Work Efficiency

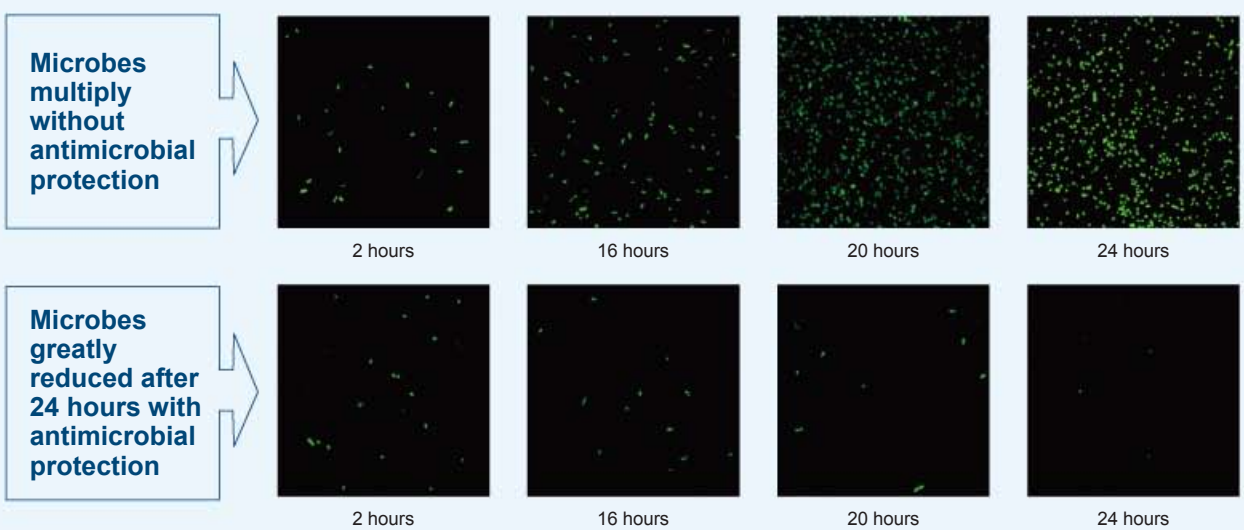
In an industry where cleanliness is vital, the importance of helping prevent the growth of microbes is escalating. CipherLab addresses the needs of an AIDC application in a healthcare environment with its newly developed series of products with antimicrobial protection to resist the growth of odor-and-stain-causing bacteria.

CipherLab has developed a series of ergonomically designed mobile computer and scanners with antimicrobial technology – 8200H,8000H,1500H, and 1600H series – for convenient data access, data collection, and data transfer. AIDC instruments with antimicrobial protection not only speed up routine daily tasks but also inhibit the growth of odor-and-stain-causing bacteria.

The enhanced sanitary protection resulting from both antimicrobial protection and disinfectant-friendly housing inhibits the growth of bacteria that can cause odors and stains, and keeps the scanner cleaner between cleaning.

Antimicrobial Treatment Helps Reduce Microbial Growth

Unlike other devices claiming antimicrobial protection, which are often just coated with a protective film, CipherLab's antimicrobial protection series has the antimicrobial technology built into the product itself – not just a coating that wears off with repeated use of alcohol wipes. Once bacteria come into contact with the surface, the biological function of the microbe is disrupted, interrupting the lifecycle and stopping the reproduction of bacteria. The antimicrobial effect is an intrinsic part of the device and it will not wear off during its lifetime. By minimizing the presence of microbes, devices are easily kept clean for use every time. There are less odors and stains resulting from microbial growth. These products with antimicrobial protection will have a lower average bioburden during their lifetime.



Note: This information is based on standard laboratory tests and is provided for comparative purposes to substantiate antimicrobial activity for non-public health applications. The technology is not designed to protect users from disease caused by microorganisms. The antimicrobial protection inhibits the growth of microorganisms that cause stains, odors, and product degradation, and it is limited to the product's surface.

Disinfectant-Friendly Housing for a Clean and Hygienic Surface

Periodically wiping a device with alcohol can keep most surfaces free of microbes for a brief period. However, the repeated use of alcohol causes discoloration, corrosion, and other deterioration problems, which in turn can lead to hardware malfunction. The launch of the new antimicrobial protection series has an extra feature of disinfectant-friendly white housing that allows the antimicrobial treated surface to withstand repeated alcohol cleaning. Fewer replacements are needed, resulting in a lower total cost of ownership.

Antimicrobial Protection Series Overview

8200H Versatile Design to Boost Workflow Efficiency



- Lightweight, ergonomic design that easily fits in the palm or pocket.
- Optional 1D and 2D barcode readers.
- 124 continuous hours of operation in batch mode on a lithium-ion rechargeable battery for seamless workflow.
- Shorter training period for new staffs via simple interface – maximizing work efficiency.
- FORGE AG software helps customize workflow and templates to suit your business.
- Optional *Bluetooth*® Class 2 and/or IEEE 802.11 b/g connectivity for real-time data transmission.
- Recommended for inventory stock control, patient identification, record management, and specimen tracking.

8000H Lightweight and Compact for Efficient Data Capture



- Shorter training period for new staffs via simple interface - maximizing work efficiency.
- 100 continuous hours of operation in batch mode on a lithium-ion rechargeable battery ensures seamless workflow
- Lightweight and compact form factor for greater mobility.
- Optional *Bluetooth*® Class 2 connectivity.
- FORGE AG software helps customize workflow and templates to suit your business.
- Recommended for inventory stock control, product orders, patient record access, point-of-care, record management, lab tests, and specimen tracking.

1500H Snappy Scanner Built for Comfort



- Supports 1D and 2D barcodes.
- Linear imager reader option scans and decodes barcodes up to 200 times per second, and can read 3 mil 1D barcodes.
- Optional *Bluetooth*® Class 2 connectivity enables 90 m line-of-sight from the communication stand.
- Adjustable stand can be wall mounted, placed on a desk, or in a fixed position for auto-sense scanning.
- Lightweight and ergonomic design that can render thousands of repetitive scans without fatigue.
- Large LED light and adjustable buzzer confirms a successful scan, even in dim lighting, to avoid duplicate scans.
- ScanMaster software allows users can easily edit data, configure symbology, and select a relevant interface.
- Recommended for patient admittance identification, drug identification, and medical billing.

1600H Pocket-sized for Maximum Mobility and Flexibility



- Optional 1D and 2D barcode readers
- *Bluetooth*® interface for convenient data transfer to any *Bluetooth*® device. The 3610 *Bluetooth*® transponder simplifies pairing and enables real-time data transmission to any device for instant viewing.
- The lithium-ion battery provides up to 40 hours of operation on a single charge. (The model with AAA-battery version is also available.)
- Maximum 4 MB on-board memory stores over 240,000* barcode scans in batch mode.
- The ScanMaster software enables easy data editing and configuration of symbologies, as well as tailoring the interface to suit individual work routines.
- Recommended for point-of-care, medication dispensing, records management, lab results, and specimen tracking.

* The calculation is based on EAN13 barcode.

Caregivers Gain Time for Their Patients



Caregivers free up valuable time, allowing them to spend more time with their patients.

At the China Medical University Hospital (CMUH) in Taiwan, caregivers manually recorded patients' condition at their bedsides and then entered the information at the nursing station. This was very time consuming and often meant that caregivers were spending a great deal of time on paperwork. With the implementation of the CipherLab 8000 mobile computer, caregivers can now scan barcodes on a patient's wristband to instantly update their medical records. They are able to continuously keep track of a patient's symptoms on the terminal and upload this data via the communication cradle once back at the nursing station. The data can be instantly displayed on a laptop or a monitor for on-duty doctors to view. Thereafter, the time saved from the tedious paperwork can be spent with patients for better, more personal treatment.



Keeping Costs Down and Saving Time

Nursing homes in the Czech Republic gained accuracy and retrieved money on their billing system.

When the Czech Republic made the transition to a capitalist structure, medical billing was no longer covered by the state – patients had to pay for their healthcare. Nursing home staff billed patients by recording charges on hand-written forms and spreadsheet-based systems. This took time and often resulted in human error, which was not only worrying for patients but was costing the nursing homes money. With the introduction of the CipherLab 8001 mobile computer to scan barcodes on medical records and wristbands, patient information can be correctly documented with just a single scan. Now caregivers can store scanned data in the terminal and easily upload this data to the system when they are at their desks.

Accurate Treatment for Patients

With the right care being dependent on handwritten notes, the Taipei Veterans General Hospital decided to safeguard their patients against potential errors.



When Taipei Veterans General Hospital adopted the CipherLab small size 1600 *Bluetooth*® scanners to record patients' information, there were numerous benefits. With its handy size, caregivers were given the mobility that they needed. By just scanning a patient's wristband, the caregiver can now see all physician notes, medication orders, and all relevant patient data directly on their tablets via *Bluetooth*® communication. The displayed data enables caregivers to issue proper and accurate medical treatment to their patients. Once the patient has been treated, the caregiver can update the information on a tablet or notebook, and use the wireless communication to update the HIS system. This ensures that all patient information is kept up to date at all times.

		8000H series		8200H series		
Communication	Options	Batch	*Bluetooth*® Class 2 compliance[1]	Batch	802.11 b/g, *Bluetooth*® V2.1	*Bluetooth*® V2.1
	Serial	IrDA (115.2Kbps)		--		
Performance	CPU	16-bit		32-bit		
	Program memory	2MB Flash		8MB Flash		
	Data memory	2MB / 4MB SRAM	2MB SRAM	4MB / 8MB SRAM		
	Operating power	Rechargeable 3.7V 700 mAh Li-ion battery		Rechargeable 3.7V 1200 mAh Li-ion battery		
	Backup power	Rechargeable 3.0V 7.0 mAh lithium battery		Rechargeable 3.0V, 18 mAh lithium battery		
	Working time[2]	100 hours	36 hours	124 hours	20 hours	40 hours
	Data retention	30 days		25 days		
	Alert	Dual-color LEDs, volume-programmable beeper		Dual-color LEDs (red / green, blue / green), vibrator, voice		
Data Capture	Barcode scanning	21 rubber keys with white LED backlight		Linear imager / Laser / 2D imager		
Physical Characteristics	Display	LCD 100 x 64 with LED backlight		2.1" 160 x 160 pixels, white LED backlight		
	Keypad	Linear imager / Laser		24 keys, white LED backlight		
	Dimension (L x W x H)	122 x 56 x 32 mm / 4.8 x 2.2 x 1.25 in.		136 x 58 x 25 mm (Linear imager) / 136 x 58 x 32 mm (Laser / 2D)		
	Weight (laser, including battery)	120 g / 4.2 oz.	125 g / 4.4 oz.	150 g / 5.3 oz.		
User Environment	Operating temperature	-10 °C to 60 °C / 14 °F to 140 °F		-10° to 55° C / 14° to 131° F		
	Storage temperature	-20 °C to 70 °C / -4 °F to 158 °F		-20° to 70° C / -4° to 158° F		
	Humidity (non-condensed)	Operating: 10% to 90% / Storage: 5% to 95%		Operating 10% to 90% / Storage 5% to 95%		
	Impact resistance	Multiple 1.2 m / 4 ft. drops onto concrete, 5 drops on each side		Multiple 1.2 m / 4 ft. drop onto concrete, 5 drops on each side / IP54		
	Electrostatic discharge	± 15 kV air discharge / ± 8 kV direct discharge		± 15kV air discharge / ± 8kV direct discharge		
	EMC regulation	BSMI, CE, C-Tick, FCC, IC	CE, FCC	BSMI, CCC, CE, C-Tick, FCC, IC	BSMI, CCC, CE, C-Tick, FCC, IC, NCC, SRRC, TELEC	
Development support		BLAZE C Compiler and BASIC Compiler				
Application Software		FORGE Application Generator including data transmission OCX, STREAM Wireless Studio, MIRROR Terminal Emulation		FORGE Application Generator including data transmission OCX, MIRROR Terminal Emulation		
Cradles		Charging and communication cradle, modem cradle, GPRS cradle (quad band), Ethernet cradle		Charging and communication cradle, Ethernet cradle		
Accessories		4-slot battery charger, AC / DC adapter, RS232 cable, USB cable		Protective cover, pistol grip, USB cable, RS232 cable		
Warranty		1 year				

		1500H series		1600H series	
Communication	Options	Corded	Cordless	Cordless	
	Module	--	*Bluetooth*® Class 2 (2.4 GHz) Version 2.0	*Bluetooth*® Class 3 (2.4 GHz) Version 2.0	*Bluetooth*® Class 2 (2.4 GHz) Version 2.1 + EDR
	Coverage (line of sight)	--	90[3] m / 295 ft.	10 m / 33 ft.	20 m / 66 ft.
	Standard profile	--	SPP, HID		
Performance	Barcode scanning	Linear imager[4], Laser[1], 2D imager		Linear imager, Laser, 2D imager	
	Optical sensor	Linear imager - 2500 pixels, Laser, 2D imager - 752 x 480 pixels			
	Light source	Linear imager : Red LED 625 nm[5] Laser : Visable laser diode at 650 ± 15 nm 2D imager : 625 ± 5 nm LEDs (2x)		Linear imager : Red LED 625 nm Laser : Visible laser diode at 650 nm 2D imager : 625 ± 5 nm LEDs (2x)	
	Resolution	3 mil to 5 mil[6]		3 mil - 1D barcodes, 5 mil - 2D barcodes	
	Depth of field[6] (13 mil Code 39 barcode)	Linear imager : 0.5 to 35 cm / 0.2 to 13.8 in. Laser : 2 to 57 cm / 0.8 to 22.4 in. 2D imager : 4 to 30.5 cm / 1.6 to 12 in. (UPCA)		Linear imager : 3.5 to 38 cm / 1.4 to 15 in. Laser : 2 to 42 cm / 0.8 to 16.5 in. 2D imager : 4 to 30.5 cm / 1.6 to 12 in. (UPCA)	
	Scanning angle	Pitch ± 60° to ± 70°, Skew ± 50° to ± 70° [6]			
	PCS	Minimum 30 % to 45 %[6]		Minimum 30%	
	Scan rate	1D : 100 to 200 scans / second, 2D : 60 scans / second			
	Ambient illumination	100,000 lux		--	
	Hands-free scanning	Auto-sense mode, continuous mode, and presentation mode[6]		--	
	Barcodes support	1D[7] : Codabar, Code 39, Code 93, Code 128, GS1 DateBar(RSS), industrial 2 of 5, interleave 2 of 5, ISBT-128, Italian and French Pharmacodes, Matrix 2 to 5, MSI, Plessey, Telepen, UPC-A, UPC-E, EAN-8, EAN-13, GS1-128(EAN-128) 2D : PDF 417, MicroPDF 417, Composite, RSS, TLC-39, Datamatrix, QR code, Micro QR code, Aztec, MaxiCode, 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, and Danish			
Physical Characteristics	Weight[6] (including battery)	145 to 185 g / 5.1 to 6.5 oz.		50 to 106 g / 1.76 to 3.7 oz.	
	Dimension (L x W x H)	15.3 x 6.1 x 9.3 cm / 6.0 x 2.4 x 3.7 in.		Linear imager : 9.5 x 3.5 x 2.0 cm / 3.7 x 1.4 x 0.8 in. Linear imager, Laser, 2D imager : 11.3 x 4.5 x 3.0 cm / 4.4 x 1.8 x 1.2 in.	
	Button	Power / scan key		Power and scan keys	
Electrical	Memory[6] reserve buffer / batch mode	4K to 10K / 256K to 4 MB			
	Working time[6]	12 to 24[8] hours based on 1 scan / 5 seconds		24 to 40 hours based on 1 scan / 5 seconds	
	Operating power	+ 5 V ± 10 % / 3.7 V 800 mAh Li-ion battery		Two AAA batteries / 3.7V 850 mAh Li-ion battery	
	Power consumption[6] Standby / Operating	25 to 50 mA / 210 to 280 mA		15 to 20 mA / 190 to 250 mA	
User Environment	Temperature	Operating : 0˚C to 50˚C / 32˚F to 122˚F Storage: -20˚C to 60˚C / -4˚F to 140˚F (w/o battery)			
	Humidity (non-condensing)	Operating : 10% to 90% Storage : 5% to 95%			
	Impact resistance[6]	1.2 to 1.5 m / 3.9 to 4.9 ft. multiple drops onto concrete		0.9 to 1.5 m / 3.0 to 4.9 ft. multiple drops onto concrete	
	Electrostatic discharge	±8 kv contact / ±15 kv air			
	EMC regulation[6]	BSMI, CE, C-tick, FCC, IC, KC, NCC, SRMC, TELEC		BSMI, CE, C-tick, FCC, MIC, NCC, IC, TELEC, SRMC, KC	
Configuration		Setup options include Windows®-based ScanMaster software, by direct connection or printing out barcode settings		Setup options include Windows®-based ScanMaster software	
Accessories		USB, RS232 and keyboard wedge cables, Three-way desk/wall/auto-sense stand, communication stand for *Bluetooth*® scanner provides *Bluetooth*® communication for up to 7 scanners, single battery charger for *Bluetooth*® scanner		3610 *Bluetooth*® transponder, Mirco USB cable, battery charger and protective cover	
Warranty		3 to 5[6] years (laser and 2D engine : 1 year)	3 years (laser and 2D engine : 1 year)	1 year	

1. It is only available upon request. **2.** Based one laser scan per five seconds with backlight off. **3.**It is based on communication stand without weighted base. **4.**1500WA is also available upon request. **5.**1560: red LED 618-626 nm.
6. The performance and spec may vary depending on product model and configuration. **7.** 2D engine supports all of the barcodes that 1500 series 1D scanners can read except French Pharmacodes, Plessey, and Telepen.
8. Working time for imager is based on CCD sensor is always active 16 hours for 2D imager.

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CIPHERLAB Smarter

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HEADQUARTERS
CipherLab Co., Ltd.
12F, 333 Dunhua S. Rd., Sec.2
Taipei, Taiwan 10669
Tel +886 2 8647 1166
Fax +886 2 8732 3300
www.cipherlab.com

CipherLab Electronics Trading (Shanghai) Co., Ltd.
J Room, 4F, No.728 West Yan'an Road, Changning District, Shanghai China 200050
Tel +86 21 3368 0288
Fax +86 21 3368 0286

CipherLab USA Inc.
2552 Summit Avenue
Plano, Texas USA 75074
Tel +1 469 241 9779
Toll Free 888 300 9779
Fax +1 469 241 0697

CipherLab GmbH
Gießerallee 21
47877 Willich
Germany
Tel +49 2154 89777 20
Fax +49 2154 89777 32