



# ANTIMICROBIAL

## protection series



8000H


1500H

1660H

### 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.

In cooperation with Microban<sup>®</sup>\*, CipherLab has developed a series of ergonomically designed mobile computer and scanners with Microban<sup>®</sup> antimicrobial technology – 8000H, 1500H, and 1660H 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.

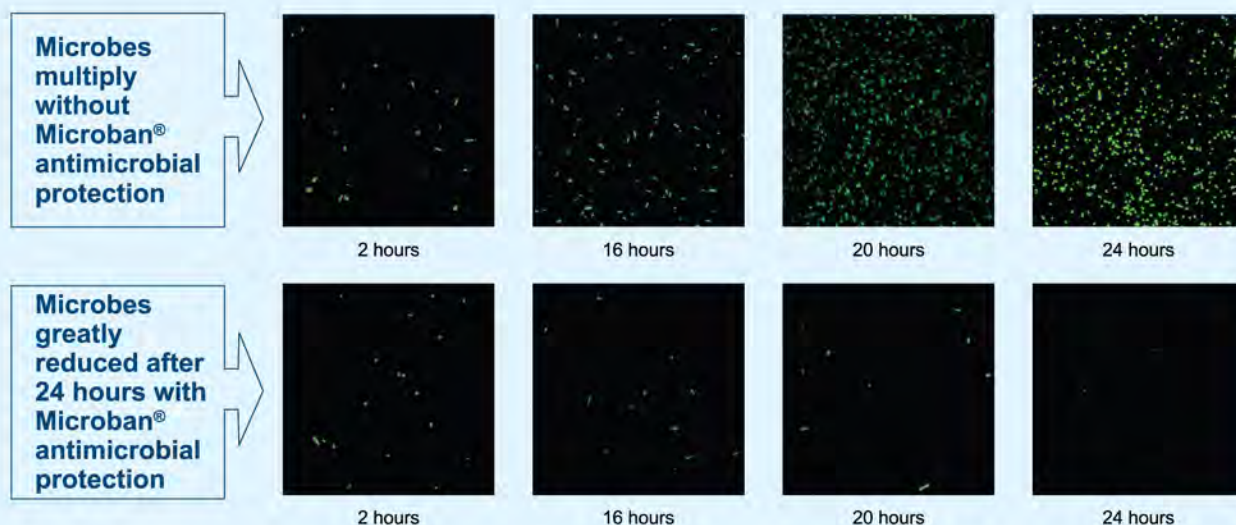
\*Founded in 1994, Microban International, Ltd. is the global leader in built-in antimicrobial product protection, engineering durable antimicrobial solutions for over 1,000 types of consumer, industrial, and medical products around the world. Microban<sup>®</sup> technology can inhibit the growth of Gram-positive and Gram-negative bacteria on treated product surfaces. For more information, please visit [www.microban.com](http://www.microban.com).



# 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 Microban® 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



## 8000H Series

### Light and Compact for Efficient Data Capture

- Easy-to-learn interface means a shorter training period and learning curve for new, temporary staff, or substitute nurses – maximizing work efficiency.
- 100 continuous hours of operation in batch mode on a lithium-ion rechargeable battery gives an efficient workflow without having to interrupt tasks.
- Lightweight and pocket-sized for greater mobility while taking up minimal space.
- FORGE Application Generator (AG) software helps customize workflow and templates to suit unique work routines and use.
- Recommended for inventory stock control, product orders, patient record access during diagnosis, point-of-care, record management, lab tests, and specimen tracking.
- Supports 1D barcodes with linear imager and laser reader.
- Optional BT class 2 connectivity.



## 1500H Series

### Snappy Scanner Built for Comfort

- Supports 1D and 2D barcodes
- The linear imager reader option scans and decodes barcodes up to 200 times per second, and can read high density 1D barcodes at 3 mil resolution.
- Optional Bluetooth class 2 connectivity enables 90-meter line-of-sight range of wireless communication.
- No moving parts for a lower total cost of ownership.
- Adjustable stand for three different uses: mounted on the wall, placed on a desk, or in a fixed position for autosense scanning.
- Lightweight and ergonomic design that can render thousands of repetitive scans without fatigue.
- Large LED light and adjustable buzzer confirms when a scan has been captured successfully, even in dim lighting, to avoid duplicate scanning.
- Using ScanMaster software, users can easily edit data, configure symbology, and select a relevant interface.
- Recommended for patient admittance identification, drug identification, and medical billing.



## 1660H Series

### Pocket-sized for Maximum Mobility and Flexibility

- Bluetooth interface for convenient data transfer to any Bluetooth device, such as a laptop. With the 3610 Bluetooth transponder, easy pairings simplify real-time data transmission to any device for instant viewing.
- The lithium-ion battery lasts for 40 hours – enabling completion of tasks without time wasted on battery recharge. (The Model with Two AAA batteries is also available)
- Maximum 512K on-board memory stores over 30,000\* barcode scans when the scanner is set to batch mode.
- Lightweight and pocket-sized, with Bluetooth capabilities for maximum mobility.
- 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 1660 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		
<b>Communication</b>	Options	Batch	BT Class 2 compliance <sup>2</sup>	
	Serial		IrDA (115.2Kbps)	
<b>Performance</b>	CPU		16-bit	
	Program memory		2MB flash	
	Data memory	2MB/4MB SRAM		2MB SRAM
	Operating power		Rechargeable 3.7V 700mAh Li-ion battery	
	Backup power		Rechargeable 3.0V 7.0 mAh lithium battery	
	Working time <sup>1</sup>	100 hours		36 hours
<b>Data Capture</b>	Data retention		30 days	
	Alert		Dual-color, volume-programmable beeper	
<b>Physical Characteristics</b>	Barcode scanning		Linear imager / Laser	
	Display		LCD 100 x 64 with LED backlight	
	Keypad		21 rubber keys with white LED backlight	
	Dimensions (LxWxH)		122 x 56 x 32 mm/ 4.8 x 2.2 x 1.25 in.	
<b>User Environment</b>	Weight (laser, including battery)	120 g / 4.2 oz.	125g / 4.4 oz.	
	Operating temperature		-10 °C to 60 °C / 14 °F to 140 °F	
	Storage temperature		-20 °C to 70 °C / -4 °F to 158 °F	
	Humidity (non-condensed)		Operating: 10% to 90% / Storage: 5% to 95%	
	Impact resistance		Multiple 1.2m / 4 ft. drops onto concrete, 5 drops on each side	
	Electrostatic discharge		± 15 kV air discharge / ± 8 kV direct discharge	
<b>Development support</b>	EMC regulation	BSMI, CE, C-Tick, FCC, IC	CE, FCC	
<b>Application Software</b>		BLAZE C Compiler and BASIC Compiler		
<b>Cradles</b>		FORGE Application Generator including data transmission OCX, STREAM Wireless Studio, MIRROR Terminal Emulation		
<b>Accessories</b>		Charging and communication cradle, modem cradle, Ethernet cradle, GPRS cradle (quad band)		
<b>Warranty</b>		4-slot battery charger, AC / DC adapter, RS232 cable, USB cable		
		1 year		

		1500H series		1660H series
<b>Communication</b>	Options	Corded	Cordless	Cordless
	Module	-	Bluetooth Class 2 (2.4GHz) Version 2.0	Bluetooth Class 3 (2.4 GHz) Version 2.0
	Converge (line of sight)	-	90 m3/ 295 ft.	10 m / 33 ft.
<b>Performance</b>	Standard profile		SPP, HID	
	Barcode scanning	Linear imager <sup>4</sup> , Laser <sup>5</sup> , 2D imager		Linear imager
	Optical sensor	Linear imager: 2500 pixels, Laser, 2D imager: 752x480 pixels		2500 pixels
	Light source	Linear imager: Red LED 625 nm <sup>3</sup>		Red LED 625 nm <sup>3</sup>
		Laser: Visible laser diode at 650 ± 15 nm		
	Resolution	2D imager: 625 ± 5 nm LEDs (2x)		3 mil
		3 mil to 5mil <sup>6</sup>		
	Depth of field <sup>6</sup> (13mil Code 39 barcode)	Linear imager: 0.5 to 35cm/ 0.2 to 13.8 in.		3.5 to 38 cm / 1.4 to 15 in.
		Laser: 2 to 50 cm/ 0.8 to 22.4 in.		
	Scanning angle	2D imager: 6.9 to 10.7 cm/ 2.7 to 4.2 in. (3 mil)		Pitch ± 70° Skew ± 70°
		Pitch ± 60° to 70°, Skew ± 50° to ± 70° <sup>6</sup>		
	PCS	Minimum 30% to 45 % <sup>9</sup>		Minimum 30%
Scan rate	1D: 100 to 200 scans/second, 2D: 60 frames/ second		100 scans/second	
Ambient illumination	100,000 lux		-	
Hands-free scanning	Auto-sense and continuous modes <sup>8</sup>		-	
Barcode support	1D <sup>7</sup> : Codabar, Code 39, Code 93, Code 128, GS1 DataBar (RSS), Industrial 2 of 5, Interleave 2 of 5, IBS1-128, Italian and French Pharmacodes, Matrix 2 of 5, MSI, Plessey, Telepen, UPC-A, UPC-E, EAN-8, EAN-13, GS1-128 (EAN-128)		Codabar, Code 39, Code 93, Code 128, GS1 DataBar (RSS), Industrial 2 of 5, Interleave 2 of 5, IBS1-128, Italian and French Pharmacodes, Matrix 2 of 5, MSI, Plessey, Telepen, UPC-A, UPC-E, EAN-8, EAN-13, GS1-128 (EAN-128)	
	2D <sup>7</sup> : PDF417, MicroPDF417, Composite, RSS, TLC-39, Datamatrix, QR code, Micro QR code, Aztec, MaxiCode, Postal Codes: US PostNet, US Planet, UK Postal, Australian Postal, Japan Postal Dutch Postal (KIX)			
<b>Physical</b>	Programmable features	Data editing, interface selection, symbology configuration		
	Language support	US and UK English, French, Italian, Belgian, Norwegian/Swedish, Spanish, Portuguese, German, Japanese and Turkish		
<b>Electrical</b>	Weight <sup>6</sup> (including battery)	145 g / 5.1 oz to 185g/ 6.5 oz.	50 g / 1.76 oz. to 69 g / 2.43 oz.	
	Size (LxWxH)	15.3x6.1x9.3 cm / 6.0x2.4x3.7 in.	9.5 x 3.5 x 2 cm / 3.7 x 1.4 x 0.8 in.	
	Switch	Tactile Switch	Push-button switch, plus [Delete] key	
	Memory <sup>6</sup>	4K/ 512K to 10K/ 4M	256K/ 512K	
<b>User Environment</b>	Working time <sup>9</sup>	12 to 24 hours <sup>9</sup> based on 1 scan/ 5seconds	Two AAA batteries / Li-ion 3.7V, 850 mAh	
	Operating power	+5 V ± 10% / 3.7V 800 mAh Li-ion battery	Li-ion 3.7V, 850 mAh	
	Power consumption			
	Standby-linked / Scanning/ Maximum	25 mA/ 210 mA to 50 mA/ 265 mA <sup>6</sup>	15mA/ 245 mA @3V to 17mA/ 190 mA @3.7V	
	Temperature	Operating: 0 °C to 50°C / 32°F to 122°F	Operating: 0 °C to 50°C / 32°F to 122°F	
	Humidity (non-condensing)	Storage: -20°C to 60°C / -4°F to 140°F	Storage: -20°C to 60°C / -4°F to 140°F	
Impact resistance	Operating: 10% to 90% Storage: 5% to 95%	Operating: 10% to 90% Storage: 5% to 95%		
Electrostatic discharge	1.5 m (4.9 ft) multiple drops onto concrete	1.2m (3.9 ft) multiple drops onto concrete	90 cm / 3.0 ft. multiple drops onto concrete	
EMC regulation <sup>6</sup>	±8 kV contact ±15 kV air			
<b>Configuration</b>		BSMI, CE, C-tick, FCC, IC, KC, NCC, SRMC, TELEC		BSMI, CE, C-tick, FCC, MIC, NCC, IC, TELEC, SRMC, KC
		Setup options include Windows-based ScanMaster software (included), by direct connection or printing out barcode settings		
<b>Accessories</b>		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, Micro USB cable, and battery charger
	<b>Warranty</b>	5 years (engine 1 year)	3 years (engine 1 year)	1 year

1. Based on one laser scan per five seconds with backlight off. 2. It is only available upon request. 3. It is based on communication stand without weighted base. 4. 1500WA is also available upon request. 5. 1560: Red LED 618-625 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 Pharmacode, Plessey, and Telepen. 8. Working time for linear imager reader is based on CCD Sensor mode setting. Always Active function disabled/ Always Active function enabled, default setting. 16 hours for 2D imager reader.

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