Metrologic®
We really work for you.™

MS2xxx SERIES **Stratos®** PRODUCT GUIDE

High Performance, Slim Line

Bioptic Scanner/Scales

Metrologic Instruments, Inc. is a global supplier of choice for data capture and collection hardware, optical solutions, and image processing software. Metrologic has been delivering innovative, quality products that are cost effective, reliable and supported by the highest level of personal service for nearly 40 years. Metrologic products are sold worldwide through Metrologic's sales, service and distribution offices located in The Americas, EMEA and Asia/Pacific. Metrologic provides its customers not only with a great deal, but a great deal more. For more information visit www.metrologic.com.

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6-Sided and 5-Sided, Bioptic, High Performance, High Throughput, In Counter Laser Bar Code Scanners

STRATOS SERIES

MS232x Stratos H

MS2122 Stratos E

MS22xx Stratos S

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ISO 9001:2000

Stratos

Contents

Metrologic is proud to offer its line of 5 and 6-sided, 360° bioptic scanner/scales for the retail POS market requiring high throughput front end scanning. What differentiates the Stratos series from other bioptic scanners is a patented modular design that provides ease of setup and maintenance ensuring minimum down time and maximum customer service, as well as a 100 mm (4") below counter depth, which comfortably supports seated and standing checkout environments.

The Stratos series offers several types and sizes of 5 and 6-sided scanner/scales ranging from 353 mm (13.9") to 508 mm (20") in length, assuring there will be a Metrologic solution to meet front end checkout requirements for high throughput POS scanning and weighing.

A L L   S T R A T O S   B I O P T I C   M O D E L S   F E A T U R E :

- ✔ **100 mm (4") below counter depth**
- ✔ **Sapphire or Diamonex horizontal glass**
- ✔ **Decodes all standard 1D and RSS codes**
- ✔ **Complete kits standard**
- ✔ **Factory integrated EAS antenna**

- ✔ **Flash ROM upgrades**
- ✔ **Bar code based configuration**
- ✔ **PC based configuration**
- ✔ **Powered port for hand-held scanner**
- ✔ **Sunrise 2005 compliant**
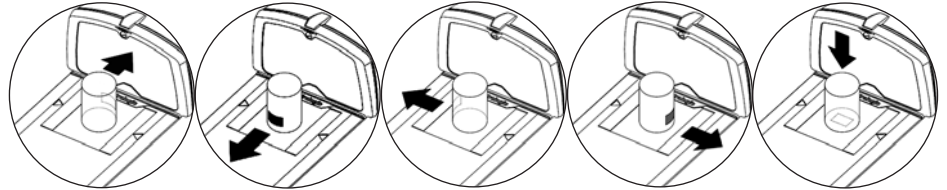
Choosing the model to best match your application requirements

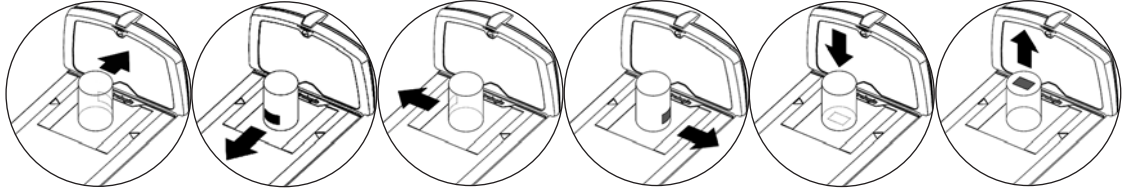|		
	MS232x **StratosH**™ **Page 3**	Application requires a **6-sided bioptic scanner/scale** or **scanner only model** and checkout counter accommodates an above counter height of 178 mm (7") and model lengths of 508 mm (20") and 420 mm (16.5").
	MS2122 **StratosE**™ **Page 4**	Application requires a **6-sided bioptic scanner only** model and checkout counter accomodates an above counter height of 178 mm (7") and model length of 399 mm (15.7").
	MS22xx **StratosS**™ **Page 5**	Application requires a **5-sided bioptic scanner/scale** or **scanner only model** and checkout counter accommodates an above counter height of 130 mm (5.1") and model lengths of 399 mm (15.7) and 353 mm (13.9").

	Description		Sides Scanned	Length	Width	Tower Width	Tower Height
StratosH							
MS2320	Scanner/Scale	Full Length	6	20" (508 mm)	11.5" (292 mm)	11.5" (292 mm)	7" (178 mm)
MS2321	Scanner Only	Full Length	6	20" (508 mm)	11.5" (292 mm)	11.5" (292 mm)	7" (178 mm)
MS2322	Scanner Only	Compact	6	16.5" (420 mm)	11.5" (292 mm)	11.5" (292 mm)	7" (178 mm)
StratosE							
MS2122	Scanner Only	Sub-compact	6	15.7" (399 mm)	11.5" (292 mm)	11.5" (292 mm)	7" (178 mm)
StratosS							
MS2220	Scanner/Scale	Compact	5	15.7" (399 mm)	11.5" (292 mm)	11.5" (292 mm)	5.1" (130 mm)
MS2221	Scanner Only	Compact	5	15.7" (399 mm)	11.5" (292 mm)	11.5" (292 mm)	5.1" (130 mm)
MS2222	Scanner Only	Sub-compact	5	13.9" (353 mm)	11.5" (292 mm)	11.5" (292 mm)	5.1" (130 mm)

5-Sides, 360° Scanning for High Throughput Scanning

6-Sides, 360° Scanning for Maximum Performance and Checkout Speed

Things to consider before ordering a bioptic scanner:

1. Determine if you want a scanner only or a combination scanner with scale.
2. If you are ordering a scanner with scale, specify if you need to order remote display.
3. RS232 interface is standard. Specify if you need a different interface.
4. If you are ordering a scanner with scale, specify if you want a single cable or dual cable to transmit data.
5. When ordering a scanner with scale, specify if you require the weight in pounds or kilograms.
6. Check the dimensions of your counter opening including the space you have above the vertical tower. Stratos series is available in 5 different dimensions.

Metrologic's StratosH™ is a high performance, **6-sided, 360°, bioptic scanner/scale** well suited for in counter POS front end checkout environments demanding maximum performance and speed. The StratosH series includes a 508 mm (20") length scanner/scale, 508 mm (20") length scanner only and a 420 mm (16.5") length scanner only. The 100 mm (4") below counter depth comfortably supports seated and standing checkout. The vertical tower dimensions accommodate checkout environments using enclosures to protect the vertical tower.

StratosH incorporates Stratos advanced scanning architecture and Stratos*SPHERE* decoding software, providing high performance scanning with minimal need for product orientation.

Sunrise 2005 Compliant

MECHANICAL DIMENSIONS

MS2320 full size scanner/scale
MS2321 full size scanner only

178 mm (7")
100 mm (4")
508 mm (20")

MS2322 compact size scanner only

178 mm (7")
100 mm (4")
420 mm (16.5")

All Models

292 mm (11.5")

features	benefits
• 6-sided, 360° scanning	Improves productivity and operator ergonomics by reducing product orientation
• Stratos*SYNC*™- vertical and horizontal scanning zones	Maintains productivity and uptime via independent scanning zones
• Stratos*SWAP*™- field replaceable optical scanning modules	Scanning systems can be replaced at the checkout lane thus lowering the cost of service
• Stratos*SCHOOL*™- operator training software	Increases productivity by promoting more efficient and safer scanning techniques
• Stratos*SCOPE*™- visual diagnostic indicator	Scanner condition determined at the checkout lane thus lowering the cost of service

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Metrologic's StratosE™ is the most compact, **6-sided, 360°**, high performance bioptic scanner in the market, perfectly suited for space constrained POS applications demanding high performance scanning. This **scanner only model** features a compact form factor, including a 399 mm (15.7") length and 100 mm (4") below counter depth, designed to allow easy integration into most of today's seated and standing checkout environments. The vertical tower dimensions support the use of checkout environments using enclosures to protect the vertical tower.

StratosE incorporates Stratos advanced scanning architecture, and Stratos*SPHERE* decoding software providing high throughput scanning with minimal need for product orientation.
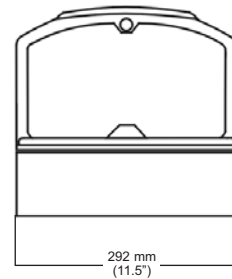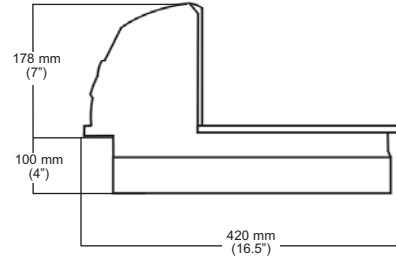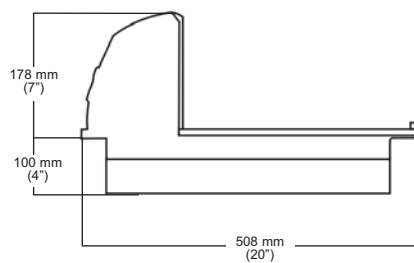
Sunrise 2005 Compliant

MECHANICAL DIMENSIONS

178 mm (7")
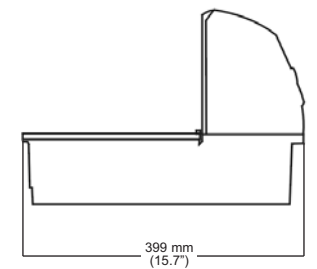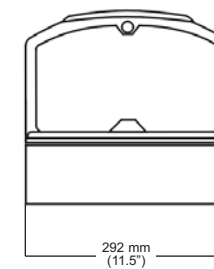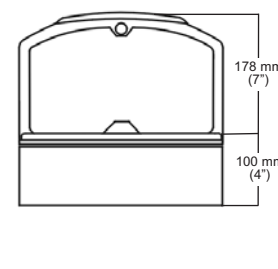100 mm (4")

292 mm (11.5")

399 mm (15.7")

features	benefits
• 6-sided, 360° scanning	Improves productivity and operator ergonomics by reducing product orientation
• Stratos*SYNC*™- vertical and horizontal scanning zones	Maintains productivity and uptime via independent scanning zones
• Stratos*SWAP*™- field replaceable optical scanning modules	Scanning systems can be replaced at the checkout lane thus lowering the cost of service
• Stratos*SCHOOL*™- operator training software	Increases productivity by promoting more efficient and safer scanning techniques
• Stratos*SCOPE*™- visual diagnostic indicator	Scanner condition determined at the checkout lane thus lowering the cost of service

Metrologic's StratosS™ is the newest addition to the flagship Stratos family of bioptic scanner/scales. StratosS is a **5-sided, 360°** **scanner/scale** designed with a compact form factor, including a 399 mm (15.7") length scanner/scale, 399 mm (15.7") length scanner only, 353 mm (13.9") length scanner only and 100 mm (4") below counter depth. StratosS is designed to allow easy integration into most of today's seated and standing checkout environments.
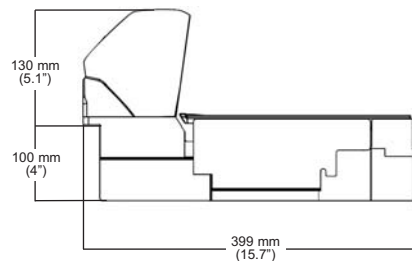
StratosS incorporates Stratos advanced scanning architecture and Stratos**SPHERE** decoding software, providing high throughput scanning with minimal need for product orientation.
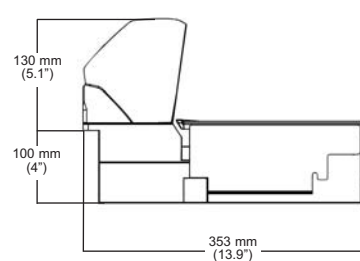
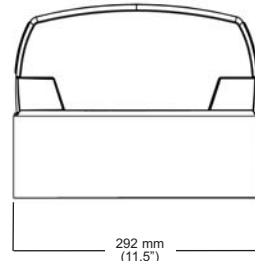Sunrise 2005 Compliant

MECHANICAL DIMENSIONS

MS2220 compact scanner/scale
MS2221 compact scanner only

MS2222 sub compact scanner only

All Models

130 mm (5.1")
100 mm (4")
399 mm (15.7")

130 mm (5.1")
100 mm (4")
353 mm (13.9")

292 mm (11.5")

features	benefits
• 5-sided, 360° scanning	Improves productivity and operator ergonomics by reducing product orientation
• Multiple interface	Allows for quick and easy migration to a new host type or interface thus protecting your investment
• Stratos**SYNC**™- vertical and horizontal scanning zones	Maintains productivity and uptime via independent scanning zones
• Stratos**SWAP**™- field replaceable optical scanning modules	Scanning systems can be replaced at the checkout lane thus lowering the cost of service
• Stratos**SCHOOL**™ - operator training software	Increases productivity by promoting more efficient and safer scanning techniques

Scale Partners

	MS232x StratosH	MS22xx StratosS
AVERY WEIGH-TRONIX		
Scale Capacity	15 kg (30 lbs)	15 kg (30 lbs)
Minimum Increment	.005 kg (0.01 lb)	.005 kg (0.01 lb)
Applications	Weight only and Price Computing	Weight only and Price Computing
Host Communication	Single and Dual interface to host	Single and Dual interface to host
Remote Display	Single line - weight onlY and Four line - Price Computing	Single line - weight only and Four line - Price Computing
BIZERBA		
Scale Capacity		15 kg (30 lbs)
Minimum Increment		0 - 6 kg (0.002 kg) 6 -15 kg (0.005 kg) and 15 kg - 6 kg (0.005 kg) 6 kg - 0 kg (0.002 kg)
Applications	Currently Unavailable	Weight only and limited price computing
Host Communication		Single and dual interface to host
Remote Display		Single line - weight only and 3 line - Price Computing
DIBAL		
Scale Capacity		15 kg (30 lbs)
Minimum Increment		.005 kg (0.01 lb)
Applications	Currently Unavailable	Weight only
Host Communication		Dual interface to host
Remote Display		Single line - weight only
DIGI		
Scale Capacity	15 kg (30 lbs)	
Minimum Increment	.005 kg (0.01 lb)	
Applications	Weight only and Price Computing	Currently Unavailable
Host Communication	Single and Dual interface to host	
Remote Display	Single line - weight only Four line - Price Computing	
FILIZOLA		
Scale Capacity	15 kg (30 lbs)	
Minimum Increment	.005 kg (0.01 lb)	
Applications	Weight only	Currently Unavailable
Host Communication	Dual interface to host only	
Remote Display	Single line - weight only	
HERBERT		
Scale Capacity	15 kg (30 lbs)	
Minimum Increment	.005 kg (0.01 lb)	
Applications	Weight only	Currently Unavailable
Host Communication	Dual interface to host only	
Remote Display	Single line - weight only	
METTLER TOLEDO - DIVA		
Scale Capacity	15 kg (30 lbs)	15 kg (30 lbs)
Minimum Increment	0 - 6 kg (0.002 kg) 6 -15 kg (0.005 kg) and 15 kg - 6 kg (0.005 kg) 6 kg - 0 kg (0.002 kg)	0 - 6 kg (0.002 kg) 6 -15 kg (0.005 kg) and 15 kg - 6 kg (0.005 kg) 6 kg - 0 kg (0.002 kg)
Applications	Weight only and limited price computing	Weight only and limited price computing
Host Communication	Single and dual interface to host	Single and dual interface to host
Remote Display	Single line - weight only 3 line - Price Computing	Single line - weight only 3 line - Price Computing
METTLER TOLEDO - DURA		
Scale Capacity		15 kg (30 lbs)
Minimum Increment		.005 kg (0.01 lb)
Applications	Currently Unavailable	Price Computing
Host Communication		Dual interface to host only
Remote Display		Four line - Price Computing

	MS2320, MS2321 & MS2322 **Stratos*H*™**	MS2122 **Stratos*E*™**	MS2220, MS2221 & MS2222 **Stratos*S*™**
OPERATIONAL			
Light Source	Visible Laser Diode 650 nm ± 10 nm	Visible Laser Diode 650 nm ± 10 nm	Visible Laser Diode 650 nm ± 10 nm
Laser Power (horizontal / vertical)	1.1 mW / 1.5 mW	1.1 mW / 1.5 mW	1.0 mW / 1.0 mW
Depth of Scan Field (horizontal)	0 mm - 152 mm (0″ - 6″) for 0.33 mm (13 mil) bar code	0 mm - 152 mm (0″ - 6″) for 0.33 mm (13 mil) bar code	0 mm - 100 mm (0″ - 4″) for 0.33 mm (13 mil) bar code
Depth of Scan Field (vertical)	0 mm - 216 mm (0″ - 8.5″) for 0.33 mm (13 mil) bar code	0 mm - 216 mm (0″ - 8.5″) for 0.33 mm (13 mil) bar code	0 mm - 216 mm (0″ - 8.5″) for 0.33 mm (13 mil) bar code
Scan Speed	6000 scan lines per second	6000 scan lines per second	5400 scan lines per second
Scan Pattern (horizontal / vertical)	66 (38 / 28)	66 (38 / 28)	54 (38 / 16)
Motor Speed (horizontal / vertical)	4800 / 6000 RPM	4800 / 6000 RPM	6000 / 6000 RPM
Sides Read	6	6	5
Scan Zone	360°	360°	360°
Minimum Bar Width	0.152 mm (6 mil)	0.152 mm (6 mil)	0.127 mm (5.0 mil)
Decode Capability	All standard 1-D bar codes, RSS-14, RSS-Expanded, RSS-14 Limited	All standard 1-D bar codes, RSS-14, RSS-Expanded, RSS-14 Limited	All standard 1-D bar codes, RSS-14, RSS-Expanded, RSS-14 Limited
System Interfaces	RS-232, Aux. RS-232, IBM468x/469x, USB, OCIA	RS-232, Aux. RS-232, IBM468x/469x, USB, OCIA	RS-232, Aux. RS-232, IBM468x/469x, USB, OCIA
Print Contrast	35% minimum reflectance difference	35% minimum reflectance difference	35% minimum reflectance differenceN/a
Number Characters	Up to 80 data characters	Up to 80 data characters	Up to 80 data characters
Roll, Pitch, Yaw	360°, 60°, 60°	360°, 60°, 60°	360°, 60°, 60°
Speaker Operation	7 tones or no beep; 3 volume settings	7 tones or no beep; 3 volume settings	7 tones or no beep; 3 volume settings
Indicators (LED)	Blue = laser on, ready to scan; White = good read, decoding	Blue = laser on, ready to scan; White = good read, decoding	Blue = laser on, ready to scan; White = good read, decoding
Length	MS2320 (full size scanner/scale) 508 mm (20″) MS2321 (full size scanner only) 508 mm (20″) MS2322 (compact scanner only) 420 mm (16.5″)	399 mm (15.7″)	MS2220 (compact scanner/scale) 399 mm (15.7″) MS2221 (compact scanner only) 399 mm (15.7″) MS2222 (sub-contact scanner only) 353 mm (13.9″)
Width	292 mm (11.5″)	292 mm (11.5″)	292 mm (11.5″)
Depth (below counter)	100 mm (4″)	100 mm (4″)	100 mm (4″)
Height (above counter)	178 mm (7″)	178 mm (7″)	130 mm (5.1″)
Weight	MS2320 (full size scanner/scale) 11.8 kg (26 lbs) MS2321 (full size scanner only) 7.7 kg (17 lbs) MS2322 (compact scanner only) 7.3 kg (16 lbs)	7.3 kg (16 lbs)	MS2220 (compact scanner /scale) 9.97 kg (22 lbs) MS2221 (compact scanner only) 7.20 kg (16 lbs) MS2222 (sub-compact scanner only) 6.80 kg (15 lbs)
Input Voltage	5.2 V @ 1.5 Amps / 12 V @ 1.5 Amps	5.2 V @ 1.5 Amps / 12 V @ 1.5 Amps	5 V @ 2 Amps / 12 V @ 1 Amps
Power	13.5 W (scanning); 5 W (standby)	13.5 W (scanning); 5 W (standby)	13.5 W (scanning); 5 W (standby)
Operating Current	900 mA (5 V) / 700 mA (12 V)	900 mA (5 V) / 700 mA (12 V)	900 mA (5 V) / 700 mA (12 V)
DC Transformers	Class 1; 5 VDC @ 1.5 A; 12 VDC @ 1.5 A	Class 1; 5 VDC @ 1.5 A; 12 VDC @ 1.5 A	Class 1; 5 VDC @ 2 A; 12 VDC @ 1 A
Laser Class	CDRH & IEC: Class 1 LASER PRODUCT according to IEC 60825-1:1993+A1:1997+A2:2001	CDRH & IEC: Class 1 LASER PRODUCT according to IEC 60825-1:1993+A1:1997+A2:2001	CDRH & IEC: Class 1 LASER PRODUCT according to IEC 60825-1:1993+A1:1997+A2:2001
EMC	FCC, ICES-003 & EN55022 Class A	FCC, ICES-003 & EN55022 Class A	FCC, ICES-003 & EN55022 Class A
ENVIRONMENTAL			
Operating Temperature	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
IP Rating	IP 55	IP 55	IP 55
Light Levels	4842 Lux (450 footcandles)	4842 Lux (450 footcandles)	4842 Lux (450 footcandles)
Storage Temperature	-40°C to 60°C (-40°F to 140°F)	-40°C to 60°C (-40°F to 140°F)	-40°C to 60°C (-40°F to 140°F)
Humidity	5% to 95% relative humidity, non-condensing	5% to 95% relative humidity, non-condensing	5% to 95% relative humidity, non-condensing
Contaminants	Sealed to resist airborne particulate contaminants	Sealed to resist airborne particulate contaminants	Sealed to resist airborne particulate contaminants
Ventilation	None required	None required	None required

Stratos*SCAN*™   Stratos*SWAP*™   Stratos*SCHOOL*™   Stratos*SCOPE*™   Stratos*SPHERE*™   Stratos*SYNC*™   Stratos*SCAN*™   Stratos*SWAP*™   Stratos*SCHOOL*™   Stratos*SCOPE*™   S