

Motorola Product Overview

Handheld Scanner Retail



Model	LS1203	LS2208	LI2208	DS6707/DS6708	LS4208	LI4278	DS4208	DS6878	LS7708	DS457	DS9808
Description	Page 87	Page 86	Page 87	Page 89	Page 88	Page 89	Page 89	Page 90	-	Page 92	Page 91
Scanner Type	Laser	Laser	Linear imager	Imager	Bidirectional	Linear imager	Imager		Omni-directional	Imager	Laser / imager
Light Source (laser)	650 nm laser diode	650 nm laser diode	LED Class 1 device, 617 nm	650 nm laser diode	650 nm laser diode	LED Class 1 device 617 nm (amber)	Aiming pattern: 617 nm LED Illumination: 625 nm LEDs	Aiming Pattern: 655 +/- 10 nm laser diode Illumination: 625 +/- 5 nm LED	650 nm laser diode (visible light)	Aiming Element: 655 ± 10 nm Illumination Element: 625 ± 5 nm	Aiming Pattern: 650nm laser diode Illumination: 630nm LED
Scan/Decoding Rate	100 scans / sec.	100 scans / sec.	547 scans / sec.	-	200 decodes / sec.	547 scans / sec.	-	-	2400 scans/ sec.	-	up to 254 cm / sec.
Nominal Working Distance	up to 203 mm	up to 430 mm	up to 1400 mm	up to 386 mm	up to 736.6 mm	up to 787 mm	up to 386 mm	up to 280 mm	up to 254 mm	up to 333 mm	up to 450 mm
Minimal Printing Contrast	30 % minimum reflectance	20 % minimum reflective difference	15 % minimum reflective difference	25 % minimum reflectance		15 % minimum reflectance	25 % minimum reflectance	25 % minimum reflectance	25 % minimum reflectance	min. 25 %	-
Rotation/Tilt/Pan	± 30°/± 65°/± 60°	± 30°/± 65°/± 60°	± 45°/± 65°/± 65°	360°/ ±65°/ ±60°		±45° / ±65° / ±65°	±360°, +65°, +60°	±360°, +60°, +60°	-	-	0 to 360°/±65°/±60°
Decoding Options 1D/2D	standard 1D bar codes	standard 1D bar codes	standard 1D bar codes	standard 1D and 2D bar codes	standard 1D bar codes	standard 1D bar codes	standard 1D and 2D bar codes	standard 1D and 2D bar codes	standard 1D bar codes	standard 1D and 2D bar codes	standard 1D and 2D bar codes
Supported Interfaces	RS232, KBW, USB	RS232, KBW, USB, Wand Scanner, IBM 468X/9X, Synapse and Undecoded	RS232, KBW, USB, Wand Scanner, IBM 468X/9X, Synapse and Undecoded	RS232, KBW (6708 only), USB, Wand Scanner, IBM 468X/9X (6708 only), Synapse and Undecoded	RS232, KBW, USB, Wand Scanner, IBM 468X/9X, Synapse and Undecoded	RS232, RS485 (IBM), USB, KBW	USB, RS232 with various emulations	RS232, KBW (6708 only), USB, Wand Scanner, IBM 468X/9X (6708 only), Synapse and Undecoded	USB, RS232, IBM 468x/9x, KBW, Synapse (nearly all POS hosts), SPCI (for 123 Scan)	RS-232, USB	USB, RS-232, RS-485 (IBM 46xx-Protokolle), KBW
Operating Temperature / Storage	0 to 50 °C / -40 to 70 °C										
Humidity	5 to 95% non-condensing										
Impact-Resistance	1.5 m on concrete			1.8 m on concrete		1.8 m on concrete	1.83 m on concrete	1.8 m on concrete	-	1.76 m drops to concrete	1.5m on concrete
Dimensions in mm (HxLxW)/ ca. Weight	62 x 180 x 60 / 122 g	152 x 84 x 63 / 146 g	160 x 67 x 99 / 140 g	166 x 119 x 71 / 182 g	170 x 93 x 68 / 181 g	98 x 186 x 70 / 224 g	170 x 93 x 68 / 173 g	850 x 690 x 970 / 238g	152 x 160 x 95/ 907 g	29.2 x 58.4 x 62 mm / 111 g	137 x 86 x 203 / 340 g
Power Supply	5 V ± 10 % at 100 mA	5 V ± 10 % max. 175 mA	5 V ± 10 % max. 165 mA	5 V ± 10 % at 350 mA	5 V ± 10 % at 140 mA		5 VDC ± 10 % at 275 mA	5 V ± 10 % at 700 mA	5.5 to 4.75 V at 390/ 500 mA	5 VDC ± 10 % at 450 mA	5 V ± 10% at 450 mA 5 V ± 10% at 1,2 A
Power Source	host system or external adaptor						host system or external adaptor	host system or external adaptor	host system or external adaptor (Base)	host system or external adaptor	
Colour	Light grey or anthracite	Light grey or anthracite	Black or white	Light grey or anthracite		Black or white	Anthracite	Anthracite healthcare	Anthracite	Black	Anthracite
Electrical Safety	UL1950, CSA C22.2 no. 950, EN60950/IEC950	UL1950, CSA C22.2 no. 950, EN60950/IEC950	UL60950, CSA C22.2 no. 950, EN60950/IEC950	UL6950-1, CSA C22.2 Nr. 60950-1, EN60950-1/ IEC60950-1	UL1950, CSA C22.2 no. 950, EN60950/ IEC950	C22.2 No. 600950-1, EN 60950-1, IEC 60950-1, UL 60950-1 LED Class 1	UL60950-1 2nd ed, CSA C22.2 No. 60950-1 2nd ed, EN60950-1/ IEC60950-1 2nd ed	UL6950-1, CSA C22.2 No. 60950-1, EN60950-1/ IEC60950-1	UL 1950, CSA C22.2 no. 950, EN60825	ETL, VDE, CETL, EN60950, Ctick, VCCI	UL6950-1, CSA C22.2 No. 60950-1, EN60950-1/ IEC60950-1
Laser Safety	IEC class 1	CDRH class II, IEC class 2	LED class 1	EN60825-1:1994+A1: 2002 +A2 : 2001, IEC60825-1, 21CFR1040.10 u 21CFR1040.11, CDRH class II, IEC class 2	CDRH class II, IEC class 2	-	IEC/EN60825-1:2001, IEC/ EN62471:2006	IEC class 2	CDRH class IIa, laser product IEC 60825, class 1 laser product	Intended for use in CDRH Class II/IEC 825, Class I devices	IEC class 2
Warranty	36 months	60 months	60 months	60 months	60 months	36 months	60 months	36 months	24 months	3 years	36 months
Options	-	-	-	optional: EAS support		optional: EAS support	Intellistand	optional: healthcare	integrated EAS aerial	Service from the Start Advance Exchange Support	optional: RFID modul
Target groups	Point-of-Sale, small warehouses					Point-of-Sale, small warehouses	POS, ticketing appl.	Point-of-Sale/Health-care	Point-of-Sale	Retail, POS, ticketing	Point-of-Sale, pharma

DS4208, DS6878, DS6707 are also available as Healthcare Version

Motorola Product Overview

Handheld Scanner Industry



Model	LS3008	LS3408ER/FZ	LS3578 FZ/ER	DS3508 SR/HD/DP/ER	DS3578 SR/HD/DPM/ER	CS3000
Description	–	Page 94	Page 95	Page 96	Page 96	Page 92
Scanner Type	bidirectional	retro-collective	retro-collective	CMOS-imager	CMOS-imager	1D laser
Light Source (laser)	650nm laser diode (visible light)			630nm LED	630nm LED	–
Scan/Decoding Rate	200 decoding cycles/sec.	36 scanning cycles/sec.	36 scanning cycles/sec.	–	–	–
Nominal Working Distance	5 mil (Code 39) 3.17–13.33mm 13 mil (100% UPC/EAN) 0–482.5mm	0 - 609 mm (13 mil 100% UPC/EAN) 50 - 813mm (10 mil)	0 - 609 mm (13 mil 100% UPC/EAN) 50 - 813mm (10 mil)	0 - 53cm (depends on engine-type)	0 - 53cm (depends on engine-type)	Batch or up to 10 m (CS3070)
Minimal Printing Contrast	more than 25% reflective distance			–	–	–
Rotation/Tilt/Pan	±35° / ±60° / ±60°	±10° ER; ±20° FZ / ±65° / ±60° ER; ±50° FZ	±20° FZ; ±10° ER / ±65° / ±50° FZ; ±65° ER	±360° / ±60° / ±60°	±360° / ±60° / ±60°	–
Decoding capability 1D/2D	All common 1D bar codes	All common 1D bar codes	All common 1D and 2D bar codes	All common 1D and 2D bar codes	All common 1D and 2D bar codes	All common 1D bar codes
Supported Interfaces	RS232C (Nixdorf, ICL, Fujitsu); IBM 468x/469x; KBW; USB (IBM SurePOS, Mac); laser/Wand Scanner Synapse	RS232, KBW, wand scanner emulation, scanner emulation, IBM 468x/469x, USB and Synapse	RS232, KBW, IBM 468x/469x, USB and Synapse	USB, RS-232, RS-485 (IBM 46xx Protocols), KBW, Synapse	USB, RS-232, RS-485 (IBM 46xx Protocols), KBW, Synapse	RS232/USB/Bluetooth (CS3070)
Miscellaneous	–	–	BT Class 2, (1.2), RS232, HID, 2.4GHz, 720 Kbit/s	–	BT Class 2, (1.2), RS232, HID	–
Operating Temperature / Storage Humidity	0 to 50 °C / -40 to +70 °C	-30 to 50 °C / -40 to +70 °C	-20 to 50 °C / -40 to +60 °C	-20 ° to 50 °C / -40 ° to +60 °C	-20 ° to 50 °C / -40 ° to +60 °C	0 to 40 °C / -40 to +70 °C without battery
Impact-Resistance	2 m on concrete			–	2m on concrete	–
Light-Resistance	Normal lighting conditions indoors and outdoors (direct sunlight)	ER: Indoors: 4842 Lux, Outdoors: 43040 Lux FZ: Indoors: 4842 Lux, Outdoors: 86080 Lux	Normal lighting conditions indoors and outdoors (direct sunlight)	Sunlight: 86,000 Lux	Sunlight: 86,000 Lux	–
Electrostatic Discharge	–	20 kV discharge over air, 8kV discharge at contact		20 kV discharge over air	20 kV discharge over air	–
Dimensions in mm (HxLxW)/ ca. Weight	68 x 170 x 93 / 181 g	74 x 187 x 123 / ER: 356 g / FZ: 350 g	74 x 187 x 123 / FZ: 414 g / ER: 420 g	122 x 186 x 74	122 x 186 x 74	38 x 19 x 64 / 86 x 22 x 50
Power Supply	5.0 VDC ±10% at 140 mA	4.5–14VDC	lithium-ion battery 2200 mAh	5V +- 10%, at 300 mA	lithium ion battery 2200 mAh	5.0 VDC ±10 % max. 500 mA
Power Source	host system or external adaptor			–	–	battery, up to 8500 scans per battery
Colour	yellow/black			–	yellow/black	dark grey
Electrical Safety	UL1950, CA C22-2 NO950, ENG60950/IEC950	IEC 1000-4 -(2,3,4,5,6,11)	IEC 1000-4 -(2,3,4,5,6,11)	UL60950-1, CSA C22.2 No. 60950-1,	UL60950-1, CSA C22.2 No. 60950-1, IEC 60950-1	UL 60950-1, C22.2 no. 60950-1, EN 60950-1, IEC 60950-1
EMI/RFI	FCC Part 15 Class B, ICES-003 Class B, European Union EMC Directive, Australian SMA	FCC part 15 class B, ICES-003 class B, EU EMC, Japan VCCI/ MITI/Dentori	FCC part 15 class B, ICES-003 class B, EU EMC, Japan VCCI/ MITI/Dentori	FCC Part 15 Class B, ICES-003 Class B, EN 55022, EN 55024, EN 61000-6-2, AS/NZS 4268:2008, Japan VCCI	FCC Part 15 Class B, ICES-003 Class B, EN 55022, EN 55024, EN 61000-6-2, AS/NZS 4268:2008, Japan VCCI	FCC Part 15 Class B, ICES-003 Class B, European Union EMC Directive, Australian SMA
Laser Safety	CDRH class II, IEC class 2	IEC 825-1, class 2	IEC 825-1, class 2	CDRH Class II, IEC Class 2	–	CDRH class II, IEC class 1
Protection Class	IP53	IP65	IP65	IP65	IP65	–
Warranty	36 months	36 months	36 months	36 months	36 month	3 months / 12 months
Target groups	Point-of-Sale, warehouse, logistics			–	Point-of-sale, warehouse, logistics	logistics, kiosk

Motorola Product Overview

Mobile Data Collection



Model	MC2100	MC3100	MC55 A0/N0	MC9190-G	MC9200	WT41N0	ET1		MC67	MC40	ES400	MC45	MC65	MC75A	MC9500	MT2000
Description	Page 102	Page 102	Page 102	Page 103	Page 104	Page 102	Page 103		Page 105	Page 104	Page 104	-	-	-	-	Page 105
Operating System	Microsoft Embedded CE 6.0	Microsoft Windows CE 6.0 Professional or Windows Mobile 6.x Classic	Microsoft Windows Mobile 6.5 Classic	Microsoft Windows CE 6.0 or Windows Mobile 6.x Classic	Microsoft Windows Embedded Compact 7.0 Microsoft Windows Embedded Handheld 6.5.3	Microsoft Windows Embedded Compact CE 7.0	Android 4.1.2 (Jelly Bean)		Microsoft Embedded Handheld 6.5 Professional	Android 4.1.2 (Jelly Bean)	Microsoft Windows Mobile 6.5.3 Professional	Microsoft Windows Embedded Handheld 6.5.3 Professional Edition	Microsoft Windows Mobile 6.5 Professional	Microsoft Windows Mobile 6.5 Classic and Professional	Microsoft Windows Mobile 6.5 Classic and Professional	Microsoft Windows CE 5.0
Sealing	IP54	IP54	IP64	IP64	IP64	IP54	IP54		IP67	IP54	IP42	IP64	IP64	IP54	IP67	IP54
Drop Specification	1.2 m drop to concrete	1.2 m drop to concrete	1.8 m drop to concrete	1.8 m drop to concrete	1.8 m drop to concrete	1.2 m drop to concrete	1.2 m drop to concrete		2.4 m drop to concrete	1.2 m drop to concrete	1.2 m drop to concrete	1.8 m drop to concrete	1.8 m drop to concrete	1.5 m drop to concrete	1.8 m drop to concrete	1.8 m drop to concrete
Tumble Tested	1,000 x 0.5 m tumbles	500 x 0.5 m tumbles (1,000 drops)	1,000 x 0.5 m tumbles (2,000 drops)	2,000 x 1 m tumbles (4,000 drops)	2,000 x 1 m tumbles (4,000 drops)	500 x 0.5 m tumbles (1,000 drops)			1,000 x 0.5 m tumbles (2,000 drops)	250 x 0.5 m tumbles (500 drops)	150 x 0.5 m tumbles (300 drops)	250 x 0.5 m tumbles	1,000 x 0.5 m tumbles (2,000 drops)	1,000 x 0.5 m tumbles (2,000 drops)	2,000 x 1 m tumbles (4,000 drops)	250 x 1.0 m tumbles (500 drops)
1-D Barcodes	✓	✓	✓	✓	✓	-	✓		✓	✓	✓	✓	✓	✓	✓	-
2-D Barcodes	✓	✓	✓	✓	✓	-	✓		✓	✓	✓	✓	✓	✓	✓	-
Imager	✓	✓	✓	✓	✓	-	-		✓	✓	✓	-	✓	✓	✓	-
Long Range Scanner	-	-	-	✓	✓	-	-		-	-	-	-	-	-	-	-
Direct Part Marking (DPM)	-	✓	✓	✓	✓	-	-		✓	-	-	-	-	-	-	✓
RFID	-	✓	-	✓	✓	-	-		-	-	-	-	-	✓	-	-
Integrated Voice	Speaker and microphone (MC2180 only) Buzzer (MC2100 only)	Rugged audio connector; high-quality speakerphone; headset, (wired or Bluetooth); handset and speaker phone modes	Speaker, microphone, receiver (for handset mode use) and Bluetooth audio headsets	-	-	AC97 Compatible Codec to play audio over speaker or headset; microphone; simultaneous audio	Stereo speakers and dual microphones (one front and one rear-facing)		Dual microphone support with noise cancellation; vibrate alert; speaker; Bluetooth headset	Speakers, microphone and headset connector (mono, 2.5 mm jack with microphone); stereo audio through Bluetooth stereo headsets	Integrated Speaker; audio stereo connector (2.5 mm barrel jack); high-quality speakerphone; supports Bluetooth and PTT wireless or wired headsets	VoWWAN: handset mode with active noise reduction, high-quality speaker phone, Bluetooth wireless headset mode	Dual microphone support with noise cancellation; vibrate alert; speaker; Bluetooth headset	Speaker, microphone, receiver (for handset mode use) and Bluetooth audio headsets	High quality speakerphone, microphone and receiver for multiple voice modes - handset, headset and speakerphone	-
WWAN	-	-	-	-	-	-	Dual 3.5G HSPA+ and 3G EVDO		-	-	Dual 3.5G: GSM HSDPA/HSUPA and CDMAEVDO5 Rev A broadband for voice and data	✓	3.5G GSM HSPA/HSUPA and CDMA EVDO Rev A	GSM: 3.5G HSDPA; CDMA; EVDO Rev A	3.5G GSM HSPA/HSUPA and CDMA EVDO Rev A	-
WLAN	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Bluetooth	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
GPS	-	-	✓	-	-	-	✓		✓	-	✓	✓	✓	✓	✓	-
Camera	-	-	✓	-	-	-	✓		✓	✓	✓	✓	✓	✓	✓	-
Batch	✓	✓	-	-	-	-	-		-	-	-	-	-	-	-	-
MSP Compatible	✓	✓	✓	✓	-	✓	✓		-	-	✓	✓	✓	✓	✓	✓

Motorola Product Overview

Wi-Fi Controller



Model	RFS4000	RFS6000	RFS7000
Description	Page 108	Page 108	-
Max. access points	up to 36	up to 256	up to 1024
Max. WiFi networks	up to 24	up to 32	up to 256
Max. user	up to 500	up 4000	up to 16000
WAN backhaul	-	3G cellular backhaul	-
Encryption	WEP 40M28 (RC4); KeyGuard; WPA-TKIP; WPA2-CCMP (AES); 802.11i WPA2		
IPSec VPN gateway	256 IPSEC tunnels / switch	1,024 IPSEC tunnels / switch	2,048 IPSEC tunnels / switch
Wi-Fi multimedia extensions	WMM-power save with TSPEC Admission Control, WMM U-APSD for voice over Wi-Fi applications		
MTFB	65,000 h	65,000 h	65,000 h
AP support	AP 621, AP 622, AP 650, AP 6511, AP 6521, AP 6522, AP 6532, and AP 7131		
PoE+ switching	✓	✓	-
Uplink	1x Gigabit (SFP)	1x Gigabit (SFP)	-
Ports	5x Gigabit (RJ45)	8x Gigabit (RJ45)	4x Gigabit (SFP)
PoE	✓	✓	-
USB (2.0)	1x	1x	2x
CF-Slot	-	-	1x
Expresscard	1x	1x	-
PCI-X	-	1x	-
Serial	1x (RJ45)	1x (RJ45)	1x (RJ45)
Service port	-	1x	1x
Hardware warranty	1 year	1 year	1 year
Firmware update warranty	90 days	90 days	90 days

Wi-Fi Access Points



Model	AP 7131	AP 7161	AP 7181	AP 8132
Description	-	-	-	-
WLAN standards	a/b/g/n; DSSS and OFDM	a/b/g/n OFDM, 802.11b DSS	a/b/g/n OFDM, 802.11b DSS	a/b/g/n; DSSS and OFDM
PoE	✓	✓	✓	✓
Frequency	2.4 / 5.0 GHz	2.4 / 5.0 GHz	2.4 / 5.0 GHz	2.4 / 5.0 GHz
Radio options	Tri radio	Dual radio	Dual radio	Dual radio
MIMO	3x3	3x3	3x3	3x3
Encryption	WEP 40M28 (RC4); WPA-TKIP; WPA2-CCMP (AES); 802.11i WPA2			
Temperature	0°C up to 50°C	-40°C up to 70°C	-40°C up to 70°C	-40°C up to 50°C
3G	-	-	-	3G backhaul or failover
Hardware warranty	Lifetime	1 year	1 year	Lifetime
Firmware update warranty	90 days	90 days	90 days	90 days
Application	indoor	outdoor	outdoor	indoor
Antenna	internal/external	external	internal/external	internal/external
Type	adaptive	adaptive	adaptive	adaptive

Wi-Fi Access Points



Model	AP 650	AP 621	AP 622	AP 6511	AP 6521	AP 6522	AP 6532	AP 6562
Description	Page 108	-	Page 108	Page 109	Page 109	-	Page 109	Page 109
WLAN standards	a/b/g/n; DSSS and OFDM	a/b/g/n; DSSS and OFDM	a/b/g/n; DSSS and OFDM	a/b/g/n; DSSS and OFDM	a/b/g/n; DSSS and OFDM	a/b/g/n; DSSS and OFDM	a/b/g/n; DSSS and OFDM	a/b/g/n; DSSS and OFDM
PoE	✓	✓	✓	✓	✓	✓	✓	✓
Frequency	2.4 / 5.0 GHz	2.4 / 5.0 GHz	2.4 / 5.0 GHz	2.4 / 5.0 GHz	2.4 / 5.0 GHz	2.4 / 5.0 GHz	2.4 / 5.0 GHz	2.4 / 5.0 GHz
Radio options	Dual radio	Single radio	Single radio	Single radio	Single radio	Dual radio	Dual radio	Dual radio
MIMO	2x3	2x2	2x2	2x2	2x2	1x1/ 1x2/ 2x2	2x3	2x2
Encryption	WEP 40M28 (RC4); WPA-TKIP; WPA2-CCMP (AES); 802.11i WPA2							
Temperature	0°C up to 50°C	0°C up to 40°C	0°C up to 40°C	0°C up to 40°C	0°C up to 40°C	0°C up to 40°C	0°C up to 50°C	-30°C up to 60°C
3G	-	-	-	-	-	-	3G backhaul or failover	-
Hardware warranty	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime	1 year
Firmware update warranty	90 days	90 days	90 days	90 days	90 days	90 days	90 days	90 days
Application	indoor	indoor	indoor	indoor	indoor	indoor	indoor	outdoor
Antenna	internal/external	internal/external	internal/external	internal	internal/external	internal/external	internal/external	external
Type	adaptive	adaptive	adaptive	adaptive	adaptive/standalone	adaptive/standalone	adaptive/standalone	adaptive