TECHNOLOGY SOLUTIONS UK LTD
part of HID

Comparison of TSL® Mobile RAIN® RFID UHF Readers

	1153	1128	2128	2128P	2128L	1166	3166	
Read Range	Up to 2 m (6.5 ft)	Up to 5.5 m (18 ft)	Up to 6 m (19.6 ft)	Up to 9 m (29.5 ft)	Up to 15 m (49 ft)* *Orientation dependent	Up to 9 m (29.5 ft)	Up to 9 m (29.5 ft)	Read Range
Maximum RF Output Power	Up to 26 dBm EIRP (region dependant)	Up to 32 dBm EIRP (region dependant)	Up to 33 dBm EIRP (region dependant)	Up to 34 dBm EIRP (region dependant)	Up to 35 dBm EIRP (region dependant)	Up to 34 dBm EIRP (region dependant)	Up to 34 dBm EIRP (region dependant)	Maximum RF Output Power
IP Rating	IP54	IP54	IP54	IP54	IP54	IP67	IP67	IP Rating
Bluetooth® version	Bluetooth® 2.1	Bluetooth® 2.1	Bluetooth® 4.2 Supports Classic, BLE & iAP2	Bluetooth® 4.2 Supports Classic, BLE & iAP2	Bluetooth® 4.2 Supports Classic, BLE & iAP2	Bluetooth® 2.1	Bluetooth® 4.2 compliant (v5.1 compatible) Supports Classic, BLE & iAP2	Bluetooth® version
Apple Mfi certified	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Apple Mfi certified
Optional 2D barcode imager	Yes	Yes	No	Yes	No	Yes	Yes	Optional 2D barcode imager
Internal Storage	Up to 32 GB* *via Micro SD card (not supplied)	Up to 32 GB* *via Micro SD card (not supplied)	Up to 32 GB* *via Micro SD card (not supplied)	Up to 32 GB* *via Micro SD card (not supplied)	16 GB* *For units manufactured in August 2020 onwards. Units manufactured before this date will be 8 GB.	16 GB* *For units manufactured in August 2020 onwards. Units manufactured before this date will be 4 or 8 GB.	32 GB	Internal Storage
No. of tags that can be stored on an SD card (Batch Data Mode)	Up to 500 million tags *via Micro SD card (not supplied)	Up to 500 million tags *via Micro SD card (not supplied)	Up to 500 million tags *via Micro SD card (not supplied)	Up to 500 million tags *via Micro SD card (not supplied)	Up to 250 million tags *For units manufactured in August 2020 onwards.	Up to 250 million tags *For units manufactured in August 2020 onwards.	Up to 500 million tags	No. of tags that can be stored on an SD card (Batch Data Mode)
Tag de-duplication (removes duplication of tag reads)	Software Based	Software Based	Software Based	In-reader tag de-duplication	In-reader tag de-duplication	Software Based	In-reader tag de-duplication	Tag de-duplication (removes duplication of tag reads)
On-board accelerometer	No	No	No	Yes	Yes	No	No	On-board accelerometer
Drop Spec	1.2 m* *Multiple drops to concrete: 4 ft./ 1.2 m ambient, 3ft / 0.9m across the operating temperature range.	1.2 m* *Multiple drops to concrete: 4 ft./ 1.2 m ambient, 3ft / 0.9m across the operating temperature range.	1.2 m* *Multiple drops to concrete: 4 ft./ 1.2 m ambient, 3ft / 0.9m across the operating temperature range.	1.2 m* *Multiple drops to concrete: 4 ft./ 1.2 m ambient, 3ft / 0.9m across the operating temperature range.	1.2 m* *Multiple drops to concrete: 4 ft./ 1.2 m ambient, 3ft / 0.9m across the operating temperature range.	1.8 m* *Multiple drops to concrete: 1.8 m ambient.	1.8 m* *Multiple drops to concrete: 1.8 m ambient.	Drop Spec
Mounting Options for Smartphone or Hand-Held Terminal	Wearable (back of hand)	Slide-on Mounts*	ePop-Loq® Mounts	ePop-Loq® Mounts	ePop-Loq® Mounts	Pop-Loq® Mounts	ePop-Loq® Mounts	Mounting Options for Smartphone or Hand-Held Terminal
Docking Options		Docking Cradle* Order 1128-CRD-02-KIT *Slide-on Mounts must be removed from the 1128 in order to use the Docking Cradle	Docking Cradle Order 2128-CRD-03-KIT	Docking Cradle Order 2128-CRD-03-KIT	Docking Cradle Order 2128-CRD-02-KIT	Docking Cradle Order 1166-CRD-01-KIT	Docking Cradle Order 1166-CRD-01-KIT	Docking Options
Battery	L Battery	XL Battery / Power Handle (order: 2102-PH-Y)	XL Battery / Power Handle (order: 2102-PH-Y)	XL Battery / Power Handle (order: 2102-PH-Y)	Built-in Power Handle	High Capacity Battery	High Capacity Battery	Battery
Minimum operating time[1]	Light use[2]: 10 hrs; Moderate use[3]: 6.5 hrs; Heavy use[4]: 2.5 hrs	6 hrs / Light use[2] 16 hrs; 3.5 hrs / Moderate use[3] 9 hrs; 1.5 hrs / Heavy use[4] 4.5 hrs	6.5 hrs / Light use[2] 17 hrs; 4.5 hrs / Moderate use[3] 11.5 hrs; 2 hrs / Heavy use[4] 6 hrs	8.5 hrs / Light use[2] 22.5 hrs; 5 hrs / Moderate use[3] 13 hrs; 2.5 hrs / Heavy use[4] 7.5 hrs	Light use[2]: 22.5 hrs; Moderate use[3]: 15.5 hrs; Heavy use[4]: 7 hrs	Light use[2]: 25 hrs; Moderate use[3]: 16.5 hrs; Heavy use[4]: 8 hrs	Light use[2]: 33.5 hrs; Moderate use[3]: 21.5 hrs; Heavy use[4]: 12 hrs[5]	Minimum operating time[1]
Tag Reads per single battery charge	1 million	1 million	1 million / 2.3 million	1 million / 2.3 million	2.3 million	2.6 million	4.5 million	Tag Reads per single battery charge
Charge Time	2 hrs	2.5 hrs	2.5 hrs / 5 hrs	2.5 hrs / 5 hrs	5 hrs	2.5 hrs	2.5 hrs	Charge Time
Country Certifications	ETSI/Europe, FCC/USA, Brazil, China, Colombia, Ecuador, El Salvador, Guam, Guatemala, India, Northern Mariana Islands, Puerto Rico, Thailand, Ukraine	ETSI/Europe, FCC/USA, Australia, Bangladesh, Brazil, Canada, Chile, China, Colombia, Ecuador, El Salvador, Guam, Guatemala, Hong Kong, India, Japan, Malaysia, Northern Mariana Islands, Peru, Puerto Rico, Singapore, South Korea, Taiwan, Thailand, Vietnam	ETSI/Europe, FCC/USA, Australia, Bangladesh, Canada, Colombia, Ecuador, Guam, Guatemala, India, New Zealand, Northern Mariana Islands, Puerto Rico, Singapore	ETSI/Europe, FCC/USA, Australia, Bangladesh, Brazil, Canada, Colombia, Ecuador, Guam, Guatemala, India, New Zealand, Northern Mariana Islands, Peru, Puerto Rico	ETSI/Europe, FCC/USA, Australia, Bangladesh, Brazil, Canada, Colombia, Ecuador, Guam, Guatemala, India, Northern Mariana Islands, Puerto Rico	ETSI/Europe, FCC/USA, Algeria, Bangladesh, Brazil, Brunei, Canada, China, Colombia, Ecuador, Egypt, El Salvador, Guam, Guatemala, Indonesia, Iraq, Japan, Kazakhstan, Malaysia, New Zealand, Northern Mariana Islands, Pakistan, Puerto Rico, Thailand	ETSI Lower Band; ETSI Upper Band; FCC (USA, Canada, Ecuador, Guam, Guatemala, Northern Mariana Islands, Puerto Rico); For other regions, please contact enquiries@tsl.com	Country Certifications
Keyboard Support (in HID Mode)	US HID Keyboard Support	US HID Keyboard Support	International HID Keyboard Support	International HID Keyboard Support	International HID Keyboard Support* *Enquire when ordering	US HID Keyboard Support	International HID Keyboard Support	Keyboard Support (in HID Mode)

[1] Figures are based on new units that have been stored, charged and operated within the Environmental Specifications stated on the Reader datasheet. Units stored over 3 months must be recharged every 3 months. Number of transponders in the environment affects minimum operating time.
[2] Light Use: Continuous RFID inventories for 20s of every 120s.
[3] Moderate Use: Continuous RFID inventories for 10s of every 30s.
[4] Heavy Use: Continuous RFID inventories for 5% of every 60s.
[5] When operating in the "Eco" battery saver mode.