RFID Portfolio

Enabling Intelligence from Tag to System

Advancing Identification Matters.

GS1

RAIN RFID

Introduction

Unlocking the Full Value of RFID

RFID technology is more than just a tagging solution — it is a foundation for efficiency, accuracy, compliance, and intelligence. By bridging the physical and digital worlds, RFID enables organizations to transform operations and build a future-ready supply chain.

The RFID Advantage

Efficiency

Automate identification and data capture to reduce manual effort, minimize errors, speed up processes, and lower operational costs.

Accuracy

Ensure every item carries a unique ID, delivering real-time visibility and reliable data across logistics, healthcare, retail, and industrial environments.

Compliance

Full traceability supports compliance with DPP, healthcare, and food safety requirements in high-sensitivity, regulated environments end to end.

Intelligence

Turn raw data into actionable insights. RFID integrates seamlessly with enterprise systems, enabling automation, analytics, and digital transformation.

What It Takes to Deploy RFID at Scale

The successful deployment of RFID depends on a fully coordinated ecosystem.

To address diverse industry needs, media suppliers are moving beyond standard and on-metal RFID labels to offer sensor-enabled, dual-frequency, and specialized formats such as blood bag and wristband labels. Printers must encode reliably across multiple chipsets, inlays, and label types, while staying current with GS1, RAIN RFID, ISO, and NFC standards. Enterprise mobile computers likewise must ensure fast, accurate reads and compliance. Finally, both printers and devices require seamless integration with enterprise systems—supporting print jobs and data updates for true end-to-end operations.

Industry Leading Expertise

Leading RFID expertise unites standards mastery, proven validation, and strong partnerships to ensure accuracy and next-gen readiness.

TSC Auto ID Group Capabilities

Our established RFID technologies and industry partnerships deliver reliable reading, system compatibility, and encoding accuracy for mobile data capture and RFID printing.

Software Platforms

Integrates devices and systems for streamlined, secure operations

Our strong software portfolio streamlines device management and optimizes RFID labeling and data capture for secure, efficient AIDC operations.

Manage & Deploy	Secure	Develop & Integrate
TSC CONSOLE Web	TSC PRTSecure	UniPRT SDK
BOS™	BOS™	BOS™ SDK
		BOS™ RFID Development Kit

Printing & Encoding

On-demand RFID Printers and Service Bureau: Produces RFID tags in-house or via pre-encoded services for ready deployment.

Our on-premise RFID printing and service bureau solutions encompass encoding, broad label compatibility, and enhancing operational efficiency for diverse business needs.

Tagging

RFID Labels: Physical carriers linking items to digital systems across materials and applications.

Our tailored and standard RFID label solutions—supported by expert guidance, regional supply facilities, and strong partnerships—guarantee printer compatibility and fit-for-purpose labeling.

Data Capture & Field Ops

Enterprise Mobile Computers: Field devices capture RFID data in real time, enabling agile, data-driven operations.

Our comprehensive RFID data capture portfolio ensures fast, accurate reading and seamless enterprise integration.

Business Applications

Enables RFID to drive value across diverse industries and real-world applications.

Our proven expertise in auto-ID technologies enables us to deliver rapid, effective, and collaborative solutions to meet complex operational challenges.


Manufacturing


Logistics


Healthcare


Retail

Figure 1. Core RFID Infrastructure

Points to Consider

Making RFID Work: Key Considerations

Implementing RFID goes beyond simply deploying tags and readers — it requires a clear strategy that balances business objectives, technology choices, and organizational readiness. Success depends on defining a strong business case, ensuring data accuracy and standards compliance, and planning for integration and scalability. Equally important is preparing people and processes for change, supported by the right mix of devices, media, and software. With these foundations in place, organizations can maximize ROI and unlock the full potential of RFID.

Figure 2. Five Key Considerations for Successful RFID Implementation

Define the Business Case Clearly

Link RFID to measurable goals such as accuracy, compliance, or labor efficiency.

Plan for Integration and Scalability

Design pilots with future system integration and growth in mind.

Ensure Data Accuracy and Standards Compliance

Reliable encoding and GS1/RAIN/ISO standards safeguard ROI.

Manage People and Process Change

Adoption succeeds when staff training and workflows align.

Select the Right Technology Portfolio

Match devices, labels, and software to specific use cases.

Why Choose Us

Trusted Partner for RFID Deployment

Success with RFID depends not only on strategy and planning, but also on having the right support. For integrators and enterprise teams with advanced system capabilities, TSC Auto ID Group provides a complete, standards-aligned portfolio that spans labels, printers, enterprise mobile computers, fixed reader products, and service bureau capabilities. Our agile innovation, proven expertise, and custom capabilities help partners deploy RFID solutions reliably, integrate seamlessly, and scale efficiently to meet the unique needs of each business.

Agile Innovation

Rapid hardware advancements and alignment with evolving global standards (GS1, RAIN, ISO, NFC, Vicinity/Proximity Cards and Tags) enable integrators to deploy the latest technology reliably and scale solutions efficiently.

Proven Expertise

Extensive experience, a large global install base, and deep engineering know-how help partners define ROI, reduce risk, and achieve accurate, reliable deployments.

Comprehensive Portfolio

A complete ecosystem spanning media, RFID printers, enterprise mobile computers, fixed reader products, and service bureau capabilities enables integrators to select the right hardware and services for each use case[1].

Custom Capability

Tailored firmware and functionality allow partners to meet specific operational requirements, adapt to unique workflows, and maximize the value of RFID projects.

Comprehensive Service

Maintenance, repair, and support options help integrators and end-users manage change, train staff, and maintain smooth operations across all deployments.

[1] Note: Availability and service bureau support vary by region. Wherever direct service is not available, our partner network may provide local coverage and support.

Data Capture Portfolio

RFID Reader Family

Our enterprise-grade RFID readers deliver rugged, mobile, and fixed solutions for real-time data capture across warehouses, retail, and field operations. They ensure fast, accurate reads while integrating seamlessly with enterprise systems to streamline workflows.

Handheld RFID Reader

S10 RFID*

The S10 RFID is an integrated RFID reader and mobile computer that eliminates issues associated with using separate devices. Its built-in linear polarized antenna enables reliable tag reading up to 13 m/42.6 ft. The S10 RFID is Wi-Fi 6 ready and Bluetooth and reduces management workload with simple configuration. A replaceable 7000 mAh hot-swap battery maximizes uptime for multi-shift usage.

Handheld RFID Reader

RFR901

High-speed handheld RFID reader capturing 1,300+ tags/sec up to 10 m. Stores 60,000 tags offline with a programmable trigger for hybrid scanning. Rugged design withstands 5 ft/1.5 m drops and is IP54-rated for tough environments.

The RFR901 is available in both standalone and mountable configurations, offering flexible integration with enterprise mobile computers or consumer smartphones via dedicated mounts. Supported configurations/devices:

Handheld RFID Reader

RFR900**

High-performance handheld RFID reader optimized for fast, accurate inventory tracking. Reads 1,250 tags per second up to 8 meters, stores 40,000 tags in batch mode, and withstands 4 ft/1.2 m drops with IP42 protection.

The RFR900 is available in both standalone and mountable configurations, allowing seamless integration with our enterprise mobile computers. Supported configurations/devices:

Short Range RFID

X40**

The X40 integrates a UHF RFID reader and antenna with a read range of up to 1.5 m, a TOF scan camera, and a battery-efficient AMOLED display for clear visuals. Its AI CPU speeds RFID and barcode capture with lower latency. EMV Contactless L1RR2 enables reliable taps, while a warm-swap replaceable battery ensures uptime and long field life with Wi-Fi 6E, 5G, BT 5.3, and GPS.

Short Range RFID

HF550X RFID**

Compact, pocket-sized enterprise mobile computer with smartphone-style ergonomics, reducing user fatigue during long shifts. Equipped with a 1D/2D scanner and multiple interface ports for fast, reliable barcode and RFID data capture. Features IP67 durability, 1.2 m drop resistance, an extended 4,000 mAh battery, versatile wireless connectivity (Wi-Fi, Bluetooth 5.0, LTE), and optional fingerprint authentication for secure operations.

*Not currently available in the US and Canada.
**Limited availability in the US, Canada and Latin America, please contact your local sales representative.

Product Selection

Designed for quick comparison, the tables highlight the core capabilities of our mobile computers to help you choose the right fit for your operations.

Handheld RFID Reader



Model	RFR901	RFR900**	S10 RFID*
Air Protocols	EPC Class 1 Gen 2, EPC GEN2V2, Impinj Gen2X	EPC Class 1 Gen 2, EPC GEN2V2, Impinj Gen2X	EPC Class 1 Gen 2, EPC GEN2V2, Impinj Gen2X
Read Range / Rate	32.8+ ft / 10+ m 1,300+ Tags / sec	26+ ft/ 8+ m 1,250+ Tags / sec	42.65+ ft/ 13+ m 1,300+ Tags / sec
Data Capture	1D & 2D imager (Optional)	1D&2D imager (Optional)	1D&2D imager
Durability	1.5m, IP54	1.2m, IP42	1.5m, IP54
Battery	4,900 mAh Hot swap	3,400 mAh 4,000 mAh	7000mAh Hot swap
Form Factor	133.6 x 85.4 x 144.5mm 353g	146.2 x 70 x 148.7mm 333g	172.45 x 85.4 x 160.5mm 613.8g
Host Connection	Electrical Connector 10 pin Bluetooth 5.3	Electrical Connector 10 pin Bluetooth 5.3	-
Host Computer	Bluebird Mobile Computers Android and iOS smartphones and Tablets	Bluebird Mobile Computers	-

Short Range RFID


Model	X40**	HF550X RFID**
OS	Android 14 (Upgradeable to Android 16 or 18)	Android 10 (Upgradeable to A11, A13, and A14)
CPU	Qualcomm QC6490 Octa-core, 2.7GHz	Qualcomm® Snapdragon™ SD660 Octa-core, 2.2 GHz
Memory	6GB RAM / 128GB UFS Flash	4GB RAM / 64GB UFS Flash
Display	6.11" 1080 x 2340, AMOLED	5.45" HD+ 1440 x 720
Read Range / Rate	Up to 3.94ft / 1.2m 50 Tags / sec	Up to 3.28ft/1.0m 50 Tags / sec
Data Capture / Camera	1D / 2D Barcode 50MP R / 8MP F	1D / 2D Barcode 13MP R / 5MP F
Durability	1.5m, IP68	1.2m, IP67
Battery	4,320 mAh Warm SWAP	4,000 mAh
Form Factor	155.2 x 74.2 x 12mm 199g	154.4 x 74.8 x 11.65mm 205g

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Accessory Options

Model	 S10 RFID*	 RFR900**	 RFR901	 HF550X RFID**	 X40**
Extended battery 4,000mAh	–	V	–	–	–
Standard battery 3,400mAh	–	V	–	–	–
Standard battery 4,000mAh	–	–	–	V	–
Standard battery 4,900mAh	–	–	V	–	–
Standard battery 4,320mAh	–	–	–	–	V
Standard battery 7,000 mAh	V	–	–	–	–
Standard battery cover	–	–	–	V	V
4-slot battery charger	–	V	V	–	–
1-slot cradle for wireless charging mount	–	–	V	–	–
1-slot charge only cradle for S10 RFID	V				
1-slot charge only cradle for S10	–	●	●	–	–
1-slot charge only cradle for S20	–	●	●	–	–
1-slot charge only cradle for S50 & S70	–	●	●	–	–
1-slot charge only cradle for EF550X / EF550R	–	●	●	–	–
1-slot charge only cradle for HF550X	–	●	●	●	–
1-slot charge only cradle for X40	–	●	●	●	●
4-slot charge only cradle for HF550X	–	●	●	●	–
4-slot charge only cradle for EF550X / EF550R	–	●	●	–	–
4-slot charge only cradle for X40	–	●	●	●	●
1-slot charging and communication cradle for S20	–	●	●	–	–
1-slot charging and communication cradle for S50 & S70	–	●	●	–	–
1-slot charging and communication cradle for EF550X / EF550R	–	●	●	–	–
4-slot charging and communication cradle for EF550X / EF550R	–	●	●	–	–
4-slot charging cradle with spare battery charging for S10	–	●	●	–	–
4-slot charging cradle with spare battery charging for S20	–	●	●	–	–
4-slot charging cradle with spare battery charging for S50 & S70	–	●	●	–	–
4-slot charging and communication cradle with spare battery charging for S20	–	●	●	–	–
4-slot charging and communication cradle with spare battery charging for S50 & S70	–	●	●	–	–
Shim for S10	–	●	●	–	–
Shim for S20	–	●	●	–	–
Shim for S50	–	●	●	–	–
Shim for EF550	–	●	●	–	–
Shim for X40	–	●	●	–	●
5V / 3A power adaptor Type B	●	●	●	●	●
12V / 5A power adaptor	●	●	●	●	●
12V / 10A power adaptor	–	●	●	●	●
9V / 10A power adaptor	–	●	●	–	–
9V / 3A power adaptor	–	●	●	–	–
5V / 4A cigarette lighter adaptor	–	–	●	●	●
5V / 2A cigarette lighter adaptor	–	–	●	●	–
Country-specific AC power cord (KR, TW, CN, JP, AU, UK, CH, EU, NA)	●	●	●	●	●
Country-specific adaptor plug (KR, CN, JP, AU, UK, EU, NA)	●	●	●	●	●
USB-C to USB-A communications and charging cable	●	●	●	●	●
USB-Micro to USB-A communications and charging cable	–	V	–	–	–
Wrist strap	●	●	●	–	–
Stylus pen	–	–	–	V	V
Shoulder strap	–	–	–	●	●
Shoulder strap tether	–	–	–	●	●
Shared holster	–	–	–	●	●
Rugged boot	–	–	–	–	V
Screen protector	V	–	–	V	V

● = Compatible, V = Available

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Fixed RFID Readers and Antennas

Built for high-density RFID environments, the FR901 can read 1,300+ tags per second with interference-free performance enabled by Dense Reader Mode and supports up to eight antennas for scalable deployment. Power-over-Ethernet simplifies installation, while its Linux platform allows seamless integration and management. With IP53 sealing and a wide -40 °C to +65 °C operation range, it ensures 24/7 reliability. Complementing the reader, our antennas deliver scalable performance and precise coverage for warehouse, logistics, and retail operations.

Model	FR901**
Air Protocols	ISO 18000-63 (EPC Class 1 Gen 2v2), Gen2X
Max Receive Sensitivity	-103dBm monostatic
Return Loss (Min.)	10 dB
Antenna Ports	4 Ports / 8 Ports
Power	US: 33 dBm EU: 5-33dBm (31.5 dBM via PoE)
Durability	MIL-STD-810G
Operating System	Linux Based

Model	AN970*	AN971*	ANS961*	ANS981*
Performance Class	High performance General purpose	High performance Large area	Circular polarized UHF antenna	Circular polarized High gain antenna
Applications	Warehouse portals / outdoor gates Retail back-room Inventory management Access gates	Warehouse portals / outdoor gates Retail back-room Inventory management Access gates	Warehouse portals / outdoor gates Retail back-room Inventory management Medical & pharma applications	Warehouse portals / outdoor gates / shelving Laundry management Vehicle tolling & access control
Gain	9 dBic	9 dBic	EU: 8 dBiC US: 8.5 dBiC	EU: 6 dBiC US: 6.5 dBiC
Polarization	1 x LHCP	1 x LHCP or 1 x RHCP	LHCP	LHCP
VSWR	1.3 : 1	1.4 : 1	1.4 : 1	1.4 : 1
3dB Beam-Width	70°/ 60°	70°	70°	60°/ 90°
Front to Back Ratio	20 dB	20 dB	15 dB	20 dB
Axial Ratio	1 dB Typical	1 dB Typical	1 dB Typical	EU: 0.6 dB Typical US: 1.6 dB Typical
Sealing	IP54	IP67	IP67	IP68
Form Factor	260 x 260 x 30mm 1.1kg	575 x 260 x 33.5mm 1.9kg	255 x 255 x 12mm 0.2Kg	280 x 140 x 3.2mm 0.23kg

*Not currently available in Latin America.
**Limited availability in the US, Canada and Latin America, please contact your local sales representative.

Desktop RFID Readers

Desktop RFID reade rs combine sleek, space-saving design with high-precision performance, making them ideal for retail, healthcare, distribution, and manufacturing. With true plug-and-play operation that requires zero software and adjustable read power, they deliver reliable accuracy while ensuring easy deployment across diverse environments.

RAIN RFID

Desktop RFID Reader

DR900*

Compact 56 × 65 mm reader with an integrated antenna and adjustable 3–27 dBm power for precise reads without cross-interference. Ideal for back-office workflows such as asset, inventory, and document management, where space efficiency and accuracy are critical.

RAIN RFID

Desktop RFID Reader

DR901*

The 22.65 mm ultra-slim DR901 integrates an antenna and plug-and-play USB to deliver accurate, adjustable read performance. Perfect for POS, smart shopping, and medicine management in customer-facing environments.

Product Selection

Model	DR901*	DR900*
Air Protocols	EPC Class 1 Gen 2, EPC GEN2V2, Impinj Gen2X	EPC Class 1 Gen 2, EPC GEN2V2, Impinj Gen2X
Read Range/ Rate	Up to 7.5ft / 2.3m 710+ Tags / sec	Up to 7.5ft / 2.3m 710+ Tags /sec
Durability	IP42	IP42
Host Connection	USB keyboard wedge (HID), USB Serial (COM)	USB keyboard wedge (HID), USB Serial (COM)
Support O/S	Windows, Android, Linux, CentOS	Windows, Android, Linux, CentOS
Form Factor	220 x 261 x 14mm 327g	56 x 65 x 22.65mm 60g

*Not currently available in Latin America.

BOS™ FastRead

BOS™ FastRead is a powerful RFID demo and utility application for TSC/Bluebird mobile computers paired with the RFR900/RFR901 reader sled. It enables rapid tag reading, advanced inventory management, and industry-first RFID tag interpretation capabilities.

Key Features

Rapid Read
High-speed RFID tag scanning with real-time read count, unique tag tracking, read rate monitoring, and elapsed time display.

Tag Export
Export scanned tag data wirelessly to a connected host PC, enabling seamless integration with back-office inventory systems.

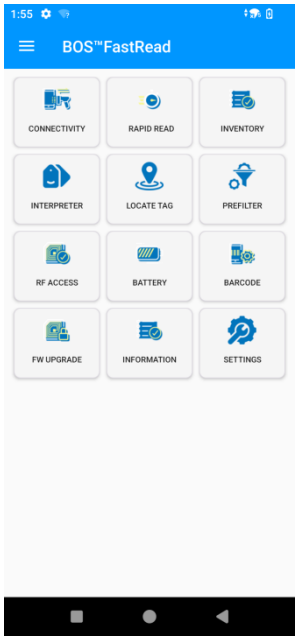
RFID Interpreter
Industry-exclusive feature that decodes GTIN-96, SGTIN+, and DSGTIN+ tag data into human-readable product information.

URL Extraction
Extract URLs embedded in EPC memory and navigate directly to associated web resources for product verification.

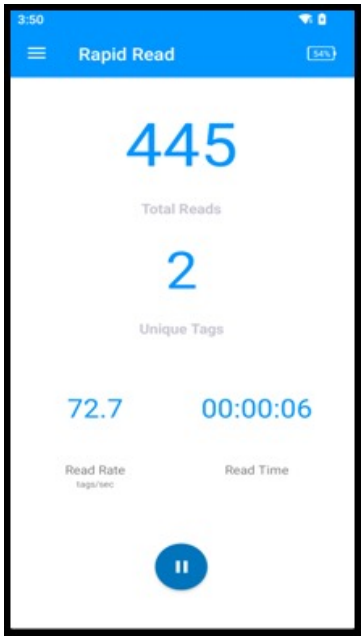
Unique Tag Notification
Configure the reader to recognize unique tags and trigger audio/visual notifications for each new tag counted.

Advanced Inventory
Full inventory management with EPC, TID, and User memory bank reading, tag search, and RSSI signal monitoring.

Application Interface



Home Screen



Rapid Read

RFID Interpreter

Supported Devices: S10 RFID, S20 RFID, S50, S70, EF550, EF550R, EF551 with RFR900/RFR901

BOS™ Software Suite

The BOS™ suite powers our data capture devices with tools for development, deployment, management, and security. It accelerates rollout, reduces IT overhead, and ensures reliable performance across the device lifecycle.

BOS™ SDK
Unlock full device capabilities for custom applications.

BOS™ RFID Development Kit
Speed up RFID app development and testing.

BOS™ One Scan
Enable advanced barcode capture with multi-symbology support.

BOS™ Data Tune™
Integrate captured data seamlessly into enterprise apps.

BOS™ Provisioning
Automate mass configuration via barcode scanning.

Bluebird Zero-Touch
Simplify EMM enrollment for instant readiness.

BOS™ NEST
Stage and update multiple devices with one click.

BOS™ OTA
Deliver automated OS and security patch updates.

BOS™ Device Finder
Locate misplaced devices using BLE signals.

BOS™ Power Manager
Monitor and optimize battery performance across the fleet.

BOS™ Wi-Fine
Diagnose Wi-Fi connectivity with real-time device insights.

BOS™ Extension
Add advanced security and management features on Android Enterprise.

AER
Google-verified for enterprise reliability.

BOS™ Secure Care
Extend device protection to align with TCO goals.

Printing Portfolio

RFID Printer Family

Our RFID printer family delivers reliable, high-performance printing and encoding across a wide range of label types and constructions. With close collaboration on global standards, support for major printer language emulations, and the industry's only RFID Tag Validation (RTV) technology to ensure encoding accuracy, TSC Auto ID's RFID products provide proven compatibility and dependability. Featuring Encode During Print, our RFID printers eliminate backfeed during normal operations and maximize throughput for smart labels, on-metal tags, and other label types.

RAIN RFID

Industrial Printer

T6000e RFID 4" & 6"

The T6000e RFID printer, available in 203, 300, and 600 dpi variants, is built for high-volume applications. With below-media adjustable and above-media fixed antennas, it reliably handles standard and on-metal RFID labels across diverse industrial settings.

RAIN RFID

Industrial Printer

MB241 Series RFID 4"

The MB241 Series delivers scalable RFID functionality, supporting standard and on-metal labels, thick tags, and specialty media. Its bifold media door reduces operational space by 24%, making it ideal for constrained workspaces.

RAIN RFID

Desktop Printer

TH240 Series RFID 4"

The TH240 Series RFID features a built-in movable antenna for immediate use and optional cutter and tear modules, with a full-width antenna available on the tear kit for future upgrades. It supports standard and on-metal labels with configurable connectivity.

HF RFID NFC

Desktop Printer

DH220L Series* RFID 2"

The DH220L RFID is an HF/NFC RFID printer for applications requiring short-range secure scanning, handling 10–60 mm wide labels on rolls up to 6.5-inch OD. Available in standard and medical-grade antibacterial versions, it's ideal for wristbands, blood bags, and other long, narrow labels.

RAIN RFID

Mobile Printer

Alpha 40L RFID 4"

The Alpha-40L RFID delivers rugged, high-performance mobile labeling built to withstand drops, dust, and water. Lightweight with a long-lasting smart battery, it connects via USB, Bluetooth, or Wi-Fi for reliable printing in warehouses, retail, and field services.

RAIN RFID

Print Engine

PEX-2000 RFID 4" & 6"

The PEX-2000 RFID with DB15/DB25 interfaces integrates seamlessly with print-and-apply systems, offering GPIO emulation and an adjustable peel-off module. Designed for reliability, it provides intuitive media handling, quick printhead replacement, and easy lift-out chassis maintenance.

*Limited availability in the US, Canada and Latin America, please contact your local sales representative.

Product Selection

TSC Auto ID provides a comprehensive range of RFID-enabled printers designed for various applications and requirements. The table below will streamline the printer selection process, assisting you in finding the ideal RFID printer for your applications.




Model		T6000e RFID 4"	T6000e RFID 6"	MB241 Series RFID 4"	TH240 Series RFID 4"
Type		Industrial	Industrial	Industrial	Desktop
RFID System	Encoding	RAIN (UHF Passive)	RAIN (UHF Passive)	RAIN (UHF Passive)	RAIN (UHF Passive)
	Standard	GS1 EPC Gen2 / ISO 18000-63	GS1 EPC Gen2 / ISO 18000-63	GS1 EPC Gen2 / ISO 18000-63	GS1 EPC Gen2 / ISO 18000-63
	Antenna	Internal, below media, adjustable External, above media, full-width	External, above media, full-width	External, above media, full-width	Internal, below media, adjustable External, above media, full-width (UHF RFID tear-off upgrade kit)
	Printer Languages	PGL, ZGL, STGL, MGL	PGL, ZGL, STGL, MGL	TSPL-EZD SBPL – available upon request	TSPL-EZD SBPL – available upon request
RFID Labels	Types	Standard / On-metal / Other	Standard / On-metal / Other	Standard / On-metal / Other	Standard / Selected On-metal / Other
	Max. Media Thickness	2.2mm (0.088")	2.2mm (0.088")	Cutter: 0.28mm (0.011") Tear: 1.65mm (0.065")	1.35mm (0.053")
	Label Pitch	Down to 15.9mm (0.625")	Down to 15.9mm (0.625")	Down to 15.9mm (0.625")	Down to 15.9mm (0.625")
	Calibration	Automatic	Automatic	Automatic	Automatic
Chip (IC) / Inlays		Chips: Support for all mainstream chips and many new advanced chips Inlays: Support for all common inlay designs Check our RFID Solution webpage for the latest list of validated chips and inlays	Chips: Support for all mainstream chips and many new advanced chips Inlays: Support for all common inlay designs Check our RFID Solution webpage for the latest list of validated chips and inlays	Chips: Support for all mainstream chips and many new advanced chips Inlays: Support for all common inlay designs Check our RFID Solution webpage for the latest list of validated chips and inlays	Chips: Support for all mainstream chips and many new advanced chips Inlays: Support for all common inlay designs Check our RFID Solution webpage for the latest list of validated chips and inlays
RFID Error Handling		Encoding Failures: Full / Partial Label Overstrike (Depends on label length) RFID Label Counter: Tracks good / bad labels	Encoding Failures: Full / Partial Label Overstrike (Depends on label length) RFID Label Counter: Tracks good / bad labels	Encoding Failures: Full / Partial Label Overstrike (Depends on label length) RFID Label Counter: Tracks good / bad labels	Encoding failures: Full / Partial Label Overstrike (Depends on label construction) RFID label counter: Tracks good / bad labels
Print Resolution		203dpi, 300dpi, 600dpi	203dpi, 300dpi	203dpi, 300dpi	203dpi, 300dpi
Max Print Speed		14 ips@203dpi 12 ips@300dpi 6 ips@600dpi	12 ips@203dpi 10 ips@300dpi	12 ips@203dpi 9 ips@300dpi	8 ips@203dpi 6 ips@300dpi
Max Print Width		104mm (4.1")	166mm (6.61")	107mm (4.21")	4.25" (108mm) @203dpi 4.16" (105.7mm) @300dpi
Media Handling		Tear, Cutter, Peel / Rewind*, Batch / Rewind*	Tear, Cutter	Tear, Cutter	Tear, Cutter
Quality Validation Support		RFID Tag Validation (RTV) Online Barcode Data Validation (ODV)	RFID Tag Validation (RTV) Online Barcode Data Validation (ODV)	RFID Tag Validation (RTV)	RFID Tag Validation (RTV)

* Four-inch, internal antenna only.
** Performance may be limited depending on label construction.

					
		DH220L Series* RFID 2"**	**Alpha-40L RFID 4"**	**PEX-2000 RFID 4"**	**PEX-2000 RFID 6"**
Type		Desktop	Mobile	Print Engine	Print Engine
RFID System	Encoding	HF / NFC	RAIN (UHF Passive)	RAIN (UHF Passive)	RAIN (UHF Passive)
	Standard	ISO / IEC 15693 ISO / IEC 14443 Type A ISO / IEC 18092	GS1 EPC Gen2 / ISO 18000-63	GS1 EPC Gen2 / ISO 18000-63	GS1 EPC Gen2 / ISO 18000-63
	Antenna	External, under media, full-width	External, above media, full-width	Internal, below media, full-width	Internal, below media, full-width
	Printer Languages	TSPL-EZD, TSPL-EZS	TSPL-EZC	TSPL-EZD, TSPL-EZS	TSPL-EZD, TSPL-EZS
RFID Labels	Types	Standard	Standard (DT)	Standard / Other	Standard / Other
	Max. Media Thickness	0.19mm (0.007")	0.16mm (0.006")	1.2mm (0.047")	1.2mm (0.047")
	Label Pitch	-	Down to 15.9mm (0.625")	Down to 15.9mm (0.625")	Down to 15.9mm (0.625")
	Calibration	Automatic	Automatic	Automatic	Automatic
Chip (IC) / Inlays		-	Chips: Support for all mainstream chips and many new advanced chips Inlays: Support for all common inlay designs Check our RFID Solution webpage for the latest list of validated chips and inlays	Chips: Support for all mainstream chips and many new advanced chips Inlays: Support for all common inlay designs Check our RFID Solution webpage for the latest list of validated chips and inlays	Chips: Support for all mainstream chips and many new advanced chips Inlays: Support for all common inlay designs Check our RFID Solution webpage for the latest list of validated chips and inlays
RFID Error Handling		Encoding failures: Full / Partial Label Overstrike (Depends on label construction) RFID label counter: Tracks good/bad labels	Encoding failures: Full / Partial Label Overstrike (Depends on label length) RFID label counter: Tracks good / bad labels	Encoding failures: Full / Partial Label Overstrike (Depends on label length) RFID label counter: Tracks good / bad labels	Encoding failures: Full / Partial Label Overstrike (Depends on label length) RFID label counter: Tracks good / bad labels
Print Resolution		203dpi, 300dpi	203dpi	203dpi, 300dpi, 600dpi	203dpi, 300dpi
Max Print Speed		8 ips@203dpi 6 ips@300dpi	Up to 5 ips@203dpi	18 ips@203dpi 14 ips@300dpi 6 ips@600dpi	14 ips@203dpi 12 ips@300dpi
Max Print Width		54mm (2.13") @203dpi 56.9mm (2.24") @300dpi	104mm (4.1")	104mm (4.1")	168mm (6.61")
Media Handling		Tear, Cutter	Tear	Tear, Peel	Tear, Peel
Quality Validation Support		-	-	-	-

* Four-inch, internal antenna only.
** Performance may be limited depending on label construction.
*** Limited availability in the US, Canada and Latin America, please contact your local sales representative.

Accessory Options

From mobile to industrial models, our printers are supported by a wide range of accessories that adapt to diverse workflows. These options enhance usability, expand functionality, and simplify everyday operations—helping users get more done with less effort.

Model	T6000e RFID 4" & 6"	MB241 Series RFID	TH240 Series RFID	DH220L Series RFID***	Alpha-40L RFID
Stationary Printer Accessories					
UHF RFID cutter upgrade kit	V	V	V	-	
UHF RFID tear upgrade kit	V	V	V	-	
HF RFID with cutter	-	-	-	V	
HF RFID with tear	-	-	-	V	
10mm narrow media adaptor	-	-	V	-	
Peel-off kit	V	-	V	-	
Basic cutter tray	V	-	-	-	
Universal cutter tray	-	V	-	-	
External roll mount	-	-	V	V	
802.11a/b/g/n/ac Wi-Fi	V	-	-	-	
802.11 a/b/g/n/ac Wi-Fi with Bluetooth	-	V	V	V	
Bluetooth	-	V	V	V	
MFi Bluetooth*	V	V	V	V	
Parallel interface	V	-	-	-	
GPIO	V	V	-	-	
Battery station	-	-	V	V	
Mobile Printer Accessories					
Type C USB cable					V
Power adaptor (12V 2A)**					V
1-slot battery charger					V
4-slot battery charger					V
1-slot docking cradle					V
4-slot docking cradle					V
6200mAh smart battery					V
Belt clip**					V
Protective case with shoulder strap					V
Media core adaptor 0.75"**					V
Vehicle mount adaptor					V
12-24V DC vehicle power adaptor					V
12-60V DC vehicle power adaptor					V
DC-TO-DC battery eliminator					V

* Factory option only
**The power adaptor, belt clip, and 0.75" media core adaptor are included with the purchase of the Alpha-40L RFID.
*** Limited availability in the US, Canada and Latin America, please contact your local sales representative.

Why Choose Genuine Supplies

High-Quality RFID Labels and Expertise

To ensure your customers' RFID labels perform as expected, we bring deep industry expertise and proven production capabilities. In addition to our knowledge of RFID printers and encoders, we specialize in producing stock, custom, and pre-printed thermal and pressure-sensitive labels.

Our label experts work with you to ensure the right label construction and RFID technology for each application. Whether you're replacing an existing RFID label or exploring RFID for the first time, we can deliver the RAIN RFID labels you need with confidence.

RFID Labels for Every Application

With access to a wide range of inlays and face sheet materials, we can support nearly any custom RFID label construction. Whether you require a specific chip or inlay, or need to confirm compatibility with your existing specifications, our team is here to help. Contact us to discuss your requirements, and we'll provide expert guidance to ensure the right RFID solution for your application.

Guaranteed Performance

Genuine TSC Auto ID RFID labels are designed and guaranteed to perform reliably. Every RAIN RFID label is thoroughly tested and certified in our RFID Label and Verification Lab to ensure consistent, optimal performance with TSC Auto ID RFID printers—so you can deploy these products with confidence.

Tailored RFID Labels from Inlay to Adhesive

Our RFID label experts will help you determine the best RAIN RFID label for your specific needs. We will help you choose the best label material, adhesive, and inlay based on:

- Surface Application
- Necessary Duration of Application
- Environmental Conditions
- Amount of Information on Label
- Your Printing and Encoding Capabilities
- How the label will be read

Service Bureau Solutions

TSC provides advanced RFID encoding services to help VAR partners accelerate deployments and meet compliance requirements with confidence. We can encode RFID tags, print variable data, or complete both in a single quality-controlled process. Ideal for pilot programs, large-scale rollouts, or complex serialized projects, our Service Bureau enables partners to deliver turnkey RFID solutions, without additional capital investment.

Thermal Transfer Ribbon

Every label is different and each material and/or use will require a certain type of ribbon. Our thermal printer experts will work with you in deciding the best option for your application.

8050-SWX Standard Wax

- Widely used for barcode applications
- Provides excellent print quality
- Suitable for standard labeling applications
- Compatible with most coated and non-coated paper labels

8300-PWX Premium Wax

- Resin-enhanced wax
- Best scratch and smudge resistance for a wax ribbon
- Supports high speed printing
- Excellent print quality on all papers and some film materials

8500-SWR Standard Wax/Resin

- General purpose wax/resin formulation
- Superior print quality on all common papers and films
- Out most versatile formulation
- Prints at low temperatures and high speed

8550-PWR Premium Wax/Resin

- Designed to print on a wide range of coated papers and films
- Very sharp print quality, enabling ladder and rotated barcode printing simutaneously
- Enhanced abrasion and scratch resistance

8650-SRE Standard Resin

- Adaptable to a wide range of label materials
- Supports high speed printing
- Very high resistance to solvents and abrasion

8770-PRE Premium Resin

- Developed for extreme environment labeling
- Unmatched scratch and solvent resistance
- Maximum durability

Printer Software & Tools

TSC Auto ID provides a suite of software and tools to optimize RFID printer operations. From remote management to seamless integration and quality validation, these solutions help streamline workflows, ensure data accuracy, and maintain high uptime across printing environments.

TSC CONSOLE Web

Manage both TSC Auto ID and Printronix Auto ID printers from a single platform with a dashboard overview.

TSC CONSOLE PC

Monitor and configure TSC Auto ID printers remotely, deploy programs, and troubleshoot issues quickly.

PrintNet enterprise Auto ID

Organize Printronix Auto ID printers in a central dashboard, enabling remote monitoring and control from any networked PC.

SOTI CONNECT

Complete lifecycle management for all TSC Auto ID and Printronix Auto ID printer models.

UniPRT SDK

Provides a unified set of APIs and sample code to simplify development and integration with TSC Auto ID and Printronix Auto ID printers.

RTV RFID Tag Validation

Confirms encoding accuracy before tag application to ensure data reliability and reduce errors.

TSC CloudConnect

Print from anywhere by sending label data via the cloud, supporting smartphones, tablets, laptops, or workstations.

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