Global EPOS and Self-Checkout



RESEARCH OVERVIEW





RBR Data Services research delivers market and competitive intelligence to support regular and ad-hoc strategic planning

RBR Data Services provides clients with independent and reliable data and insights through published research, consulting and bespoke data services. Its global research covers the cards and payments, retail technology and banking automation sectors and is used by leading market participants, analysts and regulators as the authoritative source of industry and competitor benchmark data.

Datos Insights is the advisor of choice to the banking, insurance, securities, and retail technology industries – both the financial institutions and the technology providers who serve them. We help our clients make better technology decisions so they can protect and grow their customers' assets.

For more information, visit <u>www.datos-insights.com</u>

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Global EPOS and Self-Checkout provides suppliers with data, analysis and insights that are not available from any other source

Point-of-sale technology remains crucial for retailers; vendors need reliable and granular data

- Increasing competition from online players is prompting traditional retailers to re-imagine their store networks in every aspect, from size and scale to design and layout
- The use of technology in stores has never been more important, enabling retailers to offer customers a range of checkout options, including assisted and self-service lanes
- Vendors lack a reliable, detailed view of their market presence and that of their competitors

The study provides technology vendors with intelligence on the market and their competitors

- Understand overall market context, and identify future opportunities
- Benchmark versus competitors, overall as well as by geography and customer segments
- Provide authoritative, independent substantiation of market presence in marketing collateral



The study provides detailed, country-by-country data on the market for programmable EPOS and self-checkout hardware

Scope		
Product	Programmable EPOS and self-checkout (SCO) hardware	
Geographies	Global coverage with data for 53 country markets across 6 regions	
Segments	Data provided for Grocery+, General Merchandise and Hospitality+	
Vendors	40+ vendors including Diebold Nixdorf, Elo, HiStone, HP, NCR Voyix, Oracle, Partner Tech, Posiflex, Toshiba, Sunmi and Wintec	
Metrics	Units (shipments / installed base) and value (expenditure on hardware / maintenance)	
Dates	End-2023, historical data and forecasts to 2029	

For full details of product and segment scope, see Appendix



The study will provide global data, including figures for 53 country markets

Americas

- Argentina
- Brazil
- Canada ...
- Chile
- Colombia
- Mexico
- Peru
- USA

Austria

- Belgium
- Czechia
- Denmark
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland

EMEA

- Israel
- Italy
- Morocco
- Netherlands
 Sweden
- Norway
- Poland
- Portugal
- Russia

- Slovakia
- South Africa
- Spain
- Switzerland
- Turkey
- UAE
- UK
- Saudi Arabia
 Ukraine

Asia-Pacific

- Australia
- China
- India
- Indonesia
- Japan
- Malaysia
- New Zealand
- Philippines
- South Korea
- Taiwan
- Thailand
- Vietnam

Including 'Other' markets for Latin America, Western Europe, Central and Eastern Europe, Middle East and Africa, and Asia-Pacific



The study methodology builds on our expertise in large-scale, global studies, designed to ensure comparability and reliability

Collect

Data gathered from all major vendors

- RBR Data Services solicits information from industry suppliers
- Primary data complemented with secondary research
- Overall 100+ vendors analysed

Validate

Accuracy of claims verified using variety of sources

- RBR's historical market data over two decades
- Insights on retailers' store networks
- Press releases plus specialist and mainstream media
- Annual reports and stock exchange filings

Analyse

Leveraging RBR expertise in drawing insights from data

- Data analysed by country, vendor, etc.
- Report commentary
 highlights major customers,
 and the latest rollouts
- Insights on forecasts and future trends

The study leverages RBR Data Services' expertise in syndicated retail research studies, its deep knowledge of the POS market and its ability to draw insights from data



Ease of use, and access to the RBR Data Services team, maximises value across your organisation

Deliverables collectively address clients' core market intelligence needs



Market Report

- Key market statistics, trends and commentary by country
- Regional and global comparative analyses
- Familiar PowerPoint format facilitates re-use of material



Market Database

- Excel format enables use across your organisation
- Charting tool facilitates production of bespoke outputs
- Comprehensive data easily extracted for further analysis



Video Conference

Live session to present findings and discuss implications



Analyst Access

Ongoing access to senior RBR Data Services researchers



In addition to the full global report, regional and segmented options are available

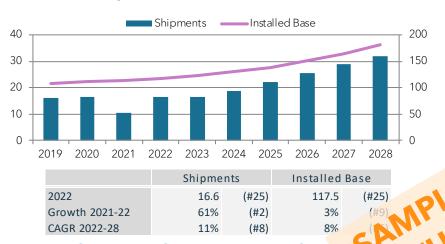
Geographic Coverage	Full Report (EPOS and SCO)	EPOS Only	Self-Checkout Only	
Global (Full Report)	£61,000	£36,500	£36,500	
EMEA	£30,500	£18,250	£18,250	
Americas	£18,250	£11,000	£11,000	
Asia-Pacific	£24,500	£14,750	£14,750	
International Overview (World and regional market coverage)	£22,000	£13,250	£13,250	

Contact us with questions, to discuss your requirements or place an order: +44 20 8831 7300 rbr@datos-insights.com

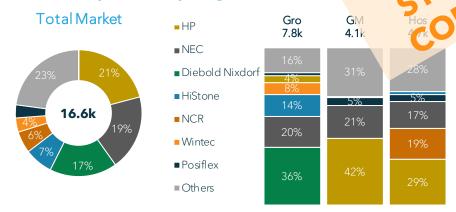


EPOS shipments to Indonesia bounce back, with strong future growth expected

EPOS Shipments and Installed Base (000s)



EPOS Shipments by Segment and Ver



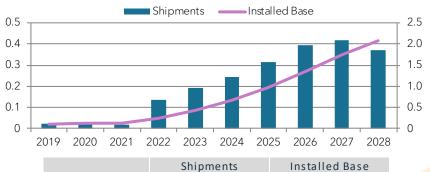
Market Commentary

- Shipments of programmable EPOS units to Indonesia rose by 61% in 2022, with nearly 17,000 units delivered
 - 2022 saw several major retailers, including an international fast-food chain, undertake hardware refreshes
 - convenience store chains Alfamart and Indomaret tinue to expand, each opening around 1,000 new locations in 2022
 - The second 21% of total shipments to the market in 2022, who at 50 presence in both GM and hospitality sectors chain Matahari, which has nearly 150 outlets
 - International QSR chains franchised by MAP, such as Burger King and Starbucks, also use HP EPOS hardware
- NEC is the second largest supplier to the market, accounting for nearly a fifth of shipments; customers include AEON
- Diebold Nixdorf accounts for 17% of the market, working with local partner Kahar Duta Sarana
 - The vendor delivers to Dairy Farm International, which operates Giant and Hero grocery stores
- Other vendors present in the market include Chinese suppliers HiStone and Wintec, as well as NCR
- The expanding retail sector in Indonesia offers strong growth potential; EPOS installations will surpass 180,000 units in 2028

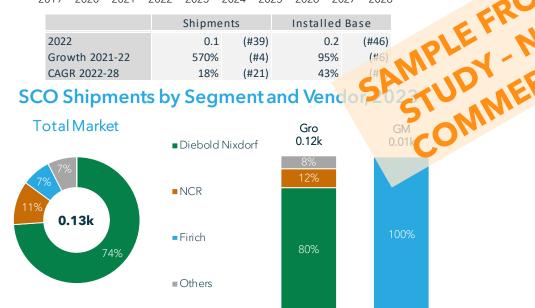


Record number of self-checkout shipments to Saudi Arabia in 2022

SCO Shipments and Installed Base (000s)



	Shipme	ents	Installed	Base	
2022	0.1	(#39)	0.2	(#46)	
Growth 2021-22	570%	(#4)	95%	(#6)	•
CAGR 2022-28	18%	(#21)	43%	(#	

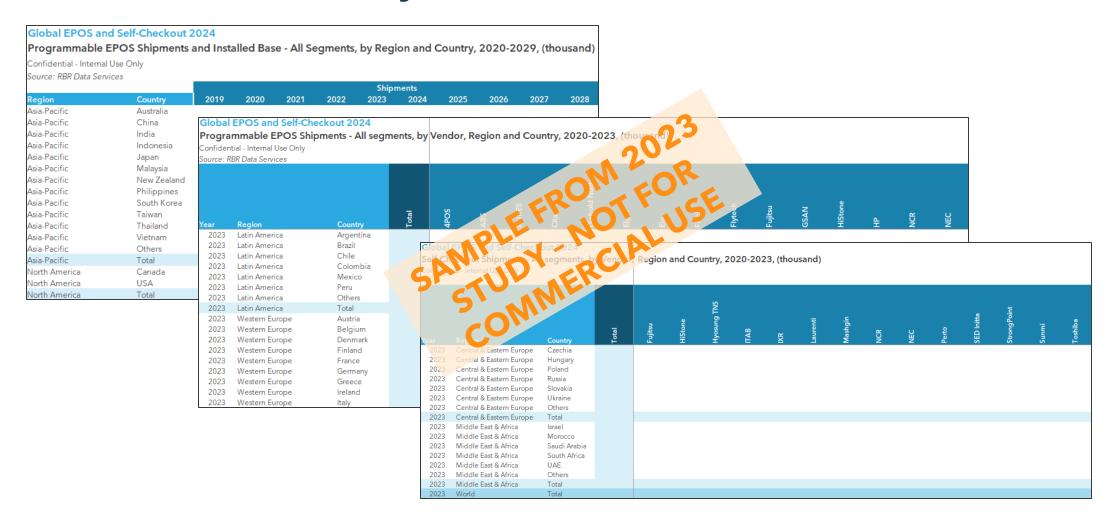


Market Commentary

- There were more than 130 shipments of SCO terminals to the Saudi Arabian market in 2022; prior to 2022, annual shipment levels had not exceeded 30 units
- Nixdorf delivered nearly 100 terminals to grocery s in Saudi Arabia, working with two local distributors frani and Zultec Group
 - im continues to roll out Diebold Nixdorf selfuts at its supermarkets
 - ased supermarket chain Al-Sadhan, also began out the vendor's SCO terminals in 2022
 - urther Diebold Nixdorf customers include SPAR, which opened two new stores in 2022, both equipped with SCO
- NCR shipped 15 terminals to Saudi Arabia; the vendor sells SCO terminals to retailers via local partner Retail Business Solutions
- Major retail chain Bindawood uses NCR SCO units, which are installed at both its own-brand stores and at Danube locations
- Firich shipped a small number of units to Saudi Arabia in 2022; clothing chain Max Fashion has begun piloting card-only SCO terminals from this vendor at one of its mall stores
- Supermarket chain Carrefour has installed proprietary selfcheckouts at some of its stores in Saudi Arabia
- SCO shipments will increase over the forecast period with the installed base exceeding 2,000 units by 2028



A comprehensive Market Database is provided in Excel, which includes a Custom Analysis tool





Appendix



RBR Data Services has deep retail and hospitality industry knowledge, researching various store technologies

Key Qualifications

- 35 years' experience delivering international market research to diverse blue-chip client base
- Expertise in hardware, software and services
- Dedicated EPOS and self-checkout hardware research since 2008
- Strong understanding of general and technology trends in retail and hospitality industries
- Reputation for premium, independent syndicated research studies funded by industry suppliers

Types of client

- Technology suppliers e.g. Diebold Nixdorf, Epson, Fiserv, Fujitsu, Glory, HP, Microsoft, NCR Voyix, Toshiba, Zebra
- Retailers e.g. Auchan, X5 Retail
- Payment firms e.g. American Express, Mastercard, Visa
- Consultancies e.g. Bain & Company, Boston Consulting Group
- Investment banks and investors e.g.
 Advent International, Elliott Management,
 Goldman Sachs



The study covers programmable EPOS and self-checkout hardware, and defines three customer segments

Products Products			
EPOS	An Electronic Point of Sale ("EPOS") unit is a device which processes transaction data at the point of-sale (or point-of-service) and which has the capability to transmit data to (and receive data from) other computers electronically, in an unrestricted manner		
Programmable EPOS	 A "programmable EPOS" unit is, in addition: designed in its entirety with a retail/hospitality (etc.) environment in mind, in terms of lifespan, power consumption, reliability, environmental challenges (dust, grease, heat), connectivity etc. 		
	 fully user-programmable, running an open operating system and dedicated POS application 		
	 purpose-built for transaction processing 		
	 designed to be stationary (because of peripherals, cabling, weight etc.) 		
Self-Checkout	A "self-checkout" (SCO) unit has many of the same characteristics as a "programmable EPOS" unit, but allows the customer to handle the "checkout" process of goods already selected, rather than being served by a member of staff		

Customer Segments

Grocery+

- Supermarkets
- Hypermarkets
- Discounters
- Convenience stores
- Drugstores/pharmacies

General Merchandise •

- Mass merchandisers
- Cash and carry/warehouse club
- Department/variety stores
- Speciality retail soft goods
- Speciality retail hard goods

Hospitality+

- Hotels
- Restaurants
- Leisure
- Other service industry

