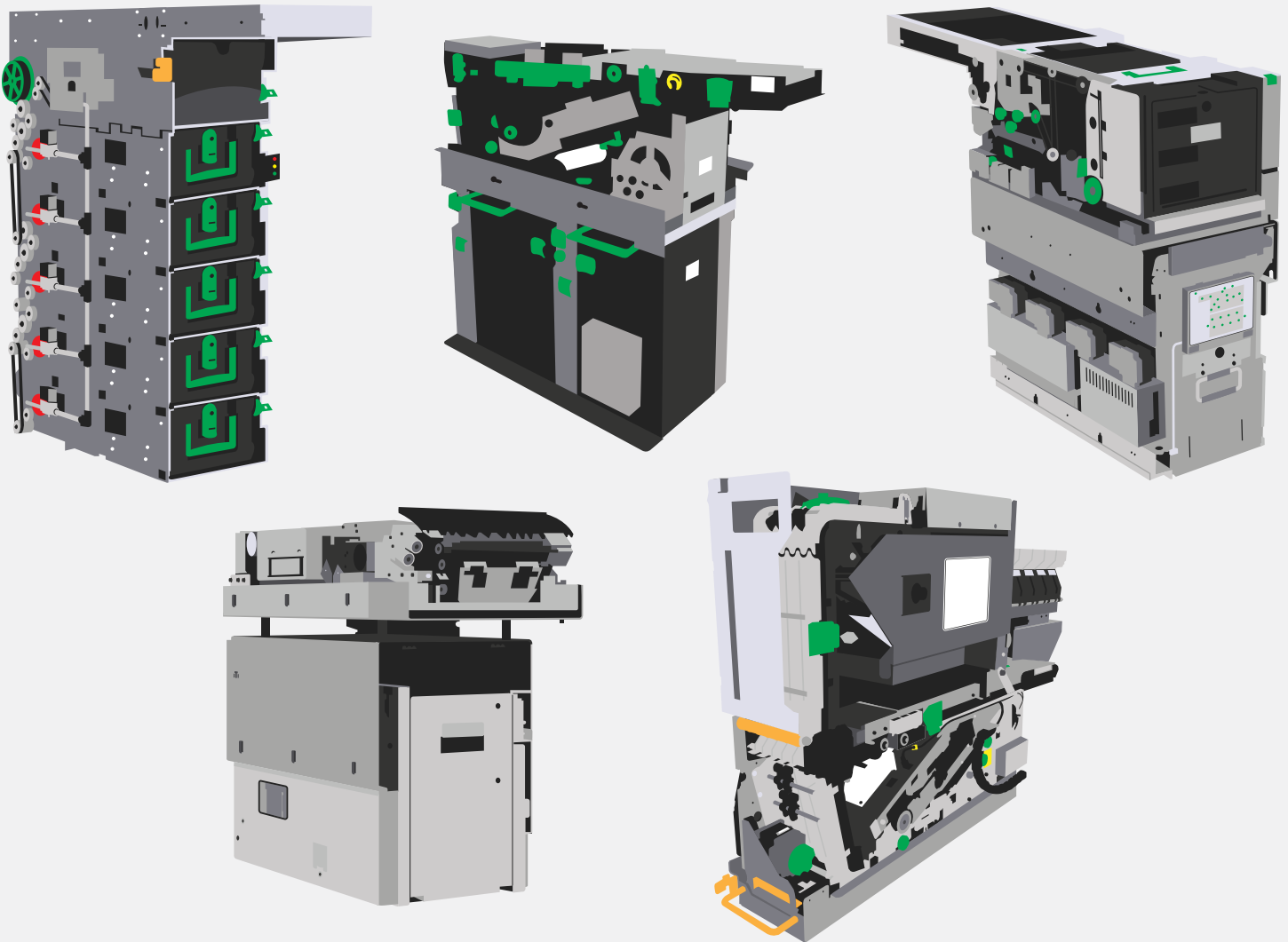


NCR MEDIA HANDLING 2.0

THE WIDEST RANGE OF DEPOSIT, DISPENSE AND
RECYCLING OPTIONS IN THE ATM INDUSTRY



For more information, visit ncr.com, or email ncr.financial@ncr.com.



TABLE OF CONTENTS

What is Media Handling 2.0 from NCR?	3
Why introduce Media Handling 2.0 now?	4
Intelligent Deposit at the ATM explained	5
What are the differences between each module?	6
What are the key benefits of each module?	7
Cash Out—S2 Media Dispense Module	8
Cash/Check In—Scalable Deposit Module	9
Cash Recycling/Deposit—Global Bunch Recycling Unit / Global Bunch Note Acceptor	10
Cash Recycling—Bunch Recycling Module	11
Check In—Scalable Check Processing Module	12



WHAT IS MEDIA HANDLING 2.0 FROM NCR?

What is it?

Media Handling 2.0 from NCR is a range of innovative dispense, deposit and recycling modules that are core to our new ATMs and are already generating fantastic results and driving higher availability.

With Media Handling 2.0 from NCR, the aim is to provide financial institutions with a highly configurable ATM module set that provides a clear upgrade path to help future proof their self-service estate as consumer demands evolve. These ATM modules are key in helping deliver a consistent and wide variety of transactions in all locations and placements.

Why is it important?

ATM volumes globally are expected to increase to over 4 million by 2021. Already there are over 99.5 billion ATM cash withdrawals made globally each year, with the value of these withdrawals exceeding \$13.2 trillion*.

How does it help you?

The aim of this new module technology from NCR is to better enable a bank to invest today and get ready for tomorrow. Media Handling 2.0 provides the widest range of deposit, dispense and recycling options in the ATM industry, many of these module options are unique to NCR SelfServ.

*Source: *RBR Global ATM Market & Forecasts to 2021*



A range of innovative dispense, deposit and recycling modules.”



WHY INTRODUCE MEDIA HANDLING 2.0 NOW?

NCR continues to invest in its core ATM technology underpinned by our broader media handling excellence strategy. These new modules help financial institutions future proof their ATM estate by addressing the following challenges:

Increased consumer demands

Consumer expectations have never been higher. Cash continues to be the primary means of payment in most countries and this in turn drives demand for fast, secure and convenient access to cash. Year-on-year we are seeing more cash in circulation than ever before. This is true both in emerging countries as well as mature markets.

Financial institution expectations

What matters most to ATM Channel owners? Ultimately driving uptime, minimizing failed customer interactions

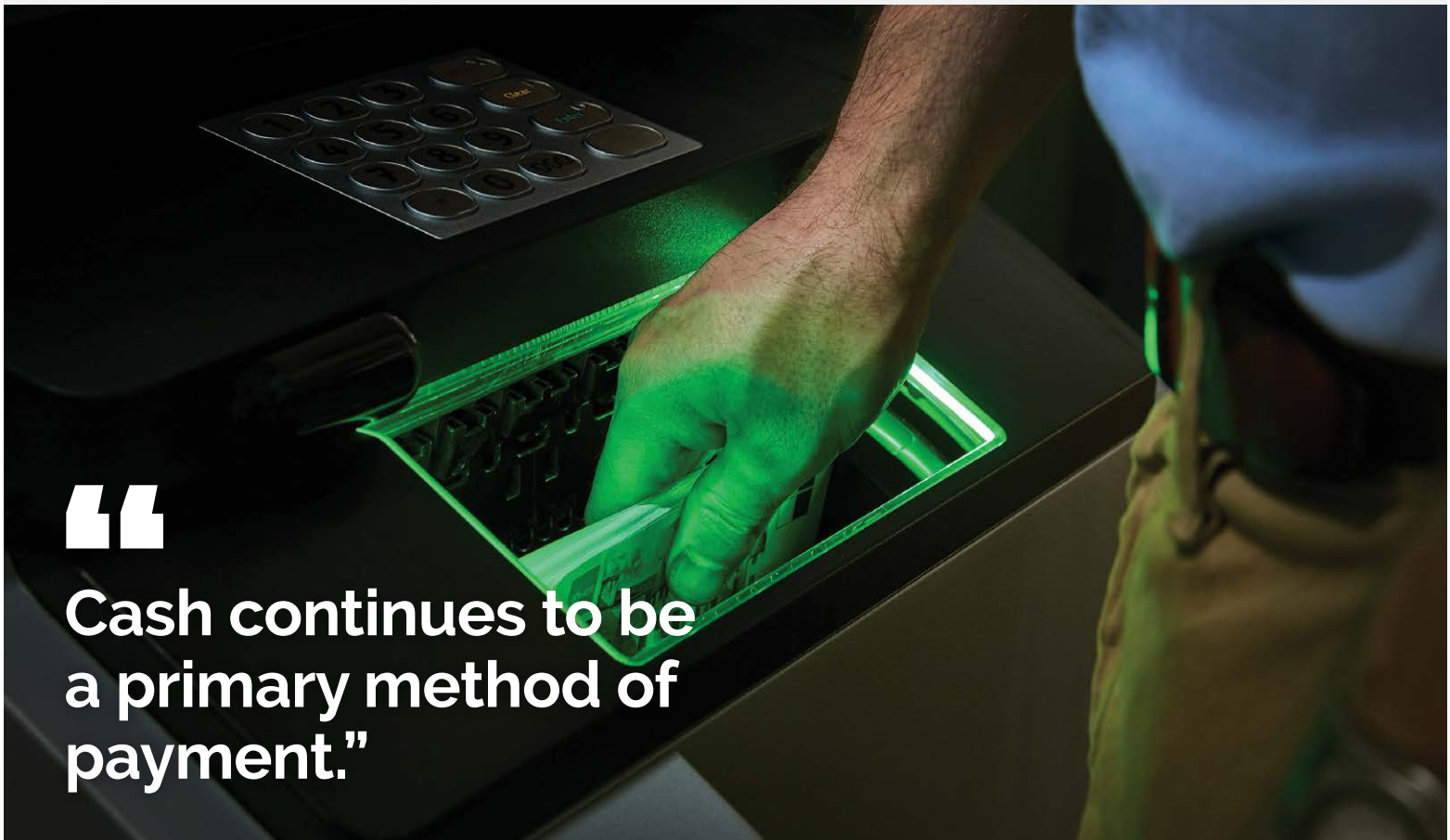
and ensuring high levels of availability. By increasing performance and availability, and minimizing downtime and errors, ATMs become more reliable, effective and efficient, working better for the FI, and their customer.

Changing service landscape

As banks deploy into wider and more remote geographies, this brings a number of environmental challenges such as greater exposure to environmental conditions. These include: dust, sand, temperature fluctuations, and installations in very cold and hot climates.



Cash continues to be a primary method of payment.”



INTELLIGENT DEPOSIT AT THE ATM EXPLAINED

NCR's Intelligent Deposit solves a number of challenges for financial institutions when migrating deposit transactions from the expensive teller position to the more cost-effective ATM channels. The benefits that can be accrued from Intelligent Deposit include the following.

For the customer:

- The deposit experience is enhanced, by providing a simple, intuitive and easy-to-use process where cash or cash and/or check can be deposited using self-service functionality
- Positive confirmation that the transaction has been completed successfully - the deposited check image, cash totals and updated balance are printed on the receipt
- 24/7 deposit availability with immediate credit for cash

For the financial institution:

- Cash collection costs can be dramatically reduced, requiring only lower cost courier pick-up on a daily basis, if required, and no daily pick-up if electronic check presentment or truncation exists
- Image processing technology helps to eliminate human error, processing is more efficient, less costly and requires reduced manpower
- Processing is dramatically accelerated, allowing for proof and posting throughout the day



Did you know? Deposit accounts for some 40 – 60% of all branch activity and NCR customers have saved between 30 – 75% of associated deposit transaction costs from ATM deposit implementation



Ave. teller cost of a transaction is \$1.07 vs ATM of \$0.27



Per deposit transaction costs reduced from \$1.66 to \$0.70

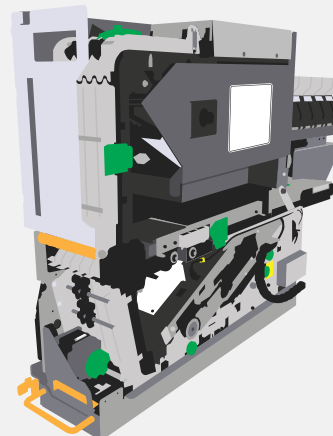
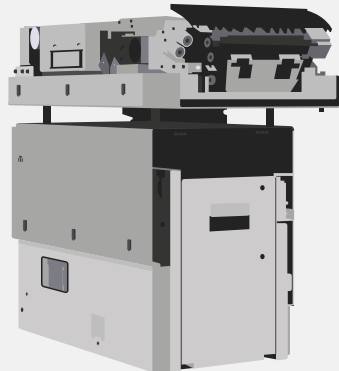
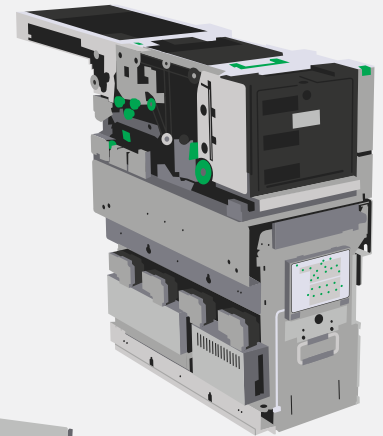
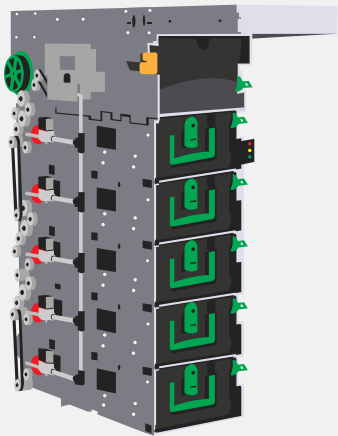


WHAT ARE THE DIFFERENCES BETWEEN EACH MODULE?

NCR Media Handling 2.0 is a flexible modular solution designed to help financial institutions manage their day-to-day ATM operations better. All modules feature common parts and components across all ATMs. This means

better performance, easier, faster fault identification and resolution via a series of module enhancements. Key features are as follows:

	DISPENSE	MIXED MEDIA DEPOSIT	CHECK DEPOSIT	RECYCLE / DEPOSIT	RECYCLE ONLY
Name	S2 Media Dispense Module (S2)	Scalable Deposit Module (SDM2)	Scalable Check Processing Module (SCPM)	Global Bunch Recycling Unit / Global Bunch Note Acceptor (GBxx2)	Bunch Recycling Module (BRM)
Bunch capacity	Up to 60 notes	Up to 100 items	Up to 30 checks	Up to 200 notes	Up to 300 notes
Cassette Capacity	Up to 2,500	Up to 4,000 notes and 400 checks	Up to 1,000 checks	Up to 2,000 notes (recycle) / 2,300 notes (deposit)	Up to 2,700 notes
ATM Capacity and Configuration	Up to 25,000 notes in dual dispense mode	Or store up to 2,000 notes and 2,000 checks	1,030 items (1 bin + exception bin)	3 Recycling + 1 Deposit or 2 Deposit + 2 Cash in/out	4 Recycling + 1 Deposit
Available on	SelfServ 2x/3x/8x	SelfServ 8x	SelfServ 3x/8x	SelfServ 3x/8x	SelfServ 83/87



WHAT ARE THE KEY BENEFITS OF EACH MODULE?

A summary of the key benefits for each module are as follows:

	DISPENSE	MIXED MEDIA DEPOSIT	CHECK DEPOSIT	RECYCLE / DEPOSIT	RECYCLE ONLY
Name	S2 Media Dispense Module (S2)	Scalable Deposit Module (SDM2)	Scalable Check Processing Module (SCPM)	Global Bunch Recycling Unit / Global Bunch Note Acceptor (GBxx2)	Bunch Recycling Module (BRM)
Details	A 17% increase in cassette capacity from the S1 Dispenser. Anti-overfill mechanism within cassettes, and programmable note carriage. Service benefits include state of health indicators and 7 key every item field replaceable units.	Increased deposit capacity from 50 to 100 items. SDM2 enables print and return of checks taking the cost of storing and disposing of checks away from the financial institution. 30% performance improvement over SDM1—improved handling of poor quality media.	Checks stored outside of the safe for easy replenishment. Enables check deposit along with recycling on multi-function ATMs. Configurable for single or multi-check functionality.	Driving performance improvements of x1.5 to x3 compared to previous recycle / deposit module. Up to a 50% reduction in note jams. Flexible configuration.	Meeting the needs of high capacity cash recycling markets with a pocket based cash deposit mechanism. Up to 2x improvement in reliability vs other cash recycling solutions. Convenient pocket based interface for depositing notes. Pocket camera and sensors for foreign object detection.



Invest today and get ready for tomorrow.”



CASH OUT—S2 MEDIA DISPENSE MODULE

The S2 Media Dispense Module is designed to handle a mix of polymer and paper notes, as well as notes of varying quality to deliver higher availability, improved serviceability and enhanced security at the ATM channel.

All the valued features, such as higher cassette capacity, bigger bunch size and lower cost servicing are now available on the NCR SelfServ 80 series such as dual dispense with 2 x 5 high dispensers offers industry leading capacity of up to 25,000 notes.

S2 offers additional security features which help prevent reversal and cash trapping fraud. Servicing is much simpler and faster, helped by a compact range of field replaceable units, which have driven reductions in dispenser service-related incidents of over 40% at customers worldwide.

S2 Media Dispense Module features:

- Up to 60 note bunch present in a single transaction
- Up to 2,500 notes per cassette—a 17% increase in cassette capacity from the S1 Dispenser
- Up to 25,000 note capacity in dual dispense*
- Anti-overfill mechanism within cassettes
- Programmable note carriage

The S2 Media Dispense Module has already been shipped in over 50,000 ATMs globally. This new cash dispense module is already outperforming the older S1 dispenser by up to 20% in terms of performance and reliability.

In summary, with increased storage and bunch dispense capability, security and servicing improvements and better performance, the S2 ensures banks can deliver the service their customers expect.

*Capacity is based on check or note quality, thickness and specific deposit module used. Capacity may vary by country, currency type, condition and quality of notes



Industry leading cash capacity of up to 25,000 notes as a dual dispense ATM



An improvement of 10% in ATM reliability seen with NCR SelfServ vs. NCR Personas for some customers



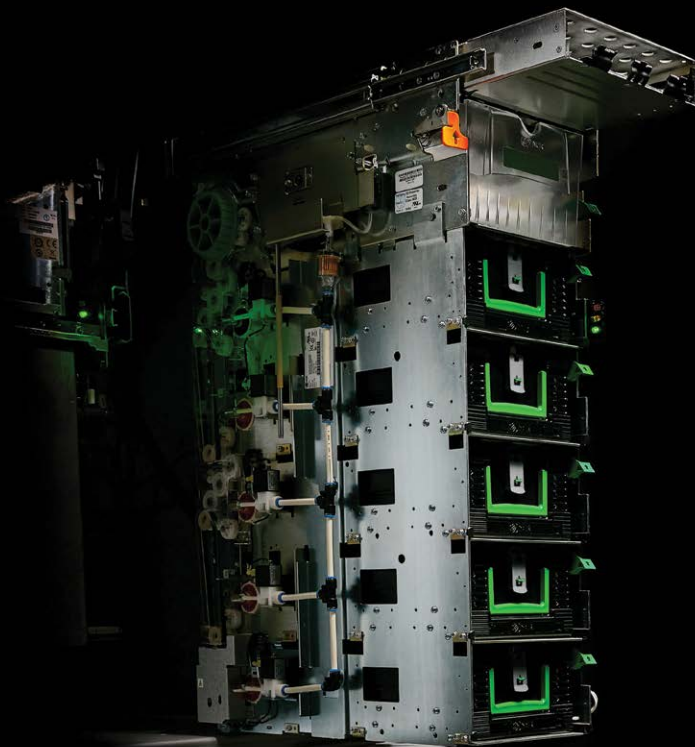
Improved uptime in excess of 99.3% witness from some customers using new SelfServ ATM Family



Up to 20% reduction in stocking costs for dispenser parts. A dispense module featuring 7 key every unit item field replaceable units



Examples seen of above a 40% reduction in service related incidents on newer SelfServ ATMs than on ageing ATMs



CASH/CHECK IN—SCALABLE DEPOSIT MODULE

Globally the volumes of media being deposited at ATMs continue to increase, however the mix of cash and checks has changed. The volumes of intelligent deposit ATMs continues to increase also. There are now in excess of 1.1M intelligent deposit enabled ATMs installed globally and NCR needs a reliable dedicated check module to cater for the needs of consumers.

Deposit Module—SDM2—Up to 100 mixed media bunch cash (from 50 previously) + check in a single transaction. Store up to 4,000 notes (combined) and 400 checks* or store up to 2,000 notes + 2,000 checks. In order to optimize CIT visits and replenishment cycles, there was also need to offer more cash storage.

SDM2 hardware enables print and taking the cost of storing and disposing of checks away from the financial institution. 30% performance improvement over SDM1—improved handling of poor quality media

To summarise, SDM2 offers higher cash capacity storage, bigger bunch size, higher availability and faster transaction speeds due to the optimization of the paper path. It opens intelligent deposit to a wider group of consumers, including small businesses, further aiding transaction migration and lowering costs for financial institutions globally.

Please note the SDM2 is only available on the SelfServ 80 Series.



4,000 note capacity is industry leading and extends intervals between replenishment.



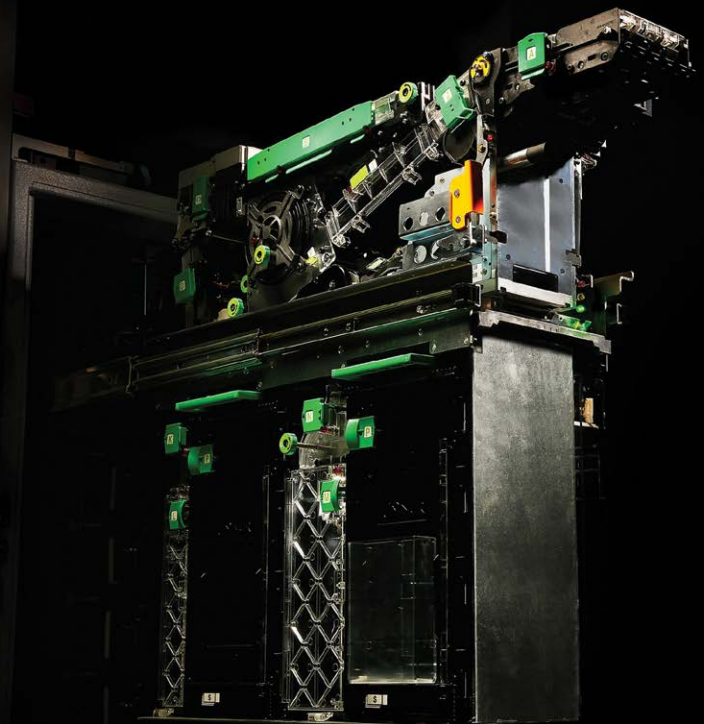
SDM2 enables print and return of checks —taking the cost of storing and disposing of checks away from the FI



30% performance improvement over SDM1 —improved handling of poor quality media



New bill validator future proofed for new security features on currency. Improved processing of new note substrates



CASH RECYCLING/DEPOSIT—GLOBAL BUNCH RECYCLING UNIT / GLOBAL BUNCH NOTE ACCEPTOR

The GBXX2 module has been refined to improve service, performance and availability at the ATM. It is available either as a cash recycling or cash deposit module.

These modules features a range of benefits including improved:

- New deposit and recycling cassettes that are more robust
- State of health indicator panel to support better faster servicing
- FRU memory has been integrated to the key components to support repairs and make faults easier to identify

The GBXX2 is also a stepped improvement from what was already a world-leading module.

These all deliver performance improvements which will vary depending on the customer environment and the quality of media being handled.



Improved serviceability



Hardware performance improvements between 150% & 300%



Up to 50% jam reduction



Flexible configuration—note acceptor or recycler



CASH RECYCLING—BUNCH RECYCLING MODULE

The Bunch Recycling Module (BRM) is designed to perform with twice the reliability of other cash recycling solutions. Please note is only available on the SelfServ 83 and 87 ATM modules and is aimed to fulfil recycling transactions with ease and convenience.

The easy to use pocket interface on the BRM is prominently positioned at the front of the ATM, delivering large bunch note capacity and improved visibility for consumer transactions. Benefits include:

- Deposit up to 300 notes
- Store of to 2,700 notes per cassette
- Configuration 4 recycling + 1 deposit (2,300 notes)

The BRM is designed to meet the needs of high capacity cash recycling markets. With a pocket based cash deposit mechanism and a direct simplified note path which minimizes jams, it is designed to achieve market leading reliability with the BRM module tested to deliver 1:80k MPF (Media Per Fault).



Up to 2x improvement in reliability vs other cash recycling solutions



Convenient pocket interface for depositing notes



Large bunch note capacity up to 300 notes



Pocket camera and sensors for foreign object detect



CHECK IN—SCALABLE CHECK PROCESSING MODULE

The SCPM (Scalable Check Processing Module) addresses the needs of Financial Institutions to intelligently automate routine deposit transactions of checks by receiving either a single check or a bunch of checks at the ATM.

The SCPM is available on SelfServ 30 Series and SelfServ 80 Series Multi-Function ATMs and the main benefit of this module is how the module allows checks to be stored outside the safe for easy replenishment. Key benefits include:

- The ability to store checks outside of the safe for easy replenishment
- Configurable for single or multi-check functionality
- Deposit up to 30 checks. Cassette capacity = up to 1,000 checks. Configuration = 1 bin + 1 exception bin (1,030 items)

From a consumer perspective the SCPM is a simple and reliable solution, delivering the fastest possible transaction time for 90% of consumers with 1 or 2 checks.



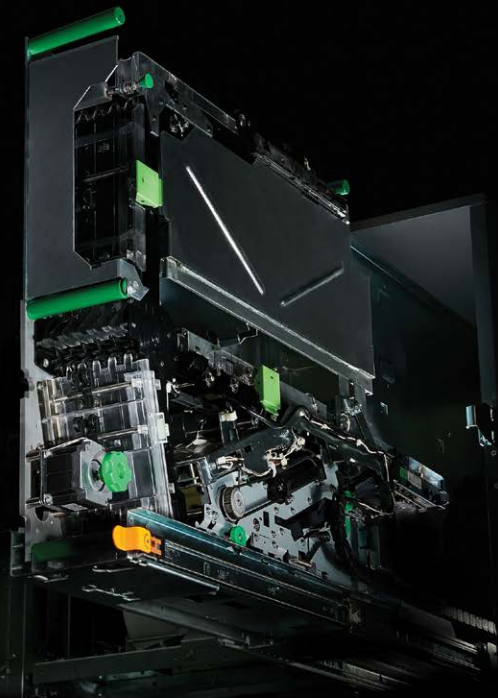
Checks stored outside the safe for easy replenishment



Configurable for single or multi check functionality



Enables check deposit along with recycling on multi-function ATMs





CONTACT US AT NCR.COM TODAY

WHY NCR?

NCR Corporation (NYSE: NCR) is a leader in omni-channel solutions, turning everyday interactions with businesses into exceptional experiences. With its software, hardware, and portfolio of services, NCR enables nearly 700 million transactions daily across retail, financial, travel, hospitality, telecom and technology, and small business. NCR solutions run the everyday transactions that make your life easier.

NCR is headquartered in Duluth, Ga., with over 30,000 employees and does business in 180 countries. NCR is a trademark of NCR Corporation in the United States and other countries.

NCR continually improves products as new technologies and components become available. NCR, therefore, reserves the right to change specifications without prior notice.

All features, functions and operations described herein may not be marketed by NCR in all parts of the world. Consult your NCR representative or NCR office for the latest information.

NCR SelfServ is either a registered trademark or trademark of NCR Corporation in the United States and/or other countries. All brand and product names appearing in this document are trademarks, registered trademarks or service marks of their respective holders.

© 2017 NCR Corporation Patents Pending

17FIN7234-1117

ncr.com

