

Numeron[®]

The compact, fast, and reliable system solution



Giesecke & Devrient
Creating Confidence.



Numeron – a new dimension in banknote processing

Giesecke & Devrient (G&D) provides all the components required for secure and efficient banknote processing. Our offering ranges from consulting to high-performance currency automation systems, cash management software, and services.

Cost is becoming an increasingly important consideration wherever banknotes are processed, and the volume of cash in circulation is continuing to expand worldwide. The Numeron plays a key role in improving banknote processing productivity for central and commercial banks, cash-in-transit companies, casinos, and the retail and vending industries.

The Numeron system

The Numeron is an exceptionally compact, end-to-end banknote processing system that includes the CashRay® 180 high-tech sensor and a person-machine interface (PMI).

When it comes to processing banknotes, the main requirements and priorities are as follows:

- Authentication
- Denomination identification
- Denomination and fitness sorting

The Numeron is an extremely successful banknote processing system, designed to meet exacting customer requirements. It stands out thanks to its cost-effectiveness, small footprint, and ease of use.

Statistics report

The report generated by the PMI shows:

- Total number of banknotes processed
- Number of banknotes fit for circulation
- Number of banknotes unfit for circulation

Ease of use

The new PMI provides a state-of-the-art user interface:

- Simplified operation using self-explanatory, language-independent symbols
- Newly structured operating guide for rapid comprehension and ease of use
- Color touch screen for intuitive input
- Ergonomic design and bright lighting to enable prolonged, comfortable operation
- Simple replacement of paper reels with automatic feed
- Significantly higher-speed integrated printer
- Easy and rapid PMI software updates via USB stick
- New PMI compatible with previous models from release 3.50
- Simple threshold definition, e.g. for fitness





Numeron D – deposit authentication and sorting

- Optimum support for currency automation processes
 - Mixed deposits: simultaneous authentication and sorting of different currencies, denominations, and series
 - High-speed transport
 - High throughput, continuous operation
 - Rejection of suspected counterfeits and damaged or unfit banknotes
 - Basic fitness sorting
- CashRay® 180 sensor
 - Double-sided, full-face authentication
 - Authentication currently best in class
- Dependability and availability
 - High performance
 - Suitable for large volumes
 - Long lifespan
- Simple operation
 - External PMI with touch screen
 - Easy-opening cabinet design for convenient maintenance and jam removal
- Adaptability
 - Stand-alone or network solution
 - Simple software updates
 - Currency adaptation

Numeron T – tape detection

Banks and many other cash-processing organizations take banknotes out of circulation that have been “repaired” using adhesive tape. Such tape can cause jams in machines such as ATMs.

- Incorporates all features of the Numeron D
- Additionally isolates taped banknotes

Numeron F – decentralized fitness sorting

Customer demands concerning banknote quality and the technical requirements of automated withdrawal mean local fitness inspection is becoming increasingly important and must meet ever-higher standards.

Incorporating all the features of the Numeron D and Numeron T, the Numeron F takes banknote fitness sorting to a whole new dimension.

The Numeron F’s added soil sensor measures the extent of soiling on each banknote. This high-resolution device also delivers an added benefit in detecting defective notes. Depending on customer requirements, banknotes can be sorted into up to three fitness categories:

- Suitable for cash machines (ATM)
- Fit for circulation (FIT)
- Unfit for circulation (UNFIT)

At the same time, each note is examined for authenticity and its value registered. Numeron F complies with article 6 of the ECB framework specifications.

The Numeron F is ideal for use in back offices of commercial banks and in cash centers. When a country’s central bank permits decentralized fitness sorting, the cash cycle can be shortened considerably. Reusable banknotes immediately reenter circulation.

Examples:

- ATM: Banknotes suitable for cash machines can be used to restock ATMs
- FIT: Banknotes fit for circulation can be redistributed at bank counters





Examples touch screen

Numeron DU / Numeron TU – optimum US dollar authentication

In many countries, the US dollar is used alongside the national currency to make cash payments. Due to the low number of machine-readable authenticity features, previous sensor systems were only able to perform accurate authentication based on regular sensor updates. G&D has now developed completely new sensor technology for reliable and accurate authentication of US dollars. Furthermore, the Numeron DU / TU systems are equipped with all the features of Numeron D or T, respectively.

Software – the brains behind the Numeron

The Numeron allows problem-free integration with existing cash-management software such as Compass^{CM} from G&D.

Numeron Configuration Software (NCS) is a Windows®-based tool that enables users to configure and manage one or more Numeron units from a PC.

Sensor Functions

	Image/IR	Magnetic	UV	US dollar	Adhesive tape	Soil/Defects
Numeron D	X	X	X	-	-	o
Numeron DU	X	X	X	X	-	o
Numeron T	X	X	X	-	X	o
Numeron TU	X	X	X	X	X	o
Numeron F	X	X	X	-	X	X

X = Standard functionality
 o = Basic functionality with image sensor
 - = Not available

Options and Accessories

- Single currency adaptation* (regional currency)
- Adaptation for 2 currencies
- Adaptation for 3 currencies
- PMI printer*
- Multiple language options for printouts
- Microdrive™ update kit
- Numeron Configuration Software (NCS)
- CompassEntrée^{CM}
- Barcode reader

* Component of standard hardware/software

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Technical Data

Dimensions (H/W/D)

Approx. 51 x 36 x 45 cm

Weight

Approx. 31 kg

Deposit capacity

Approx. 400-500 BN, depending on quality

Stackers

3 stackers (2+1 reject compartment)

Stacker capacity (approx.)

- Low quality: 100 BN
- High quality: 200 BN
- Reject: 100 BN

BN formats accepted

- Length: 100-185 mm
- Width: 50-95 mm

Transport speed (approx.)

- 20 BN/s (1,200 BN/min.)
- 10 BN/s (600 BN/min.) in fitness mode

Number of currencies

Up to 3

Interfaces

Numeron:

- LAN interface
- Serial interface
- Connection port for external display

PMI:

- Software update interface
- Interface for mouse, keyboard, numpad or barcode reader

Power supply

100-250 V, 50/60 Hz

Power consumption

Approx. 210 VA

Ambient temperature

15-35 °C

Relative humidity

30-80%, non-condensing

Certification

CE, GS, BG, CCC, RoHS