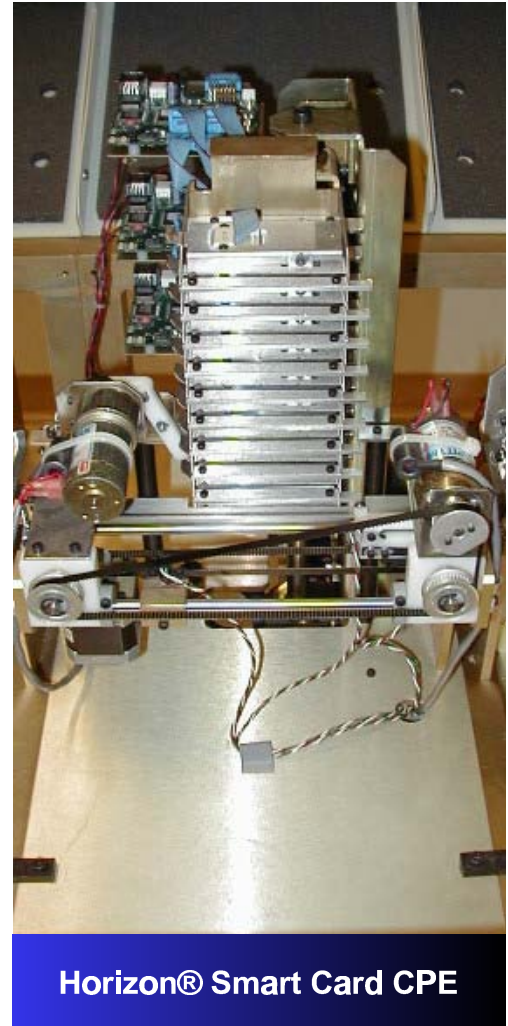
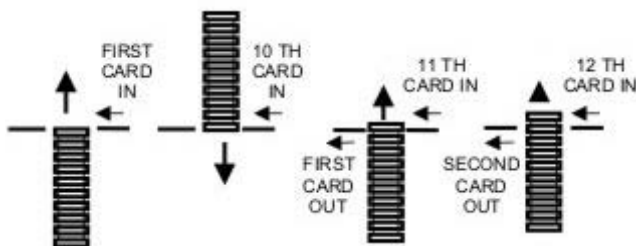


NBS HORIZON® Smart Card CPE

The Smart Card Personalization Element uses an elegant, elevator mechanism to simultaneously personalize up to 10 smart cards in single CPE (10 5/8" width). The assembly can be configured with 1 to 10 initialization stations. The cycle time for personalizing is reduced by the number of stations. The selection of the number of stations is dependent on the maximum anticipated programming time per card as well as the throughput rate of the particular Horizon configuration. For example with 10 stations the Smart Card CPE can provide a throughput of up to 1000 cards per hour running a typical financial application or GSM SIM cards.

The mechanism works by loading the first card into the first station. Simultaneously, the smart card head is lowered onto the chip card and personalization begins as the magazine is raised by one station. The process continues until the last station is loaded, at which point the magazine is lowered to the default position. The first card is then ejected since it has been fully personalized, and the next card is inserted.



Horizon® Smart Card CPE

This design is superior to other techniques because of the significant reduction of mechanical movement. In addition, the CPE allows a greater number of stations compared to competing units thus providing higher throughput. Like all Horizon CPEs, the Smart Card CPE can be ordered with a new machine or added to existing systems.

The Horizon can accommodate multiple smart card CPEs which enables the user to perform such functions as applet loading or application loading and pre-personalization on the first CPE and personalization on the second CPE. This eliminates the need to purchase a second piece of equipment saving the customer money.



For added security, a multiple Smart Card Security Key Option is available (external smart card readers/writers). Up to twelve of these electronic keys can be used to provide security functions.

The Smart Card CPE also includes a second computer for smart card processing. The computer is integrated into the operator control station and features a locking cover for security purposes. The computer is used to process smart card data and with the purchase of additional software can be used to perform the NBS inline P3 process. A KVM switch is also included so that the operator can switch easily from one pc to the other.

The strength of the NBS Smart Card solution lies not only in the hardware but in software as well. NBS owns the entire smart card personalization process. NBS can provide the customer with the entire solution including hardware, inline or offline P3 (data preparation), HSM functions (hardware data encryption and cryptography) and key injection. With NBS the customer can deal with only one vendor from start to finish. Our philosophy is that the only personalization equipment a customer should need to purchase is the NBS Horizon.



S p e c i f i c a t i o n s

- Compatibility:** Can personalize Smart Cards meeting ISO 7816 T=0, T=1 compliant microprocessor cards. Also supports Infineon Technologies 4406, 4418, 4428 4432, 4442 and Gemplus GPM2K & GPM8K memory cards and other equivalent cards.
- Approvals:** This CPE uses the NBS coupler board, which is type approved by Mondex as a component and is also part of the Mondex type approved NBS ImageMaster series, Advantage Series and NBS Impressions Series equipment.
- Read/Write:** Is supported on all chip types listed above.
- Validation:** Verification of written data is made by powering off the chip on the card, which simulates a hard reset. The chip is then powered and read to verify encoding.
- Data Passing:** The Smart Card CPE can pass return data from a chip or security reader to other down line CPEs for card personalization such as embossing or magnetic stripe encoding.
- Software:** Three levels of software are available with the Horizon Smart Card CPE.
- ◆ Software Developers Kit
 - ◆ Standard Packages
 - ◆ Custom Turn Key Solutions
- Please consult your local representative for the cost, availability and delivery of these products

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