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LIPMAN ELECTRONIC ENGINEERING LTD

## Integrated POS Terminal & Automatic Check Reader

# NURIT 700/710/720



### Description

The NURIT 700 series of integrated electronic point-of-sale (POS) payment terminals and automatic check readers have been designed to support a complete range of retail payment transactions including magnetic debit, credit smart chip cards, checks, private label and more. Much effort has been invested in the design and engineering of all NURIT 700 models for the operational ease and benefit of both retailer and customer.

Three main NURIT 700 models are available to the retail community. The NURIT 700 is the standard model requiring a telephone line and AC power source for normal operation. The NURIT 710 is designed with an on-board rechargeable UPS battery pack and operates from a standard telephone line, but eliminates the need for an external power source. The NURIT 720 is the culmination of many years experience in both wireless processing technology and standard tel-line POS terminal manufacturing. The NURIT 720 incorporates a radio modem (OEM internal data modem or PCMCIA slot for external plug-in unit), line modem, internal fast printer, internal PIN pad (optional), Smart Card Reader (optional), four SAM modules and a rechargeable battery pack with fast charger.

The integrated check reader in all NURIT 700 models, *automatically* and *accurately* reads personal or commercial checks. Internal paper sensors detect the presence of a check and subsequently activate a motorized "pull-in" transport mechanism. Magnetic data is automatically transferred to the unit's POS terminal where it is processed as an electronic transaction.

### Features

- Low-cost, tel-line or wireless (model dependent), all-in-one terminal solution
- Highly reliable 20-button ergonomically designed keypad
- Small footprint
- 1 MB flash (min.), extendable
- 256 KB battery backed-up RAM (512, 1024 or 2048 KB for NURIT 710 & NURIT 720 optional; 512 or 1024 KB for NURIT 700 optional)
- Fast 32-bit processor
- Fast 12 line/sec thermal printer (graphical, 2 1/4 inch/ 57 mm wide paper)
- Easily replaceable paper roll with automatic paper feed mechanism
- Accessible peripheral ports
- Large back-lit graphical display (128 x 64 pixels) enhancing the graphical user interface and menu-driven applications
- OS and dual-track 1 & 2 magnetic reader (track 2 & 3 optional)
- Application downloading via tel-line or RS-232 connection
- Built-in UPS battery pack with built-in fast charger (NURIT 710 and NURIT 720 models)
- Battery status monitor (NURIT 710 and NURIT 720 models)
- Built-in radio modem for Cellular Data Network - GSM, CDPD, Mobitex and Datatac (NURIT 720)
- Internal OEM Data Modem/PCMCIA Slot for external plug-in unit (NURIT 720)
- Built-in Smart Card Interface (optional)
- Up to two internal SAM modules (NURIT 700); up to four SAM modules, two accessible and two internal at board level (NURIT 710 and NURIT 720)
- Accepts personal and commercial checks
- Very high check reader MICR pass read rate
- Motorized automatic check transport
- Check reader audio alarm and LED power and read status



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# NURIT<sub>700/710/720</sub>

## Specifications

### POS TERMINAL COMPONENT

#### Human Interface

- Graphical back-lit LCD display (128 x 64 pixels); contrast adjustment via keypad
- 20-button ergonomically-designed keypad
- Full alphanumeric entry capability
- Dual track 1 and 2 card reader (tracks 2 and 3 optional)
- User-friendly menu-driven system
- Easily accessible rear peripheral ports

#### Processing

- Powerful 32-bit Motorola microprocessor (EC68000) incl. special ASIC

#### Wireless Capabilities (NURIT 720)

- Built-in radio modem
- PCMCIA slot for external plug-in radio module (optional)
- Local RF network
- Hardware/software solutions for GSM, CDPD, Mobitex and DataTac cellular networks

#### Memory

- 1 MB (min.) flash memory (extendable up to 2 MB, model dependent) for loader, operating system, applications, executable plug-ins, protocol plug-ins and parameters
- 256 KB battery backed-up RAM (512, 1024 or 2048 KB for NURIT 710 and NURIT 720 [optional]; 512 or 1024 KB for NURIT 700 [optional])
- Optional 512, 1024 and 2048 KB battery backed-up RAM
- Six month minimum data retention
- Write-protected RAM using special hardware mechanism to protect RAM disk content

#### Programming

- Easy-to-use API, minimizing application size and programming efforts
- Application downloading via phone line or RS-232 connection
- Easy-to-use debugging tools
- Complete and detailed hardware/software built-in tests
- Add-on application libraries for major third-party credit, debit, check verification and truncation programs, EBT, phone cards, pre-paid, added value and private label cards

#### Communication

- Dial-up modem @ 1200/2400/14400 bps for telephone communication (CCITT V.22bis, V.32bis, Bell 212A and fast-connect supported [model dependent]). Asynchronous and synchronous protocols supported by operating system
- HDLC protocol supported by operating system

#### Interfacing

- Two RJ-11 2/6 connectors for tel-line and telephone
- One RJ-11 4/4 connector for external PIN pad interface (RS-232 port)
- One RJ-45 connector for RS-232 communication
- External card interface: PCMCIA types 1, 2 and 3 used for wireless modem and memory expansion (optional)

#### Built-In PIN Pad (Optional)

- Eliminates the need for external device
- Meets standards: ANSI X3.92, ANSI X9.24, ANSI X9.8

#### Built-In Smart Card Interface (Optional)

- One smart card interface (supports ISO-7816 contact smart cards, synchronous and asynchronous; T=0, T=1). Protocol layers up to "transport" layer supported by OS
- Eliminates the need for high-cost external devices

#### Up to four ISO 7816 SAM Security Modules (Optional; model dependent)

- Two accessible (on NURIT 710 and NURIT 720 only)
- Two internal at board level (on all models)

#### Printer

- Graphic thermal printing mechanism; speed 12 lines per second
- Simple-to-use automatic paper feed mechanism
- Standard 2 1/4 inch/57mm wide paper (384 pixels per row)

#### Power

- Supplied UL approved AC/DC adapter: 15Vdc/1.5A
- Built-in battery pack (UPS) allowing for 5 (NURIT 710)/10 hours (NURIT 720) of operation or 50 (NURIT 710)/100 (NURIT 720) transactions
- Built-in fast charger

#### Mechanical

- Dimensions: 10.5 mm/4.1 in. [17 mm/6.69 in. with antenna extended] (H) x 22 mm/8.66 in. (W) x 27 mm/10.62 in. (D)
- Weight: 1.588 kg [3.5 lb.]

### CHECK READER COMPONENT

#### MICR Reading Performance (nominal)

- 99.5% first pass read rate
- 99.9% second pass rate

#### MICR Character Set Recognition

- E13-B and CMC-7

#### Sensors

- Top of form and paper edge/alignment sensor

#### MICR Fields Read

- All specified character positions on a personal check can be read, including the Transmit, On-Us, Auxiliary On-Us, and Amount fields

#### Approvals for all Models of NURIT 700 Series

- Complies and registered with FCC parts 15 and 68
- Power supply AC/DC adapter recognized by Underwriter Laboratories (UL)

All features and specifications are subject to change without notice. All trademarks mentioned are registered by their respective owners.

#### LIPMAN WORLDWIDE

##### Lipman Electronic Engineering Ltd.

International Headquarters  
11 Haamal Street, Park Afek  
Rosh-Haayin, ISRAEL 48092  
Tel: (972) 3 902 9730  
Fax: (972) 3 902 9731  
E-Mail: [mail@lipman.co.il](mailto:mail@lipman.co.il)  
Web site: [www.lipman.co.il](http://www.lipman.co.il)

##### Lipman USA

50 Gordon Drive  
Syosset, NY  
USA 11791  
Tel: (1) 516 484 9898  
Fax: (1) 516 484 9057  
E-Mail: [nuritsys@lipmanusa.com](mailto:nuritsys@lipmanusa.com)  
Web site: [www.lipmanusa.com](http://www.lipmanusa.com)

##### Lipman China (BBM Ltd.)

Room 601 Office Tower  
Beijing Capital Times Square  
No. 88 West Changan Avenue  
Beijing P.R.C. 100031  
Tel: (86) 10 83913788  
Tel: (86) 10 83913701  
Fax: (86) 10 83913703  
E-Mail: [bbm@public3.bta.net.cn](mailto:bbm@public3.bta.net.cn)  
Web site: [www.lipman-china.com](http://www.lipman-china.com)

##### Lipman Turkey

Lipman Elektronik Ve Danışmanlık Ltd. Şti.  
İstanbul Havalimanı Serbest Bölge Şubesi  
Plaza 3, Depo Katı, No. 331  
Yeşilköy, İstanbul, TURKEY  
Tel: (90) 212 465 04 24  
Fax: (90) 212 465 04 23  
E-Mail: [hello@lipman.com.tr](mailto:hello@lipman.com.tr)  
Web site: [www.lipman.com.tr](http://www.lipman.com.tr)

##### Lipman Spain

Lopez de Hoyos 10 - Ofc. 5  
Madrid SPAIN 28006  
Tel: (34) 91 411 6292  
Fax: (34) 91 561 0417  
E-Mail: [nuritsys@lipman.es](mailto:nuritsys@lipman.es)

##### Lipman CIS

35 Miasnitskaya Street  
Moscow, RUSSIA 101959  
Tel: (7) 095 204 1082  
Fax: (7) 095 204 1080  
E-mail: [lipman@guatatelecom.ru](mailto:lipman@guatatelecom.ru)  
Web site: [www.lipman.ru](http://www.lipman.ru)

