

## Cashpower Prepayment Vending Solution



Cashpower Suprima+ is Landis+Gyr's latest generation prepayment electricity vending system designed from decades of experience in the field. Chosen by electricity utilities around the world for its robustness and scalability, Suprima+ takes advantage of modern developments in IT and communications technology and will accommodate new technologies well into the future. Suprima+ operates seamlessly with its family of Cashpower prepayment electricity meters and other STS meters, providing customers a wide choice and flexibility for a complete prepayment electricity management solution from world-leading Landis+Gyr.

### Multiple operating systems/multiple databases

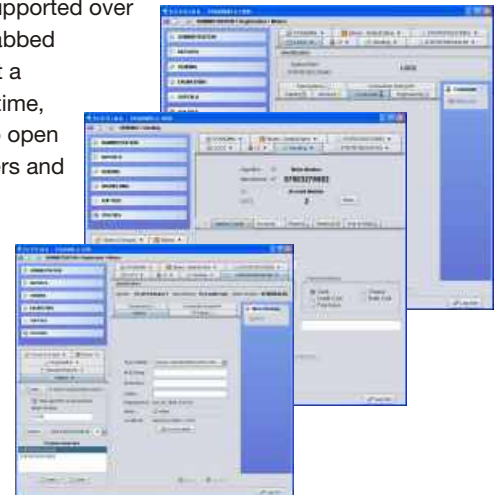
Suprima+ is an open system designed to work on a variety of operating systems and databases. Both commercial and open source systems are supported including, among others, Windows, Linux and Mac OS operating systems, and MSSQL, Oracle, MySQL and PostgreSQL database engines. The system has been designed in a totally modular fashion which facilitates complete flexibility and customisation. It can be configured in a high availability cluster to provide enterprise scalability and reliability. Online updates allow maintainability and enable system enhancements such as support for complex legislated tariff requirements, to be deployed quickly and easily from a central source. Suprima+ offers multi-threaded concurrent transaction processing, allowing background system monitoring for data integrity and operating reliability. Tasks such as report printing, consumer registration and vending credit vouchers can be performed simultaneously.

### Suprima+ Management client

Low bandwidth requirements are supported throughout Suprima+ enabling 3rd party suppliers to easily create custom interfaces into the e-Vend server. The sleek and full featured Suprima+ management interface is supported over WAN and LAN communication links, retaining its extensive range of functionality. Tabbed administration pages allow users to open multiple work pages enabling them to edit a combination of multiple meters, consumers, locations and other items at the same time, and switch between them simultaneously. The enhanced workflow enables users to open additional work pages for associated items and functions such as meters, consumers and locations, without the need to navigate menus or additional searches.

### Suprima+ e-Vend web server

Suprima+ e-Vend web server provides a real-time token vending service interface for authorised vending clients over the LAN/WAN, Intranet or Internet. Specifically designed for low bandwidth ICT network environments, e-Vend provides full token encryption capabilities without the overhead costs of local encryption hardware at the point of operation. It serves as a middle tier between the Suprima+ back-office and front-end vending clients and third party vending servers. e-Vend runs off a standard computer with no need for a database thereby enabling utilities to vend from remote offices. The server application manages any number of remote devices from a central point in the vending infrastructure. e-Vend facilitates communications between Suprima+-compatible thin-client vending terminals, which can be personal computer or point-of-sale terminal based, or based on any platform that supports HTTP communications such as smart phones, cellphones and other third party products. It supports Suprima+ e-Engineering clients, Powervend point-of-sale devices and Scratch Power scratch cards. The e-Vend server is an ideal plug-in point for all current and future technologies.



### e-Engineering Clients

The e-Engineering module allows authorised users (Suprima+ users and groups) to generate engineering vouchers such as tamper resets and clear credit vouchers over low bandwidth connections. It integrates seamlessly into an e-Vend Graphical Thin-Client application as an additional menu option. Once selected, a full range of maintenance tokens can be generated via requests to the e-Vend Server. As with all Suprima products, full user, workstation and functional permissions can be configured in the back-office right down to the maintenance token type level. In this way, the system owner can be assured that only authorised persons and workstations generate the allowed types of meter maintenance tokens.

## Powervend Point-of-Sale (POS) Terminals

Powervend II, a fixed line PSTN device, operates in on-line mode via modem dial-up whereas Powervend IIG is a mobile POS device designed for use over GPRS wireless communication networks. Both utilise the e-Vend protocol to provide on-line vending via a utility's Suprima+ e-Vend server middleware and minimal training is required to operate them. Powervend IIG is particularly attractive as the e-Vend protocol is a highly data-efficient XML (extended mark-up language) vending protocol. Powervend IIG enables a utility to set up flexible vending points that are fully mobile and cost-effective. With cellular technology utilities can broaden their vending services inexpensively and set up a non-fixed emergency vending point, enabling them to continue vending electricity should their network go down. Powervend II comprises an external power supply, integrated PSTN modem, thermal printer, swipe card reader, and is designed for stationary use.



## Scratch Power Scratch Card Solution

Landis+Gyr's scratch card system uses cellphone communication to vend electricity. For the utility it reduces the cost of making prepayment vending facilities available to the consumer and for the vendor no computer hardware or POS devices are necessary. This system also empowers the utility to sub-distribute electricity scratch card tokens to approved retailers. Scratch Power interfaces to the utility's existing system via the e-Vend server with the management taking place via a web browser interface, enabling personnel to easily manage the system via the LAN/WAN. SMS services can be utilised on the Internet as well as via locally-connected GSM modems. Scratch Power provides a prepayment vending solution for areas with GSM coverage, where no on-line vending points are available. The consumer's cellphone communicates with the Scratch Power server via the GSM network, which communicates with the e-Vend server to generate the credit transfer number which reaches the consumer via an SMS.



## Third Party Vending

Landis+Gyr has entered into agreements with companies to provide further vending opportunities for the convenience of consumers. An example is a cellphone-based solution designed to enable vendors to use their cellphones to vend electricity to users without bank accounts. This system interfaces to the Suprima+ e-Vend server for token-generation. Other vending capabilities through third party arrangements include unattended vending terminals which enable 24-hour vending and kiosks which are similar to automatic teller machines. All these systems interface to Suprima+.



## External System Interfaces

Due to its design and architecture, Suprima+ can interface to smart metering systems as well as integrate with a range of existing systems run by local authorities and power utilities such as SAP, Gentrak and PROMUN. Integration to the SAP management system offered by Landis+Gyr, permits transfer of consumer data from the SAP system into Suprima+ and transfer of transaction information from Suprima+ into SAP. This major benefit enables customers to improve their business process efficiency. Suprima+ uses an interface protocol for management functionality and vending, which allows utilities to develop their own interface clients. This means that a municipal system, such as SAP, can act as a Suprima+ client and take direct control of Suprima+.

## Hosted Vending Services

Landis+Gyr's Vending Bureau service is a cost-effective vending and management solution for small to medium sized entities such as Property Managing agents, Landlords and Body Corporates. However it's also suited to small municipalities wishing to implement a prepayment metering solution without having to invest in the vending system back-office infrastructure. Of major benefit is that Landis+Gyr manages the complex back-office and data servers leaving the entity to be concerned merely with the sale of prepayment electricity to their tenants or consumers. A number of vending options are available: Point-of-sale devices which require very basic PC literacy skills to manage the front-end of the system and connectivity to the Internet, without having to invest in costly computers or hire technical staff; Powervend POS terminals; or alternatively the convenient scratch card method which is set up by the vending bureau.

## Remote Access Solution

The Remote Access solution is one of Landis+Gyr South Africa's revolutionary developments comprising a PLC remote access terminal and back-office communications controller, known as Suprima talk. The solution enables communication by means of GPRS or Ethernet with the remote access terminal, which constantly monitors communication between the Cashpower PLC prepayment meter and its customer interface unit. This enables remote access of the meter's status and two-way communication with multiple prepayment meters. This solution has enormous benefits for the utility in that it enables remote auditing of prepayment meters, the ability to remotely check the status of the meter and obtain meter fraud notifications.