



Electrone Europe  
(a subsidiary of Electrone Americas Limited)

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## **Our Kiosk Strategy**

Electrone has been in the business of sourcing and developing special purpose components for many years. More recently we have connected several of these components to form a solution, characteristically in the PoS area. We have now moved this strategy forward to the next stage, namely the integration of processor and peripherals in an enclosure to form a kiosk.

### **The Generic Kiosk**

The design of the initial enclosure was driven by the intention to support a wide variety of peripheral devices, selected according to the business requirements of the deployer.

The upper aperture on the fascia is designed to accept a seventeen inch touch screen LCD device or, through the use of coordinated plating, smaller screens or displays and key boards or pin pads. A receipt printer may also be configured on the upper surface of the enclosure which is angled to provide ease of vision and access to the selected peripheral devices.



The lower aperture accommodates a range of 'reader' devices including bar code, optical characters and plastic card. There is also additional depth behind the lower surface and this may be used to accommodate currency note receptors and receipt and/or full width printers. Printers may be laser, dot matrix or thermal, according to the nature of the required application.

The upper section of the enclosure includes an illuminated "topper" section, which displays the user's branding.

This basic enclosure is a low-cost metal cabinet, securely lockable and hinged to provide front or rear access for service, replenishment of consumable supplies and removal of accepted currency.

For the user requiring more sophisticated design, Electrone will work with designers to accommodate ideas and requirements and by configuring metal rather than plastic keyboards and pin pads.

### **The Functional Kiosk**

In configuring the kiosk to the business needs of the deployer, Electrone will analyse the precise requirements to determine the idea mix of peripheral devices to support the application.

The following summaries indicate some of the required functions to support operation of kiosks in the areas of most frequent use. Individual requirements may drive the inclusion of additional peripheral devices or the connection of other machinery to the kiosk



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### The Payment Kiosk

Acceptance of payments is one of the areas of widest use of kiosks and one which can deliver dramatic benefits in terms of customer convenience and cost effectiveness, especially where large numbers of customers are involved and direct debit is not widely used.

Initiation of a transaction will involve the entry of identifying data relating to the bill that has to be paid. This may be direct, where the details of the bill are read in summary by bar code or optical characters printed on the bill itself, or indirect, where the identifying data defines the customer and where details of the bill are retrieved from a database held in the supplier's computer system. Indirect data may include a number which uniquely identifies a customer or account number and which drives retrieval of the current bill from the database and displays it on the screen of the kiosk.

Entry of the identifying data may be through the keyboard or pin pad or through the reading of a magnetic card (magnetic stripe or chip). The card may be issued by provider of the service to be paid for, or issued by a third party, such as a bank, where the relationship between the detail on the card and the utilised service has been predefined. Where a plastic card is used, this may or may not be linked to the use of a PIN entry.

Once the detail of the bill to be paid is displayed on the screen, the customer will decide how to pay it and how much to pay. This process will take place through the use of on screen displays and either on-screen "touch" areas or a keyboard.

The next stage is the actual process of payment, which may take place through the use of a plastic payment card or the submission of cash in the form of currency notes. Where a payment card is used for identification purposes and the PIN has been entered, the payment will take the form of a request for authorisation which will be either accepted or declined on

- |                            |
|----------------------------|
| Payment Kiosk Configurator |
| <b>Input Options</b>       |
| Card Reader                |
| Card Read-Writer           |
| Pin Pad                    |
| Touch Screen               |
| Keyboard                   |
| Note Acceptor              |
| Internet Access            |
| <b>Output Options</b>      |
| Card Read-Writer           |
| Touch Screen               |
| Receipt Printer            |
| A4 Printer                 |
| Internet Access            |
| Voice Speaker              |

the basis of the usual banking criteria. Where payment is in the form of cash, a value of notes equivalent to the amount to be paid will be fed into the note acceptor. Depending on the model of acceptor, the notes will be submitted individually or in a single batch. The note acceptor will accept or reject notes according defined criteria and, if notes are rejected, the customer will be invited add further notes or to truncate the payment at the value of notes accepted.

Over or under-payment may be accepted and dealt with according to the agreement between the customer and the service provider.

On completion of the process, the kiosk will forward payment details to the service provider's database and issue a receipt defining all details of the transaction. Where a bank card is used, transaction details will also be sent to the bank.

Although it is feasible to provide the facility to dispense notes and/or coins as "change" for cash payment, this is not considered a practical process as it requires the kiosk to be equipped to dispense and to store significant values of currency in the form of notes of different values. This raises issues of terminal cost-effectiveness, of security



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and of conflict of interest with banks, as such a kiosk is, in effect, an Automatic Teller Machine (ATM).

### The Check-in Kiosk

The “check-in” process usually takes place in the context of the take-up of pre-reserved and possibly pre-paid “accommodation”. This may be a hotel room, a seat on a train, aircraft or other transport service or in a cinema, theatre or entertainment or sporting event.

Initiation of the check-in transaction requires the initial identification of the customer or the reservation in order to support retrieval of the details from the online database. This is most frequently done by the reading of the payment card to which the reservation was charged, or the loyalty card linking the customer to the service provider.

In principle, a keyboard or touch screen might be used to enable the customer to enter the reservation number, but this forces the need for entry of further data to ensure that the reservation is taken up by the person who made it in the first instance.

The check in process may also be extended to include the collection of additional information from the customer, notably where this has been incomplete at the time of reservation. A full keyboard or formatted touch screen will be used to support this process. Where pre-payment or authorisation has not been taken, the customer may go through an automated PoS transaction service using the protocol required by the banks. In some cases, the check in process may take place against an authorisation with payment taking place after the service has been delivered: ie at check-out.

Check-in Kiosk Configurator	
	Input Options
	Card Reader
	Card Read-Writer
	Pin Pad
	Touch Screen
	Keyboard
	Internet Access
	Output Options
	Card Read-Writer
	Touch Screen
	Receipt Printer
	A4 Printer
	Internet Access
	Voice Speaker

The completion of the check-in process will involve the issue to the customer of the items needed to enable the customer to take possession of the reserved service. This may be as little as a formatted receipt with a seat number but it may also include additional media items such as boarding cards or encoded plastic key cards.

Clearly, interface to the online database(s) represents an integral part of the “check-in” solution and one which will distinguish between the various services for which reservation has taken place.

### The Internet Shopping/Multi Media Kiosk

Many people either do not have their own PC systems or want to access online services at times and in locations when they are away from their own machines.

Internet shopping outlets may also wish to provide access to their shelf stock in environments, notably retail malls, where “shopping” takes place in the traditional way. Shoppers may wish to interrogate online “stores” to compare prices and availability of colours and sizes which may not be available in the mall, or they may wish to take advantage of the delivery services rather than to carry heavy and awkward bags around with them. Indeed, online shopping in



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such circumstances might be as valuable a service to physical store operators as it is to “virtual” shops.

The operating functions of the online shopping/multi media kiosk are essentially those of most home computers although the touch screen probably obviates the need for the full keyboard. As payment can be made by bank transfer or by a transaction built on the touch screen, the inclusion of the card reader into the configuration is essentially optional although, if the kiosk is also to be used for other functions: to accept payments, for example: an enhanced configuration will be needed. If the online shopping service is to include the search for and download of large media files, such as music for ipods and MP3 players, or movies for DVD, an appropriate media writer, normally a DVD writer, must be configured.

On-line Shopping Kiosk	
	Input Options
	Card Reader
	Touch Screen
	Internet Access
	Output Options
	Touch Screen
	Receipt Printer
	A4 Printer
	Internet Access
	Voice Speaker

The online shopper approaches the kiosk and either selects an onscreen sponsored site or uses the touch keys to enter the address of another site. Once access to the required site has been made, the shopper may browse the available items or select something for purchase. The purchase may take the form of physical goods or of a software download (provided that the kiosk is configured for this multi media operation. According to the processes defined for operation of the site, the shopper may select purchases, make payment and define delivery instructions.

On conclusion of the transaction, the shopper will receive a printed A4 page indicating confirmation of the details of the purchase, the payment and the delivery instructions.

The deployer will determine how payment for the operation of the kiosk is going to be made. A “free” service may be provided on the basis of funding by a restricted number of “sponsoring” sites who either pre-pay for the presence of links to their addresses on the welcome screen or who pay a commission on the sales generated through the kiosk (or a combination of the two). A chargeable service could be based on the duration of the online session based on a transaction by credit card or through a currency note acceptor.

**Digital Signage** (Advertising, Maps and Store Directories)

Digital signage is based on the provision of a multi media service made up, essentially, of high quality graphics and sound. Interactive facilities will be used where the kiosk is operating as a store/mall directory and map.

A typical interactive session involves a customer selecting the category of facility required: sports supply store, supermarket, ladies fashion store, restaurant, etc: with the kiosk responding with the locations of outlets in the required category highlighted on the store map.

Advertising could feature offers and incentives available from specific outlets and promote goods and services. Alternatively a shopper might select a particular advertiser and browse, and perhaps buy, available goods. Where advertising is a major function of the

Digital Signage	
	Input Options
	Touch Screen
	Output Options
	Touch Screen
	High Resolution Screen
	Voice Speaker
	Receipt Printer



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kiosk and/or where maps and store directories are managed, an ideal configuration could include the addition of a large, high resolution graphics screen as a “topper”, with interaction between customer and kiosk taking place through the touch screen located on the user’s comfortable eye-line and directions, for example, highlighted on mall maps shown on the high resolution screen, complemented with supporting voiced direction hints.

A receipt printer could be used to generate vouchers supporting advertised offers or to confirm transactions such as restaurant reservations made through the kiosk.

### **The Vending Kiosk**

Virtually any configuration of kiosk may be used in conjunction with a separate mechanical vending device to support payment and dispense of a selected product. This combination of two separate but interfaced units enables the seller to obtain payment for high value items, through cash or payment card, and to dispense the item from a suitably controlled environment.

In this way, we envisage that perishable foodstuffs could be presented from a refrigerated environment while flowers, for example, could be presented from cool but humid conditions.

### **Software**

Functional application software defines the operating processes and controls under which our kiosks operate. While the operation of kiosks includes common usage routines which define particular processes, such as payments against bank cards, where operation must be according to defined standards, application software and the associated graphics provides the kiosk with its “branded” user interface, with screen formats and printed formats carrying a common “look and feel” characteristic of the brand of the kiosk deployer and of the brands representing the products and services offered through the kiosk.

Software may be developed independently or by us, through the services of our software partner: a world leader in the development of application software for ATMs and financial transaction processing.

The operating environment of the kiosk may be based on either MicroSoft Windows or LINUX.

Certain kiosk configurations, which include devices for which the appropriate drivers are available, may execute application software developed according to CEN XFS standards. Such software enables the deployer to reconfigure some components of the kiosk by replacing these with other similar components of slightly different specifications without change to the application. The kiosk network may also be incremented with kiosks sourced elsewhere, provided that components are supported by CEN XFS drivers. This effectively provides support for operation of a multi vendor kiosk network. CEN XFS operates in an MS Windows environment.

### **Branding**

A network of kiosks represents a first class opportunity for the deployer to implement features which will enhance his brand and which will draw his customers to his kiosks.



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Kiosks throughout the network will carry a common design of on-screen images and graphics which enhance the brands of the deployer and of the featured products and services. The enclosure design can be re-worked to reflect the style and colours which represent the network and which accommodate specific requirements, such as the large, high definition graphics screen featured as a “topper” on kiosks configured for digital signage and advertising.

Where payment terminals are not in use by customers, screens are used to display messages and graphics which promote the products and services offered by deployer.

### **The Business Case**

While it is impossible to generalise, the commercial case of terminals can be based on the answers to several key questions, each of which should have an associated value:

- ❖ Will the kiosk provide incremental opportunities to serve or access customers?
- ❖ Will the kiosk deliver services which would otherwise be delivered by staff located in business premises, thereby reducing the deployer’s operating costs?
- ❖ Will customers pay to use the services at the kiosk?
- ❖ Will advertisers pay to use the features of the kiosks?
- ❖ Will customers take positive action to respond to advertised offers, such as coupons?  
If so, advertisers will place a higher value on the features of the kiosk.
- ❖ Will owners of featured web sites pay for links to their sites?
- ❖ Will featured sites pay a commission of sales made through the kiosk?
- ❖ Will the kiosk provide services which will enhance the performance of the traditional outlets of the deployer or the advertiser

Completion of the business case involves the allocation of kiosk and software costs, site rentals, communication costs and the costs of regular servicing against the potential revenue stream generated at the kiosk.

### **Electrone’s Services**

Electrone’s proposal will support the deployer’s business plans by including configuration and design of the kiosk in according with application and branding requirements and by developing the required application software. We will also assist in the preparation of the business case.