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**SMART ENCODING DESCRIPTION  
FOR THE MAGICARD**

**PRONTO,  
ENDURO,  
RIO PRO,  
PRINTER FAMILY**

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## Amendment Control

Amendments to this document will be made on agreement with the designated authorisers.

## Amendment Record

Issue/ Amend No	Section / Page	Change Details	Incorporated	
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1.00		Initial Release	JH	27/01/2011
1.01	2./p 4	Added MagAPI.dll file location data	JH	16/02/2011
1.02	4./p7	Updated links to latest API docs. Added Appendix E (example application links)	JH	24/06/2011
1.03	4./p7	Updated Appendix B – changed the download from just API documentation to all API files (including dll, def, lib and hdr files)	JH	11/01/2012

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## 1. Purpose of the API's

- 1.1 The purpose of the Magicard API is to allow applications to synchronize their operations with the operation of the printer.
- 1.2 It provides functions to enable placement of cards in the correct position for contact and contactless chip encoding and to eject cards from the printer.
- 1.3 It also provides feedback to the application to confirm completion of the above operations.
  - It is important to note that the API's cannot be used to send encoding or print data to the printer – the API's are intended to be used only to position the card within the smart chip encoder.

## 2. API File

- 2.1 The API itself can be used by loading the MagAPI.dll file. A 'C' header file and a .def file are provided.
- 2.2 The MagAPI.dll file is loaded automatically during printer driver installation to the following locations :-
  - XP & Vista (32 bit) - C:\Windows\System32
  - XP & Vista (64 bit) - C:\Windows\SysWOW64
  - Windows 7 (32 bit) - C:\Windows\System32
  - Windows 7 (64 bit) - C:\Windows\SysWOW64

## 3. Smart Encoding process

- 3.1 For each encoding/print job, the following 5 step process should be performed :-
  - Note: also see the flow chart in **Appendix A** below

**STEP 1** : The 3<sup>rd</sup> party software should use the Magicard APIs to control the card positioning into the encoder.

- Note: see **Appendix B** below for details of the Magicard APIs.



**STEP 2** : The 3<sup>rd</sup> party software should then communicate with the encoder using the encoder's own driver files. All reading and writing to the card should be carried out at this stage.

- Note: The factory fitted smart encoder in the Pronto, Enduro and Rio Pro printers is an Omnikey 5321 encoder - see **Appendix C** below for details of the 5321 driver files.



**STEP 3** : Once encoding is complete, the 3<sup>rd</sup> party software should send the image to be printed - via the Magicard printer driver and Windows spooler.

- Note: see **Appendix D** below for details of the Magicard driver files.



**STEP 4** : When the printer receives the image data from the spooler it will automatically:-

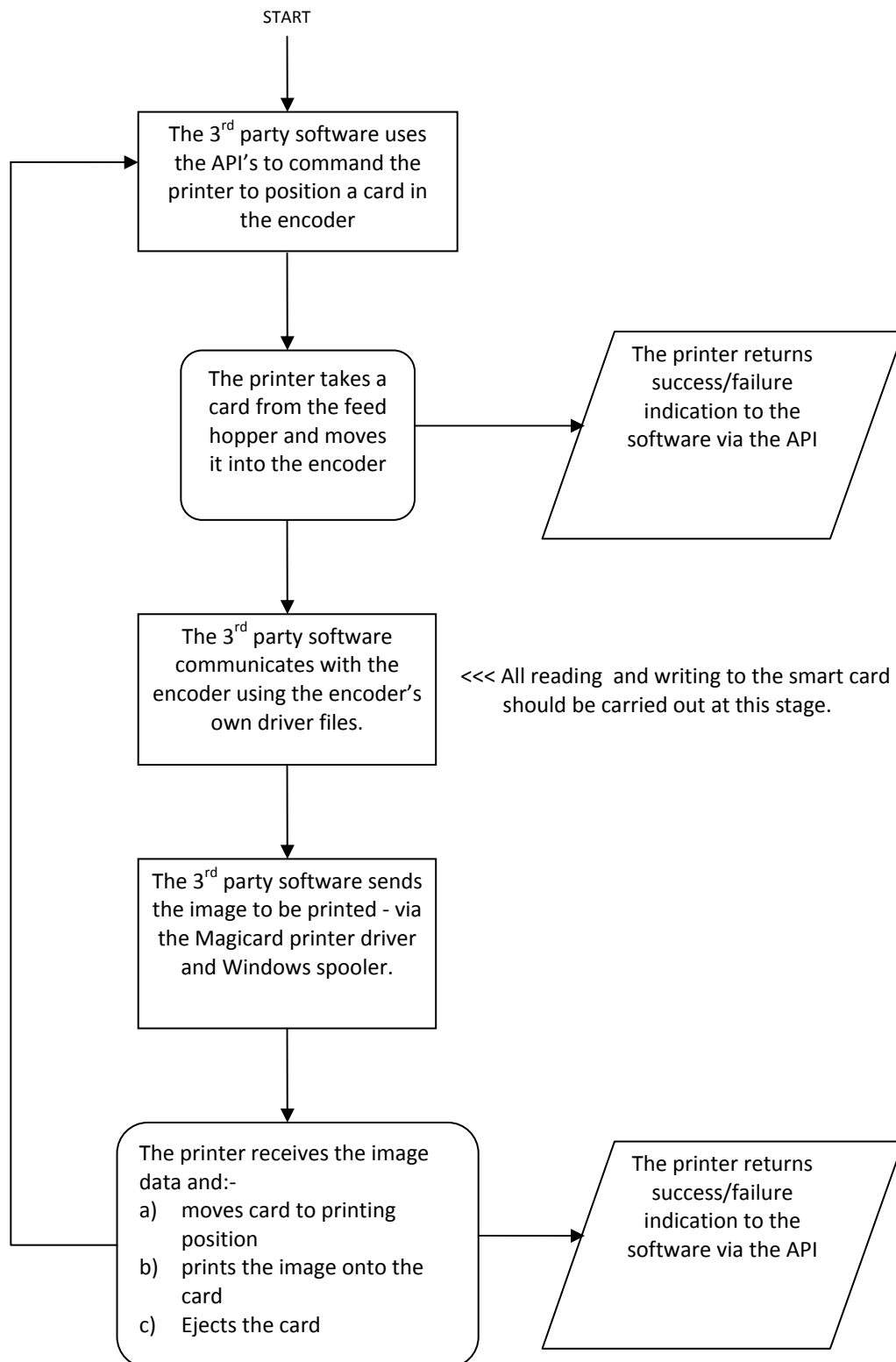
- a) move the card from the encoding position to the printing position
- b) print the image onto the card
- c) when printing is complete, the card will be ejected from the printer



**STEP 5** : The 3<sup>rd</sup> party software should then use the API to position the next card into the encoder, and so on.

## Appendix A:

### Process flow chart:



## Appendix B:

### Magicard API files download:

The latest Magicard API files - including dll, definition, header and library files, and a developer's guide (Magicard API.pdf), can be found in :-

- the UltraDriver CD shipped with every printer  
(in the D:\ AutoPlay\Docs\Developer Information folder)
- our website at:

[http://www.ultramagicard.com/fileadmin/inc/support\\_scripts\\_en/printers/files/magicard\\_api\\_files.zip](http://www.ultramagicard.com/fileadmin/inc/support_scripts_en/printers/files/magicard_api_files.zip)

## Appendix C:

### Omnikey 5321 Encoder downloads:

All information on this encoder can be found on HID's website at:

[http://www.hidglobal.com/prod\\_detail.php?prod\\_id=171](http://www.hidglobal.com/prod_detail.php?prod_id=171)

The most up-to-date drivers for this encoder can be downloaded from:

[http://www.hidglobal.com/driverDownloads.php?techCat=19&prod\\_id=171](http://www.hidglobal.com/driverDownloads.php?techCat=19&prod_id=171)

## Appendix D:

### Magicard printer drivers downloads:

The most up-to-date drivers for the Magicard printers can be downloaded from our website at:-

- Pronto: <http://www.ultramagicard.com/technical-support/pronto/drivers/>
- Enduro: <http://www.ultramagicard.com/technical-support/enduro/drivers/>
- Rio Pro: <http://www.ultramagicard.com/technical-support/rio-pro/drivers/>
- Note: A printer must be connected to the PC USB port in order to complete the USB driver installation.

## Appendix E:

### Example application download:

An example application (with source code) can be downloaded from our website at:-

[http://www.ultramagicard.com/fileadmin/inc/support\\_scripts\\_en/printers/files/api\\_example\\_app\\_&\\_source.zip](http://www.ultramagicard.com/fileadmin/inc/support_scripts_en/printers/files/api_example_app_&_source.zip)