

Integra®

*integrated personalisation,
integrated security*



Integra® defines Euclid's card construction - designed and developed specifically for the secure smart / identity card market. The construction of the card comprises multiple layers, typically 4 or 5, similar to a financial card. However, the card design and personalised data is 'integrated' into the process - leading to the product name Integra®.

Integra® offers major advantages over traditional dye

diffusion, thermal transfer (D2T2) technology. This latter technology applies the variable text to the surface of the fully-formed card and 'protects' it with a very thin (6 to 10 microns) overlay - which is effectively nothing more than a varnish. This covering is easily worn, leading to early life rejection. The construction can be tampered with, increasing risk of fraudulence - many proprietary solvents will remove the image, enabling

the resultant blank card to be re-printed with false data.

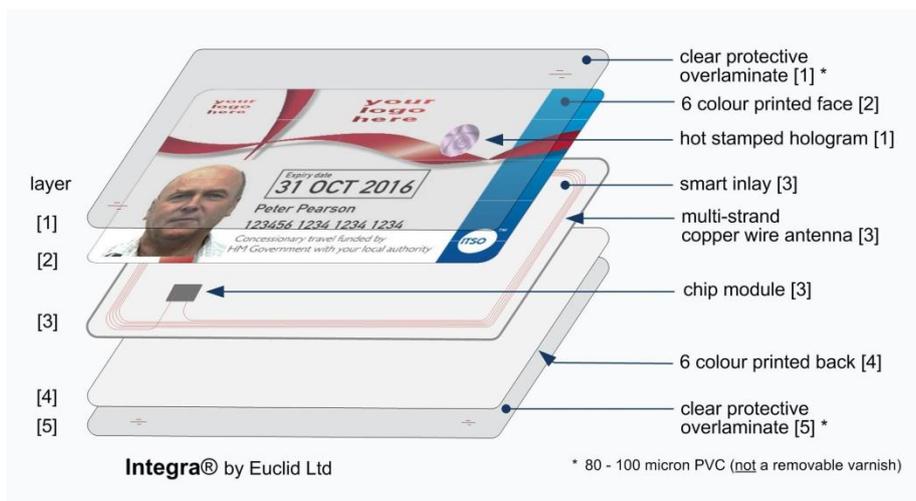
Integra®, however, offers an 80 - 100 micron, heat bonded, transparent, PVC over-laminate to protect the print data (including photo) from wear-and-tear. This also creates a tamper-evident shield which can be further protected with various industry-proven security devices.

Personalisation

Euclid Integra® ID cards are printed double-sided, full-bleed at 2500 dpi, using a six-colour process. The inks are lightfast and provide high quality reproduction. Integra® cards have been tested by

industry organisations and proven to be ideal for security ID purposes of up to 6 years. Cards are printed 21 up on plain sheets of specially formulated PVC which are fed into high specification,

industrial digital printers. Both the personalisation data and the background images are laid down in a single pass. The reverses are printed in a similar manner.



integrated personalisation

Production

The construction of Integra® involves bonding of the multiple sheets using heat / pressure in a lamination process. The resultant homogenous sheets are then automatically punched into separate cards upon which further process may be included - holograms,

signature stripes, etc. Encoding of the smart product (chips) is carried out in an automated environment. Magnetic stripe can be included within the product, simply by using pre-placed magnetic tape on the reverse over-laminate.

Euclid can produce upwards of 30,000 cards per 8 hr. shift.

Integra® is manufactured in accordance with ISO 7810, Identification Cards (physical characteristics) and ISO 14443, Identification Cards (contact-less integrated circuit cards).

Environment / Security

The Integra® process starts with plain white, PVC sheets: there is no pre-printed stock to manage or store, ergo no security headache. The process is

extremely efficient, outputting very little waste, none of it toxic. What waste is produced is recycled into low value, domestic commodity.

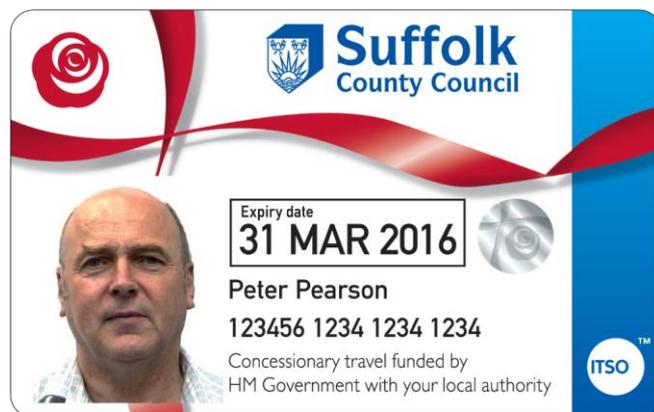
Holograms, signature stripes or hot stamped foil features can be applied to the card after final construction. The product can be embossed.

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Integra® provides a cost-effective base for all ID and smart card programmes. The card is both secure and robust with long-life expectancy. It provides a high level of anti-fraud and counterfeit measures.

The construction methodology for Integra® involves "print on demand". This means that there are none of the security issues associated with storage and tracking of pre-printed blanks, no stock write off at end of scheme life. Additionally, the card design

and any security features can be regularly 'ever-greened'.



Euclid Limited, registered in 1988, specialises in the manufacture of smart / ID cards and their systems. Its high volume manufacturing and encoding processes are based upon experience gained across national ID / driving licence projects. Having worked in the international market for many years, the company has focused since 2003 on secure smart / ID card technologies from data capture through to card production and fulfilment. Euclid Limited is certified to ISO 9001, ISO 14001 and ISO 27001.



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