

# Smart Certificate



## What is Smart Certificate?



Smart Certificate is an innovative certificate embedded with a tamper-proof chip. The digital chip contains the information about the recipient's details, the organization's details and the digitally encrypted signature of the certificate issuing authority.

This solution gives more reliable, robust, secure and tamper-proof physical certificate and uses Passive RFID, High frequency (13.56 MHz) and biometric Fingerprint technologies.

### The Smart Certificate solution encompasses:

- ❖ Capturing and storing photograph, signature and fingerprint credentials of the students
- ❖ Personalization of RFID-Chip embedded in the Smart Certificate with certificate holder's personal details, degree details (in case of a student) and fingerprint credentials
- ❖ Printing of Static (Issuer details) and Variable (Certificate and holder details) data on the Smart Certificate
- ❖ Maintenance and update of the back-end database
- ❖ Provision for cancellation or issuing duplicate Smart Certificate
- ❖ Provision for Enquiry, Monitoring and Reporting
- ❖ Provision for Verification and Authentication of the issued Smart Certificate by any third party agencies like prospective employers etc.

### The 'Smart' Features:

- ❖ Embedded RFID Chip inside the certificate
- ❖ Chip with 13.56 MHz frequency & ISO 14443 A standards
- ❖ 4 Kilo Bytes of Memory inside the chip
- ❖ User information along with two fingerprint credentials can be stored in the chip
- ❖ 100% read accuracy
- ❖ More secure & reliable



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## Advantages of Smart Certificate:

- ❖ More robust verification mechanism (even compared to Holograms) to establish the authenticity of the certificate
- ❖ Absolute foolproof way to verify the identity of the rightful holder of the certificate using proven fingerprint and secure Smart Card technologies
- ❖ Tamper-proof and robust due to its Contact-less nature & globally unique ID of the embedded RFID-Chip
- ❖ Authentic information embedded in the degree certificates
- ❖ Easy access to information
- ❖ Identification of false or forged degree certificates
- ❖ Impersonation of verification process completely ruled out
- ❖ It will be a work to be reckoned towards appreciation for issuing authorities, besides being an easy verification process
- ❖ Implicit added-value for the certification and a measure against the so-called defamation of the certifying institution
- ❖ A yardstick to differentiate between the Right Talent and the Copycats
- ❖ Protects the country's reputation & credibility globally and value-based education system
- ❖ All higher valued certifications in terms of complexity, efforts to achieve and social contribution shall be made mandatory to use the Smart Certificate solution by relevant authorities
- ❖ Elimination of malpractices in all domains

## Hardware Specifications:

- ❖ Finger Sensor: Large area optical sensor, 22mm X 18mm
- ❖ Sensor Resolution: 500 DPI
- ❖ Matching Method: 1:1
- ❖ Communication: RS232, USB
- ❖ RFID Tag: ISO 14443A MiFare or 4KB can be configured for CSN
- ❖ Easy LED instructions
- ❖ Compact, Rugged & Elegant design
- ❖ RFID reader operating frequency 13.56 MHz
- ❖ Read range maximum of 80mm
- ❖ Data transfer rate of IC inside the tag 106 Kb/ sec

## Application Areas:

- ❖ University Certificates
- ❖ High valued short-term course certificates
- ❖ Life Insurance certificates
- ❖ Highly secured Defence & Government certificates
- ❖ Registration certificates
- ❖ Certificates of Appreciation / Achievement



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