

A) Technical Specifications for Mifare 4K Smart Card (Pre Printed card)

User Dept: General OPD, Pvt. OPD, Preventive oncology

Parameter	Functionality
Card Type	Contactless
Technology	Mifare classic compliance with ISO 14443 Type A upto layer 3.
Memory	4Kb EEPROM Memory, organized in 32 sectors of 4 blocks and 8 sectors of 16 blocks (one block consists of 16 byte)
Chip Type	NXP Semiconductors Mifare Classic
Typical Transaction Time	100 milliseconds
Operating Distance	Up to 100mm depending on Reader and Antenna
Authentication Mechanism	Mutual three pass authentication
Operating Frequency	13.56 MHz
Data transfer rates	Up to 106 kb/s
Anti-collision	Anti-collision feature of handling multiple cards in the reader field
Security	Individual set of two keys per sector to support multi-application with key hierarchy
Endurance	Data Retention for 10 years and Write endurance of 100000 cycles
Operating Temperature	-20 to 70 deg Celsius
Operating Humidity	5 to 95% RH, non-condensing
Certification	ISO Certified and tested as per Mifare standard during card manufacturing(Mifare Certification)
Pre-printed	Logo & details on the front side & instruction /details on the back side (Sample will be Provided by TMH)

B) Technical Specifications for Mifare 4K Smart Card (Plain card)

User Dept: HRD Dept.

Parameter	Functionality
Card Type	Contactless
Technology	Mifare classic compliance with ISO 14443 Type A upto layer 3.
Memory	4Kb EEPROM Memory, organized in 32 sectors of 4 blocks and 8 sectors of 16 blocks (one block consists of 16 byte)
Chip Type	NXP Semiconductors Mifare Classic
Typical Transaction Time	100 milliseconds
Operating Distance	Up to 100mm depending on Reader and Antenna
Authentication Mechanism	Mutual three pass authentication
Operating Frequency	13.56 MHz
Data transfer rates	Up to 106 kb/s
Anti-collision	Anti-collision feature of handling multiple cards in the reader field
Security	Individual set of two keys per sector to support multi-application with key hierarchy
Endurance	Data Retention for 10 years and Write endurance of 100000 cycles
Operating Temperature	-20 to 70 deg Celsius
Operating Humidity	5 to 95% RH, non-condensing
Certification	ISO Certified and tested as per Mifare standard during card manufacturing(Mifare Certification)