

# FM220UL1 Fingerprint Reader



- > UIDAI Approved L1 authentication Device for Aadhaar
  - > STQC Certified Single Finger Scanner
  - > BIS Registration No. : R-72003948  
Confirming to IS 13252(PART I):2010 + A1:2013 A2:2015/IEC 60950-1:2005 + A1:2009 + A2:2013
  - > Device as per MOSIP L1 and UIDAI L1 specs, having Pre certified Renesas Controller.
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- > Every device having a unique identifier allowing traceability, analytics, and fraud management. every device having a unique identifier allowing traceability, analytics, and fraud management.
  - > Biometric data is signed within the device using the device key to insure it is indeed captured live. Then the Registered Device (RD) Service of the device provider must form the encrypted PID block before returning to the host application.
  - > This RD Service (exposed via Service interface defined in this spec) encapsulates the biometric capture, any user experience while capture (such as preview) and signing and encryption of biometrics all within it.
  - > All of the processes related to create a biometric PID block is executed within the TEE
  - > Small template size, ISO & PIV, BIS approved.
  - > The reader is totally shock proof, for accidental falls from table.
  - > Suitably protected against dust and water ingress, IP54
  - > Having Secure boot, Encryption in trust zone, FTM Supported Security

Security Parameters	Specification
Crypto operation	: Hardware base RSA2048 Key Generation, AES GCM-256, SHA-256, TRNG support
Secure Memory	: TEE support by the device. Secure memory support key wrapping feature
Secure Boot	: Secure boot support by the device



<b>Sensors</b>	Optical
<b>Image Resolution</b>	500 dpi (H), 500 dpi (V)
<b>Image Capture Area</b>	15.44 x 17.475 (mm)
<b>Platen Area</b>	16.5x19 (in mm) (HxV)
<b>Scanner Output image Size/Native</b>	304 x 344 pixel (HxV)
<b>Gray Level</b>	8 bit/pixel, max 256 gray scales
<b>Dimension</b>	80mm(L) x 41mm(M)x40mm(H)
<b>Weight</b>	100g (approx)
<b>Distortion</b>	<1% Meeting PIV specifications
<b>Operating Temperature, ESD</b>	-50~45OC, 10 KV
<b>MTBF</b>	>100000 operation hours
<b>Scanning Light source</b>	Ultra Red (940nm) capable of support more than 600 dpi
<b>Connectivity</b>	USB (Type - C, Micro USB, Type-A) Serial Port (Rs232, Bluetooth)
<b>Standards</b>	ISO 19794-2, ISO 19794-4, FIPS 201* Compliant, Minex-III
<b>Image</b>	Supporting JPEG 2000 lossless, ISO, PIV WSQ (Compression 10:1)
<b>Supported Operating Systems</b>	Windows, Android and Linux Supported



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