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Registration Kit Specifications

Version 2.0

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Registration Device Specifications

General Considerations:

- i) The device(s) must be **MOSIP SBI 1.0** Compliant
- ii) The vendor must provide Registration client side MDS for the devices to work in the Fayda / MOSIP ecosystem.
- iii) All devices should work **without** a device management server.

Biometric Registration Kit Specifications

#	Item	Short Description
1	Carrying Case with battery	<ul style="list-style-type: none"> ● Waterproof, dust proof, crash Protective, rugged, non-slip exterior. Packed in IP65 and above rated case. ● Ventilated and Aerated Case to facilitate battery charging inside the case. ● Lockable with external lock ● Case should come with handles and wheels like a suitcase ● Backpack or better transport options are a plus ● A trolley case with wheels is also acceptable. ● A shoulder hanger will also a good option ● A Carrying Case which holds all the components in it is a plus. ● Should accommodate all components and cables of the registration kit <ul style="list-style-type: none"> ○ Critical components may be operated within the case with minimal efforts to setup and operate ● 2 meter power extension cord with 2 pin (type E compatible for 220/230v) outlet ● Power cord embeddable within the carrying case during transportation is a plus
2	Laptop	<ul style="list-style-type: none"> ● Intel Core i5 11th generation equivalent or above, 16GB DDR4 3200MHz RAM, 512GB SSD (M.2 PCIe) Storage or better specifications ● With Windows 11 Home license, 64-bit, English or better specifications ● Screen size should be between 14" and 15.6" inch ● Hardware based- Anti-Theft Lock ● Inbuilt touchpad and Qwerty Keyboard ● External wired USB mouse ● External wired QWERTY Keyboard with size not more than the size of inbuilt keyboard. ● Minimum 2 (two) USB 3.0 ports and 1 (one) USB 2.0 or higher ports should be provided. Additional connector/hub to be provided to connect all the components, as required. ● Speakers are not mandatory ● Wi-Fi (IEEE 802.11 b/g/n) and Ethernet RJ45 connectivity (both embedded) ● Built-in Trusted Platform Module (TPM 2) ● 8 hours battery life of the inbuilt battery of the laptop. ● Pre-Installed Anti-Virus/ Malware software with latest updates & ability to update virus definitions. 3 years of license from date of installation & operationalisation of registration kits.

		<ul style="list-style-type: none"> ● A secondary screen: <ul style="list-style-type: none"> ○ Connected to laptop as an accessory to allow the registrant to see his/her information ○ Detachable, adjustable, 16:9 aspect ratio, 1080p, full Colored HD ○ Screen size between 10” and 14”
3	Fingerprint Scanner	<ul style="list-style-type: none"> ● 4+4+2 model ● Compliant with specifications mentioned in Fingerprint Scanner ● USB 2.0 or above is acceptable for the fingerprint scanner.
4	IRIS Scanner	<ul style="list-style-type: none"> ● Simultaneous dual Capture ● Eye Reversible Protection (Firmware level) ● Binocular device ● Pluggable device with no requirement of unplugging when placed in the carrying case ● Compliant with specifications mentioned in Iris Scanner Specifications
5	Photo Camera with LED	<ul style="list-style-type: none"> ● HD 1080p Photo and Video Quality with USB connectivity ● An LED setup with reflections, shadows and one that makes the face look flat should be avoided Must be a separate pluggable device. ● Compliant with specifications mentioned in Face Capture Scanner Specifications
6	Backdrop Screen	<ul style="list-style-type: none"> ● Wrinkle-free, durable fabric, and washable with adjustable stand and/or attachable to a chair/wall to act as background for taking face photograph ● 80 cm (width) x 120 cm (height), rectangular, circular or oval in the shape ● Colour must be either white or light grey usable for indoor and outdoor use ● Foldable. ● If it fits inside the carrying case, it is a plus
7	Portable Document Scanner	<ul style="list-style-type: none"> ● Resolution ≥ 5MP and ≥ 600 dpi ● High Definition – Autofocus capability ● Scan documents up to A4 size a ● Engraved Guiding markings on the document holder to facilitate proper scanning ● LED flashlight integrated with the scanner ● USB 2.0 or higher ● Scan speed should be less than one (1) second ● Compatible with the operating system of the computer
8	Portable Monochrome Printer	<ul style="list-style-type: none"> ● Monochrome ● Printing Speed ISO/IEC 24734 for thermal paper, not mandatory ● USB 2.0 or higher. ● A6 rolled thermal paper printer ● Minimum 8 pages per minute (ppm) ● Compatible with the operating system of the computer
9	Battery Pack	<ul style="list-style-type: none"> ● Portable, High-Capacity battery pack (to support minimum 8 hours of operation of the registration kit including all components) ● Chargeable while in use. ● Should be fitted within the carrying case. ● While ease of swapping battery pack is a plus, hot swappable batteries are not a mandatory requirement.
10	Weight	<ul style="list-style-type: none"> ● Total weight of carrying case, including all necessary components packed inside, must be less than 20Kg

11	GPS Device	<ul style="list-style-type: none"> • Embedded GPS device within the laptop for location tracking • <3 m precision
12	MOSIP Compliance	<ul style="list-style-type: none"> • Devices must be compliant with MOSIP SBI 1.0 specifications.

Fingerprint Scanner

#	Factor	Registration Device Specification
1	Image Specification	FBI Appendix F Certified; and Compliant with ISO/IEC 19794-4:2011;
2	Minimum Resolution	>= 500 native DPI. Higher densities are preferred.
3	Minimum Active Platen Area or Capture area*	FAP 60 >=(76mm x 80mm)
4	Greyscale Density	8 bits (256 grey levels)
5	Image Format	JPEG 2000 Lossless
6	Compression Ratio	Lossless
7	Quality Score	NFIQ v2.0
8	Capture Mode	<p>Live auto capture with built-in quality check (NFIQ – NIST Fingerprint Image Quality)</p> <p>Slap segmentation and sequence detection</p> <p>Automatic left-right hand and two-thumb-detection</p> <p>Liveness detection</p> <p>Embedded capture quality feedback indicator lights are a plus</p>
9	Preview	> 3 FPS M-JPEG frames with NFIQ 2.0 score superimposed
10	ESD	>= 8kv
11	EMC Compliance	FCC class A or equivalent
12	Operating Temperature	0 to 50 °C
13	FTM	SBI CL 1.0

14	Connectivity	USB 2.0 or above
15	Power	USB
16	Software API	Compliant with the OS, registration client application to handle device discovery, streaming and capture, and with MOSIP Specification version v0.9.5
17	Durability/ Shock	IP 65
18	Humidity	10-90% non-condensing

Iris Scanner

#	Item	Short Description	Compliance status: Yes/No (specify, if not compliant)
1	Image Specification	Standards: Compliant ANSI NIST and ISO image interchange format ISO/IEC 19794-6 (output iris image) ISO/IEC 29794-6 (quality of the image) FCC Class A or FCC class B RoHS Exempt Group as per IEC 62471:2006-07 (eye safety)	
2	Minimum Iris Diameter	>=210 pixels	
3	Greyscale Density	8 bits (256 grey levels) minimum	
4	Spatial Resolution	>=60% @ 2Lp/mm	
5	Pixel Resolution	>10 pixels/mm	
6	Capture Distance	>=10CM	
7	Imaging Wavelength	Approximately 700-900 nm	
8	Illumination	The eye should be illuminated using infrared or any other source that could produce high-quality gray scale image	

9	Image Format	IMAGE_TYPE_VGA (K2) OR IMAGE_TYPE_CROPPED (K3)	
10	Compression	JPEG 2000 Lossless	
11	Compression Ratio	Lossless	
12	Aspect Ratio	1:1	
13	Capture Mode	Live auto capture with configurable and built-in quality check (incorporates NIST quality considerations) Liveness detection Detect left eyes from right Embedded capture quality feedback indicator lights are a plus	
14	Scan Type	Progressive	
15	Preview	>= 3 FPS M-JPEG frames with quality score superimposed	
16	EMC compliance	FCC Class A or equivalent	
17	Operating Temperature*	0 to 50 °C	
18	FTM	SBI CL 1.0	
19	Number of Simultaneous Captured Eyes	2 (two)	
21	Connectivity	USB 2.0 or higher	
22	Durability/ Shock	IP 65	
23	Humidity	10-90% non-condensing	
24	Software API	Compliant with the OS, registration client application to handle device discovery, streaming and capture, and with MOSIP Specification version v0.9.5	

Face Capture Scanner

#	Factor	Registration Device Specification
1	Image Specification	ISO/IEC 19794-5:2011
2	Camera Specification	1080p with 90 degree FoV or above
3	Skin Tone	Should be able to capture face of ALL skin tones.
4	Exception Image Specification	Full Frontal with FACE features, two palms next to the face, waist up photo. 60mm(width) X 40mm(height)
5	Image quality	Full Frontal (0x01) as per ISO/IEC 19794-5 in jpeg2000 lossless format and compliant with ICAO 9303 standards
6	Image format	JPEG 2000 Lossless
7	Compression Ratio	Lossless
8	EMC compliance	FCC Class A or equivalent
9	Operation Temperature*	0 to 50 °C
10	FTM	SBI CL 1.0
11	Capture Mode	<ul style="list-style-type: none"> ● Plain live capture ● Auto capture with autofocus and auto lighting adjustment ● Smile, Eye glass, mask and other facial features detection ● Automatic image cropping as per configured dimensions ● Capture quality feedback indicator
12	Connectivity	USB 2.0 or higher
13	Power	USB
14	Mounting	With adjustable stand for various height
15	Durability/ Shock	IP 54, but a better IP rating is always a plus.
16	Software API	Compliant with the OS, registration client application to handle device discovery, streaming and capture, and with MOSIP Specification version v0.9.5

