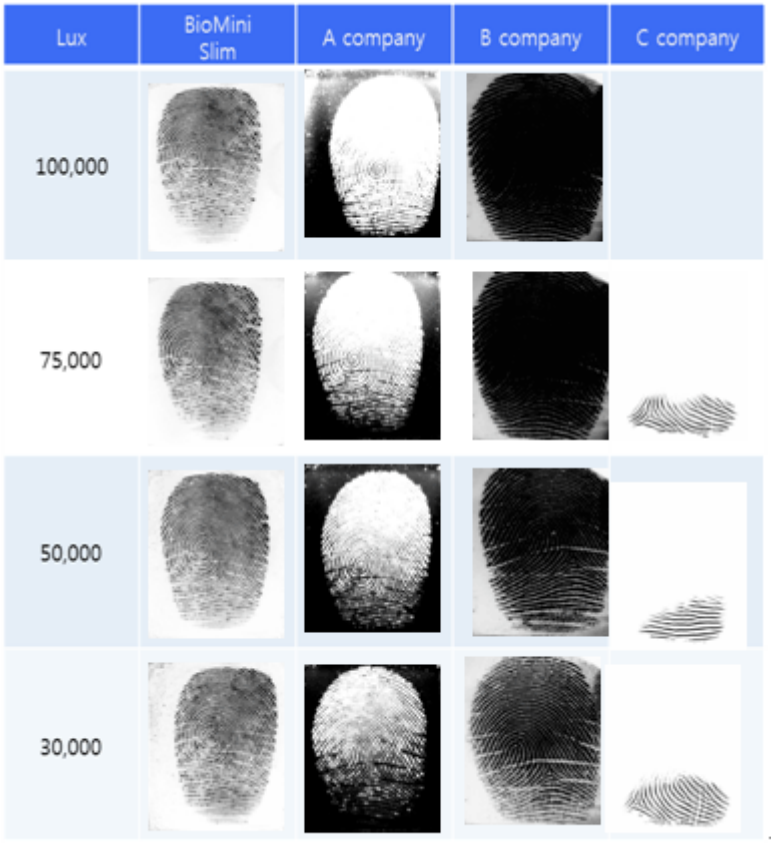
Next Generation Verification Scanner, BioMini Slim

BioMini Slim, the world's thinnest PIV certified FAP20 optical scanner, is made using key optical technology, image acquisition and algorithms accumulated over 10 years. It is a new concept scanner overcoming the available environmental limits of existing scanners and is optimized for the mobile environment.

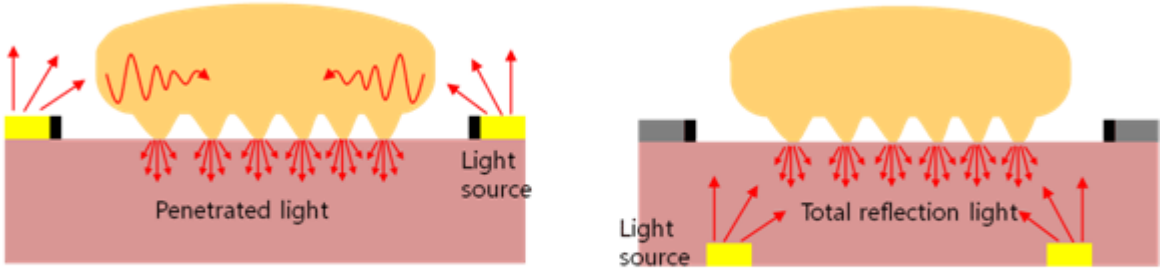
BioMini Slim applies the company's unique image acquisition solution based on its own optical technology to capture high-resolution, high-precision fingerprint image acquisition. It can obtain outstanding fingerprint images compared to other scanners. It truly obtains consistent fingerprint images regardless of hand condition such as dry or humid fingerprints, and stably acquires fingerprints from children and the elderly. It shows a difference in performance with outstanding performance regardless of age or fingerprint conditions, functioning at a level several times better than any other products.

Fingerprinting has been increasing in areas other than well-controlled indoor environments with the increase in mobile devices and the popularization of fingerprint use. However, existing scanners have difficulty in obtaining accurate fingerprint information according to environmental changes. In particular, fingerprint information is not attainable or is distorted by external lighting, such as direct sunlight. BioMini Slim can acquire fingerprints regardless of external light or fingerprint conditions, applying the company's self-developed MDR technology, an improvement on existing HDR technology. It can get normal fingerprints even under 100,000 LUX direct light, which is impossible with other products (Refer to Fig 1.). In addition, it can obtain desirable-condition fingerprints in any environment because of its waterproof and dust proof properties, satisfying IP65.



[Figure 1] Fingerprint images under direct sunlight

As the use of fingerprints increases and applications are extended to the financial field, such as banking or pension receiving, the importance of fake fingerprint detection is growing. BioMini Slim is made using the solid experience and know-how accumulated by Suprema in false fingerprinting and overcomes the limits of existing company sensors. The difference between an actual fingerprint and a false one lies in intrinsic physical differences and optical characteristics. BioMini Slim provides new and advanced Live Finger Detection (LFD) technology by applying a machine learning method that analyzes and categorizes image patterns according to optical characteristics, as shown in Fig 2. The product is made by improving the company's technology and overcoming the limits of existing LFD tech, such as with Silicon, resulting in superior performance compared to competitor's technologies. Based on the advantages mentioned above, BioMini Slim is an optimized market-ready solution regardless of application, such as personal authentication, healthcare, finance, etc. and has the potential to create new verification markets.



(a) Scattered light through the fingerprint from external light

(b) Total reflected light from internal light

[Figure 2] BioMini Slim's live finger detection system in two different situations