

25 June 2021

To whom it may concern,

iBeta Quality Assurance conducted Presentation Attack Detection (PAD) testing in accordance with ISO/IEC 30107-3. iBeta is accredited by NIST/NVLAP (NVLAP Lab Code: 200962) to test and provide results to this PAD standard (<u>certificate and scope</u> may be downloaded from the NVLAP website).

This testing was conducted with HyperVerge Onboard version 2.1.6 and the associated cloud-based solution HyperVerge Liveness version 1.9.6. Testing was conducted from 15 June through 22 June 2021 on a single smarphone (a Google Pixel 2 with Android 8.1.0).

Testing was conducted in accordance with the contract for a level of spoofing technique that only utilized simple, readily available methods to create artefacts of the genuine biometric for use in the presentation attack. The subjects for the test effort were cooperative – meaning that they were willing and able to provide any and all biometric samples, including high quality photos and videos of their likeness. The test time for each PAD test per PAI was limited to eight hours. This is considered a Level 1 PAD test effort (first of three levels).

The test method was to apply 1 bona fide subject presentation that alternated with 3 artefact presentations such that each species consisted of 150 Presentation Attacks (PAs) and 50 bona fide presentations per device. The application would then state "Fail" for the artefact presentations and "Success" for bona fide presentations.

On the Pixel 2, iBeta was not able to gain a liveness classification with a presentation attack of 150 times per species per device. With 150 PAs for each of 6 species per device, the total number of attacks for the device was 900 and the Attack Presentation Classification Error Rate (APCER) was 0%. The Bona Fide Presentation Classification Error Rate (BPCER) was also calculated and may be found in the final report.

The HyperVerge Liveness was tested by iBeta to the ISO 30107-3 Biometric Presentation Attack Detection Standards and was found to be in compliance with Level 1 on the Google Pixel 2.

Best regards,

Mail audetto

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