

*This checklist must be submitted as a PDF as part of your submission.*

Name of Certifying Engineer(s): Jeremy Holleman

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Name(s) of System Under Test: NDP9120 (board) with NDP120 (chip)

Division (check one):

- ☐ Open  
☒ Closed

Category (check one):

- ☒ Available  
☐ Preview  
☐ Research, Development, and Internal (RDI)

Benchmark(s) (check all that apply):

- ☒ Visual Wake Words  
☒ Keyword Spotting  
☐ Anomaly Detection  
☒ Image Classification

Please fill in the following table adding lines as necessary:

System Under Test Name	Benchmark	Accuracy/AUC
Syntiant NDP120 at 0.9V/30MHz	KWS	91.1%
Syntiant NDP120 at 0.9V/30MHz	VWW	84.8%
Syntiant NDP120 at 0.9V/30MHz	IC	86.0%

For each SUT, is the benchmark Accuracy/AUC target met? (Not a requirement for the Open division) (check all that apply):

- ☐ ☒ Yes (Visual Wake Words ... 80% Accuracy)  
☐ ☒ Yes (Keyword Spotting ... 90% Accuracy )  
☐ Yes (Anomaly Detection ... 0.85 AUC)  
☐ ☒ Yes (Image Classification ... 85% Accuracy)  
☐ No, for some combination of benchmark, scenario and SUT

For each SUT and benchmark, did the submission run on the whole validation set in accuracy mode? (check one):

- ☐ ☒ Yes  
☐ No

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For each SUT and benchmark, does the submission use the EEMBC Runner? (check one)

- ☒ Yes
- ☐ No

For each SUT and benchmark, is the same code run in accuracy and performance modes? (check one)

- ☒ Yes
- ☐ No

Are the weights calibrated using data outside of the official calibration set? (check one)

- ☐ Yes
- ☒ No

What numerics does the submission use? (check all that apply)

- ☐ INT4
- ☒ INT8
- ☒ INT16
- ☒ UINT8
- ☐ UINT16
- ☐ FP11
- ☐ FP16
- ☐ BF16
- ☐ FP32
- ☐ Other, please specify:

What backend does the submission use? (check all that apply)

- ☒ Vendor backend, please name: Syntiant Training Development Kit (TDK), SDK
- ☐ TF-Lite Micro
- ☐ Micro TVM
- ☐ Other, please specify:

Which of the following caching techniques does the submission use? (check all that apply, ideally none):

- ☐ Caching Inputs between iterations
- ☐ Caching responses between iterations
- ☐ Caching intermediate computations between iterations

Which of the following techniques does the submission use? (check all that apply, ideally none if submitting to the closed division.)

- ☐ Quantization aware training

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- ☐ Wholesale weight replacement
- ☐ Weight supplements
- ☐ Discarding non-zero weight elements
- ☐ Pruning
- ☐ Modifying weights during the timed portion of an inference run
- ☐ Hard coding the total number of queries
- ☒ None of the above

Is the submission congruent with all relevant MLPerf rules?

- ☒ Yes
- ☐ No

If the answer to the above question is no, please explain:

For each SUT, have you filled out the JSON system description file?

- ☒ Yes
- ☐ No

For each SUT, does the submission accurately reflect the real-world performance of the SUT?

- ☒ Yes
- ☐ No

Does your submission include the following: (check all that apply)

- ☒ System description file
- ☒ Code that implements the benchmarks
- ☐ Code/scripts that train the model(s) (Open Division)
- ☒ Metadata that describes each system-implementation combination tested
- ☐ Scripts that set up and execute each system implementation tested
- ☒ Result logs for each system implementation tested
- ☒ This Checklist