Name of Certifying Engineer(s):Jeremy Holleman

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

Division (check one):

X Open

* Closed

Category (check one):

X Available

* Preview
* Research, Development, and Internal (RDI)

Benchmark(s) (check all that apply):

X Visual Wake Words

X Keyword Spotting

* Anomaly Detection

X 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% |
| Syntiant NDP120 at 1.1V/98MHz | KWS | 91.1% |
| Syntiant NDP120 at 1.1V/98MHz | VWW | 84.8% |
| Syntiant NDP120 at 1.1V/98MHz | IC | 86.0% |

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

X Yes (Visual Wake Words … 80% Accuracy)

X Yes (Keyword Spotting … 90% Accuracy )

* Yes (Anomaly Detection … 0.85 AUC)

X Yes (Image Classification ... 85% Accuracy)

X 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):

X Yes

* No

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

X Yes

* No

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

X Yes

* No

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

* Yes

X No

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

* INT4

X INT8

X INT16

* UINT8
* UINT16
* FP11
* FP16
* BF16
* FP32
* Other, please specify:

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

X Vendor backend, please name:Syntiant Interface Library

* TF-Lite Micro
* Micro TVM
* Other, please specify:

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

X 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?

X Yes

* No

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

X Yes

* No

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

X System description file

X Code that implements the benchmarks

* Code/scripts that train the model(s) (Open Division)

X Metadata that describes each system-implementation combination tested

X Scripts that set up and execute each system implementation tested

X Result logs for each system implementation tested

X This Checklist