MIND™ (Mission Intelligence Neural Device™)

ASPRET™ Anti-Spoofing AeroSpace Pattern REcognition Technology

Machine Learning Acceleration for Aerospace

Configuration 4TPU

Part Number: LM4TPUE (equalized shielding)
LM4TPUT (TMR optimized shielding)
Coprocessor type: Tensor Processing Unit (Deep-Learning)
Port type: USB3.0
Number of ports: 4
Each port:
@ Performs high-speed ML inference
@ TPU coprocessor capable of performing 4 trillion operations (TeraOperations) Per Seconds (TOPS) using 0.5 Watt for each TOPS (2 TOPS per Watt)
@ Can execute state-of-the-art mobile vision models such as MobileNet v2 at almost 400 FPS in a power efficient manner
@ Supports all major platforms
@ Debian Linux, macOS, Windows 10
@ Supports TensorFlow Lite
@ No need to build models from the ground up

Configuration 4NME

Part Number: LM4NMEE (equalized shielding)
LM4NMET (TMR optimized shielding)
Coprocessor type: Digital Neuromorphic Chip (Classifier)
Port type: USB2.0
Number of ports: 4
Each port:
@ Performs high-speed learning and inference
@ 2.68 TOPS
@ RBF architecture with RCE learning algorithm
@ Continuously learning classifier with L1 and L-sup Norm
@ KNN inference capability
@ 2000 neurons
@ 512Ksynapses
@ Up to 128 different neural networks
@ Explainable inference
@ Ultra-low power (223 GOPS/Watt)
@ Linux and Windows support

Environmental:
Storage temperature: -55° to +100°
Operating temperature: -55° to +85°
IP68
EMI shielding
MIL-STD-810G
NASAT™ Gamma/Neutron radiation shielding
(boron + tungsten nanotechnology)

Mechanical:
Enclosure material: 7075 T6 aluminum
Enclosure thickness: 5mm
Dimensions: 165x125x80mm
Weight: 2Kg
Shock absorbing mounting platform

Connectors:
J1, J2, J3, J4 Weald LMG/1/18558/220 12 pin
(brass with coarse thread coupling for
extreme environments and high vibration)
Optional: MIL-DTL38999 Series III

Applications:
Aerospace, Satellite, Military, Nuclear Plants

LUCA MARCHESE LM
Aerospace and Defence Machine Learning Company

LUCA MARCHESE
Address: Via Mario Tosa 43 16151 Genova Italy
Contact: luca.marchese@synaptics.org
Web: www.synaptics.org
VAT: IT0267070992
NATO CAGE: AK845