

MEXT Predictive Memory™

Free and Open-Source Software (FOSS) Disclosure

May 05, 2026

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2.0 FOSS Packages Used and Licenses Overview

Software	Version	License(s)	Section
Armadillo	14.2	Apache-2.0	3.1
Backoff	5.0.3	MIT	3.2
Boost Libraries	1.78	Boost License	3.3
Cereal	1.3.2	BSD-3-Clause	3.4
crc32	N/A	MIT	3.5
DPDK	25.11	BSD-3-Clause license for the core libraries and drivers. The kernel components are GPL-2.0 licensed.	3.6
expr	1.17.8	MIT	3.7
Ensmallen	2.22.1	BSD-3-Clause	3.8
fmt	12.1.0	MIT	3.9
Go genproto	1.10.0	Apache-2.0	3.10
Go networking	0.53.0	BSD-3-Clause	3.11

Go protobuf	1.36.11	BSD-3-Clause	3.12
Go proto oltp	1.10.0	Apache-2.0	3.13
Go sys	0.42.0	BSD-3-Clause	3.14
Go text	0.35.0	BSD-3-Clause	3.15
grpc	1.80.0	Apache-2.0	3.16
grpc-gateway	2.28.0	BSD-3-Clause	3.17
logr	1.4.3	Apache-2.0	3.18
mlpack	4.5.1	BSD-3-Clause	3.19
nlohmann-json		MIT	3.20
OpenTelemetry-Collector	0.141.0	Apache-2.0	3.21
OpenTelemetry-Go	1.43.0	Apache-2.0, BSD-3-Clause	3.22
OpenTelemetry-Auto-SDK	1.2.1	Apache-2.0	3.23
pybind11		Pybind11 License (BSD-style)	3.24
SPDK	26.01	BSD-3-Clause	3.25
Spdlog	1.17	MIT	3.26
stdr	1.2.2	Apache-2.0	3.27
xxhash	2.3.0	MIT	3.28
YAML	3.0.1	MIT	3.29
UUID	1.6.0	BSD-3-Clause	3.30
MEXT Kernel Module (mext.ko)			
mext.ko		GPL-2.0	3.31
igb_uio		GPL-2.0	3.32

3.0 FOSS Package Details

FOSS source code used in MEXT Predictive Memory for all packages listed below is maintained by MEXT and will be provided upon Customer request.

3.1 Armadillo

Version: 14.2

License URI: <https://gitlab.com/conradsnicta/armadillo-code/-/blob/15.0.x/LICENSE.txt>

Project URI: <https://gitlab.com/conradsnicta/armadillo-code>

Library Description: fast C++ library for linear algebra (matrix maths) & scientific computing

3.2 Backoff

Version: 5.0.3

License URI: <https://github.com/cenkalti/backoff?tab=MIT-1-ov-file#readme>

Project URI: <https://github.com/cenkalti/backoff>

Library Description: The exponential backoff algorithm in Go

3.3 Boost Libraries

Version: 1.78

License URI: https://github.com/boostorg/boost/blob/master/LICENSE_1_0.txt

Project URI: <https://www.boost.org/>

Library Description: Boost is a collection of free, peer-reviewed, open-source C++ libraries. It provides a wide range of functionalities that complement the C++ Standard Library and are designed to be portable across various platforms.

3.4 Cereal

Version: 1.3.2

License URI: <https://github.com/USCiLab/cereal/blob/master/LICENSE>

Project URI: <https://uscilab.github.io/cereal/>

Library Description: header-only C++11 serialization library that takes arbitrary data types and reversibly turns them into different representations

3.5 CRC32

Version: N/A

License URI: <https://github.com/corsix/fast-crc32/blob/main/LICENSE.md>

Project URI: <https://github.com/corsix/fast-crc32/>

Library Description: Fast CRC32 implementations

3.6 DPDK

Version: 25.11

License URI: <https://spdx.org/licenses/BSD-3-Clause#licenseText>

License URI: <https://www.gnu.org/licenses/old-licenses/gpl-2.0.en.html> (kernel components)

Project URI: <https://www.dpdk.org/>

Library Description: Data Plane Development Kit (DPDK) is a Linux Foundation project that consists of libraries to accelerate packet processing workloads running on a wide variety of CPU architectures.

3.7 expr

Version: 1.17.8

License URI: <https://github.com/expr-lang/expr/blob/master/LICENSE>

Project URI: <https://github.com/expr-lang/expr>

Library Description: Expression language and expression evaluation for Go

3.8 Ensmallen

Version: 2.22.1

License URI: <https://github.com/mlpack/ensmallen/blob/master/LICENSE.txt>

Project URI: <https://ensmallen.org/>

Library Description: A header-only C++ library for numerical optimization

3.9 fmt

Version: 12.1.0

License URI: <https://github.com/fmtlib/fmt?tab=MIT-1-ov-file#readme>

Project URI: <https://github.com/fmtlib/fmt>

Library Description: A modern formatting library for spdlog

3.10 Go genproto

Version:

License URI: <https://pkg.go.dev/google.golang.org/genproto?tab=licenses>

Project URI: <https://pkg.go.dev/google.golang.org/genproto>

Library Description: Generated Go code for Google APIs.

3.11 Go Networking

Version: 0.51.0

License URI: <https://pkg.go.dev/golang.org/x/net?tab=licenses>

Project URI: <https://pkg.go.dev/golang.org/x/net>

Library Description: Supplementary networking libraries.

3.12 Go protobuf

Version: 1.36.11

License URI: <https://pkg.go.dev/google.golang.org/protobuf?tab=licenses>

Project URI: <https://pkg.go.dev/google.golang.org/protobuf>

Library Description: Google's Protocol Buffers implementation.

3.13 Go Proto OLTP

Version: 1.10.0

License URI: <https://pkg.go.dev/go.opentelemetry.io/proto/otlp?tab=licenses>

Project URI: <https://pkg.go.dev/go.opentelemetry.io/proto/otlp>

Library Description: Generated code for OTLP protocol buffers.

3.14 Go sys

Version: 0.42.0

License URI: <https://pkg.go.dev/golang.org/x/sys?tab=licenses>

Project URI: <https://pkg.go.dev/golang.org/x/sys>

Library Description: Low-level system primitives.

3.15 Go text

Version: 0.42.0

License URI: <https://pkg.go.dev/golang.org/x/text?tab=licenses>

Project URI: <https://pkg.go.dev/golang.org/x/text>

Library Description: Text processing and localization.

3.16 grpc

Version: 1.79.2

License URI: <https://pkg.go.dev/google.golang.org/grpc@v1.65.0?tab=licenses>

Project URI: <https://pkg.go.dev/google.golang.org/grpc@v1.65.0>

Library Description: A high performance, open source, general RPC framework

3.17 grpc-gateway

Version: 2.28.0

License URI: <https://github.com/grpc-ecosystem/grpc-gateway/blob/main/LICENSE>

Project URI: <https://github.com/grpc-ecosystem/grpc-gateway/>

Library Description: gRPC to JSON proxy generator following the gRPC HTTP spec

3.18 logr

Version: 1.4.3

License URI: <https://github.com/go-logr/logr/blob/master/LICENSE>

Project URI: <https://github.com/go-logr/logr>

Library Description: A simple logging interface for Go

3.19 mlpack

Version: 4.5.1

License URI: <https://github.com/mlpack/mlpack/blob/master/LICENSE.txt>

Project URI: <https://www.mlpack.org/>

Library Description: a fast, header-only C++ machine learning library

3.20 nlohmann-json

Version:

License URI: <https://github.com/nlohmann/json/blob/develop/LICENSE.MIT>

Project URI: <https://github.com/nlohmann/json>

Library Description: json for C++

3.21 OpenTelemetry (OTEL) Collector

Version: 0.141.0

License URI: <https://github.com/open-telemetry/opentelemetry-collector?tab=Apache-2.0-1-ov-file#readme>

Project URI: <https://github.com/open-telemetry/opentelemetry-collector>

Package Description: vendor-agnostic implementation on how to receive, process and export telemetry data

3.22 *OpenTelemetry-Go*

Versions: 1.42.0

License URI: <https://pkg.go.dev/go.opentelemetry.io/otel?tab=licenses>

Project URI: <https://pkg.go.dev/go.opentelemetry.io/otel@v1.38.0>

Library Description: Go implementation of OpenTelemetry - set of APIs to measure performance and behavior of software and send this data to observability platforms.

3.23 *OpenTelemetry-Auto-SDK*

Versions: 1.2.1

License URI: <https://pkg.go.dev/go.opentelemetry.io/otel?tab=licenses>

Project URI: <https://pkg.go.dev/go.opentelemetry.io/auto/sdk>

Library Description: OpenTelemetry Go auto-instrumentation SDK.

3.24 *pybind11*

Version:

License URI: <https://github.com/pybind/pybind11/blob/master/LICENSE>

Project URI: <https://github.com/pybind/pybind11>

Library Description: Seamless operability between C++11 and Python

3.25 *SPDK*

Version: 26.01

License URI: <https://github.com/spdk/spdk/blob/master/licenses/bsd-3-clause.txt>

Project URI: <https://spdk.io/>

Library Description: The Storage Performance Development Kit (SPDK) provides a set of tools and libraries for writing high performance, scalable, user-mode storage applications.

3.26 *spdlog*

Version: 1.12

License URI: <https://github.com/gabime/spdlog/blob/v1.x/LICENSE>

Project URI: <https://github.com/gabime/spdlog>

Library Description: Fast C++ logging library.

3.27 *stdr*

Version: 1.2.2

License URI: <https://github.com/go-logr/stdr/blob/master/LICENSE>

Project URI: <https://github.com/go-logr/stdr>

Library Description: logr implementation against the stdlib log package

3.28 xxhash

Version: 2.3.0

License URI: <https://github.com/cespare/xxhash/?tab=MIT-1-ov-file#readme>

Project URI: <https://github.com/cespare/xxhash>

Library Description: A Go implementation of the 64-bit xxHash algorithm (XXH64)

3.29 YAML

Version: 3.0.1

License URI: <https://github.com/go-yaml/yaml/blob/v3/LICENSE>

Project URI: <https://github.com/go-yaml/yaml>

Library Description: YAML support for the Go language.

3.30 UUID

Version: 1.6.0

License URI: <https://github.com/google/uuid/blob/master/LICENSE>

Project URI: <https://github.com/google/uuid>

Library Description: Go package for UUIDs based on RFC 4122 and DCE 1.1: Authentication and Security Services.

3.31 mext.ko

Version:

License URI: <https://www.gnu.org/licenses/old-licenses/gpl-2.0.txt>

Project Source: Contact support@mext.ai for source code.

Module Description: Dynamically loadable kernel module for kernel interface to MEXT Predictive Memory

3.32 igb_uio

Version:

License URI: <https://www.gnu.org/licenses/old-licenses/gpl-2.0.txt>

Project URI: [git://dpdk.org/dpdk-kmods](https://dpdk.org/dpdk-kmods)

Library Description: allows user space applications to directly manage io resources

4.0 License Text

Licensing text for FOSS packages used in MEXT Predictive Memory

4.1 Apache 2.0

URI: <https://www.apache.org/licenses/LICENSE-2.0.txt>

Text:

Apache License

Version 2.0, January 2004

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