K.O.D.A.

DOCUMENTATION & SPEC SHEET

VERSION 0.5 rev.3 - FOR INTERNAL USE ONLY

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Sending this revision back to development.
Need more notes on self service mode, not
sure how safe it is to ship yet.

What's the status on the latest build? Any
updates? we need to get this finished before
any info on the project leaks out.

— dave
```

About K.O.D.A.

K.O.D.A. (**K**ernel **O**perating **D**evice & **A**lgorithm) is a highly-specialized weapons-grade targeting system designed to be a useful and effective tool within military organizations to automate offensive operations and reduce human error.

System Configurations

K.O.D.A., in it's present iteration, operates on custom-built, proprietary silicon. Though it's configuration may change on a case-by-case basis, the core model consists of:

- CPU: Aishogeki Solutions® LS-2022K (64c/128t) @ 4.5GHz base
- GPU: AVS® MGX 6800 SE
- RAM: 24GB DDR5-8700

Should the operating system detect that it is frequently pushing hardware limits, it will report this in its output logs. These warnings can be disabled with a configuration file, but it's recommended that you upgrade the offending components for optimal performance.

In terms of software, K.O.D.A. operates on a custom kernel with minimal packages installed. At the time of writing, the base system only consists of twenty-four packages, which all run on the latest LTS release of the OS on kernel version 7.9.20.

The kernel and its limited packages are designed with minimal overhead in mind, to keep K.O.D.A.'s other functionality running at optimal performance.

Early versions of the system are referred to internally as "kohaku", and as such, some system calls and most configuration files still refer to and rely on a "kohaku" variable.

WARNING: Self-Service Mode

One of the biggest innovations for K.O.D.A. is its revolutionary "Self-Service Mode", which will allow the system to train itself on a specific dataset without external intervention, and adapt to it's location and situation accordingly. Please be aware that Self-Service Mode is still an experimental feature, and may produce undesirable results.

Please exercise caution in enabling Self-Service Mode.
Do **not** enable Self-Service Mode without reading the documentation.

Performance Mode Presets

K.O.D.A. is designed to be as flexible as possible, allowing for many custom configurations. The system can be fine-tuned and modified to fit any use-case. However, to simplify the configuration and testing process, K.O.D.A. comes with several preset "reference" modes out-of-the-box.

STANDARD MODE

K.O.D.A.'s standard mode of operation. Performance is monitored but not actively limited except by thermals. This mode is best used to test K.O.D.A. in an unmodified state, but it is recommended that training data is supplied beforehand.

LOW POWER MODE

Low Power Mode reduces the acoustic and thermal output and power consumption of K.O.D.A. by limiting its processing power. This mode is best used in spaces where physical real estate is limited, or energy usage is of a concern. While in Low Power Mode, GPU performance is significantly reduced. Please note that K.O.D.A. may run with a higher internal temperature than usual in Low Power Mode, as the active cooling system is largely disabled while Low Power Mode is enabled.

SELF SERVICE MODE

Self Service Mode is an experimental process that allows K.O.D.A. to self-establish its own configurations and actions. It designates full dictation of processes to the kernel, effectively allowing the system to learn from its own actions and fine-tune its operation accordingly.
When in Self Service Mode, the K.O.D.A. will take as many steps as needed to protect itself from malicious attacks, and will ultimately prioritize the long-term health of its components and integrity of its software.
Self Service Mode is enabled by default, but it is **strongly recommended** that it is disabled via configuration file if not needed, as it can pose a very significant security risk if mishandled or misconfigured. If misconfigured, you may find it difficult to disable.

Please consult standard operating procedures and general security before enabling Self Service Mode.

INTERNAL USE ONLY

Training the K.O.D.A.

As K.O.D.A. is largely powered by artificial intelligence, it requires a series of reference data so as to properly identify its tasks. The more information the system is given, the higher the accuracy of its calculations. It is recommended you train the system on a data set of 15,000 samples or more. Lower sample sizes may result in undesired operation.

To make the training process easier, and to save time during preliminary training, K.O.D.A. will scan the MIME types of any files within its training directories and contextually interpret the data within. Although many MIME types are supported natively, the system may need additional packages in order to interpret additional file formats. Please refer to the documentation for the Aishogeki Solutions® SDK for more information on developing extensions.

The folder of training data samples can be specified within the configuration files. **Please make sure to verify you are training on the right set of data!** Training the system on an incorrect or invalid set of data may result in a corruption of the software.

MIME-type training can be disabled via configuration file. This approach is suggested before deployment. Though it may take more time, it is best to ensure optimal accuracy of the dataset.

WARNING ABOUT TRAINING & SELF SERVICE MODE

It is highly suggested that Self Service Mode be <u>DISABLED</u> via configuration file before entering training mode. While Aishogeki Solutions has yet to encounter any problems leaving it enabled, it should be disabled when in deployment settings so as to prevent the system from entering Self Service Mode unintentionally.

hey, idk who at the editing office is gonna receive this, but things are a bit chaotic. just restored a backup after a system failure and haven't had time to change configs from default. we just built and trained the latest version of the software, but had to rush it. will keep you posted on how the prototype is running ASAP.

— T.S.