# **DEEPCRAFT™ Ready Models**



# Commercial-ready Edge AI models that let you easily add features to your embedded products

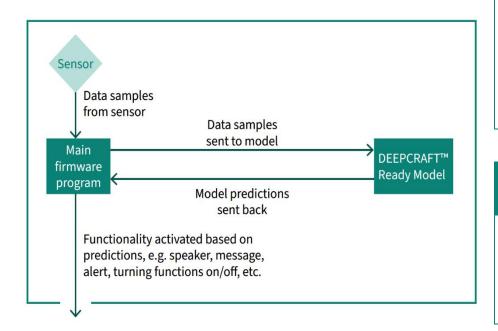
DEEPCRAFT™ Ready Models are AI models trained to detect specific data, which can then trigger special functionalities for various use cases.

Ready Models are targeted towards companies like consumer electronics manufacturers that want to distinguish their products by adding intelligent functionalities, industrial companies who want to use them for safety enhancements in factories and machinery, automotive companies, and more.

While building machine learning models for the edge can be time consuming, DEEPCRAFT™ Ready Models let companies avoid that complex development. They are ready to go, fully trained, comprehensively tested Edge AI models that are ready for production. This leaves customers free to focus on how to best put the models to use, and to commercialize the added value they bring to their product.

Extensive testing is done on Infineon MCUs. During testing, the models are exposed to common and uncommon environments and situations, to ensure that they stay reliable and effective in nearly any scenario.

For more information visit: Infineon.com/DEEPCRAFT



# **Key features**

- Production ready: complete models designed for edge devices
- Fully tested models that accurately detect and classify data such as sounds, gestures, and more
- Optimal model performance in common scenarios
- Optimized for minimal false triggers, even in uncommon scenarios

# **Key benefits**

- Easy to integrate and deploy onto consumer products
- Fast time to market at minimal development cost
- Low memory footprints and inference time hardware resources freed up for other purposes
- Enable Al-based features with little to no Al know-how

# Key use cases

- Trigger different functions to enhance your product
- Send notifications when model is triggered, turn functions off or on, etc.







#### **PRODUCT BRIEF**

### Specification and compatibility

#### Recommended Hardware for Models

- Infineon's AI kits are recommended for evaluation:
- PSOC™6 AI Kit
- PSOC™ Edge Al Kit
- AURIX<sup>™</sup> TC375 Lite Kit
- TRAVEO™ T2G B-H LITE Kit
- TRAVEO™ T2G B-E LITE Kit
- XMC7200 Evaluation Kit
- Models can operate on a wide range of inputs from different sensors (such as camera, CAPSENSE, microphone, radar, currents/voltages and most time-series data)

#### Additional software tools

- More information and guides available at <u>developer.imagimob.com</u>
- For streamlined deployment onto Infineon hardware, use <u>ModusToolbox™ Software</u>
- Visit infineon.com/deepcraft to learn more
- DEEPCRAFT™ Studio, where you'll get access to starter projects, code examples, etc.

## Hardware requirements

- Model footprints are as low as 1 kB RAM and 1 kB FLASH
- AutoML optimizes your models all the way from the neural network structure to target-specific optimizations for your MCU or NPU

## **Target applications**

Ready Model	Target Application
Baby Cry Detection	Clinical & Hospital Equipment, Home Health Monitoring, Audio and Speaker - Home or Professional
Cough Detection	AR devices / Smart Glasses, Clinical & Hospital Equipment, Home Health Monitoring, Healthcare Wearable & Consumable, Residential Aircon, Smart Watch & Wristband
Direction of Arrival Detection (Audio)	Alarm & Security, Collaborative Robot (Cobot), Humanoid Robots, Domestic Robot (vacuum, lawn, pool), Residential Aircon, Security Camera & Video doorbell, Smart Thermostat
Factory Alarm Detection	Clinical & Hospital Equipment, Commercial Building Automation, Commercial, Residential and Industrial Lighting, Humanoid Robots, Security Camera & Video doorbell, Industrial Sensor system
Fall Detection	Humanoid Robots, Healthcare Wearable & Consumable
Gesture Detection	Collaborative Robot (Cobot), Commercial Building Automation, Commercial, Residential and Industrial Lighting, Domestic Robot (vacuum, lawn, pool), Drone & Multicopter, Humanoid Robots
Siren Detection	Alarm & Security, AR devices / Smart Glasses, Humanoid Robots, Security Camera & Video doorbell
Snore Detection	Clinical & Hospital Equipment, Home Health Monitoring, Healthcare Wearable & Consumable, Smart Watch & Wristband

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#### **Public**

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