



MindSpore

# Deploy ONNX model seamlessly across all scenarios using MindSpore

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**What is MindSpore?**



# MindSpore Overview



## MindSpore

A new open source deep learning training/inference framework that could be used for mobile, edge and cloud scenarios.

### Key Features

- Friendly development experience
- Flexible debugging
- Fully unleashing hardware performance
- Quick deployment in all scenarios

### 1. Flexible debugging:

```
# Switch to dynamic graph mode
context.set_context(mode=context.PYNATIVE_MODE)

# Switch to static graph mode
context.set_context(mode=context.GRAPH_MODE)
```

### 2. Deploy across all scenarios:



Mobile

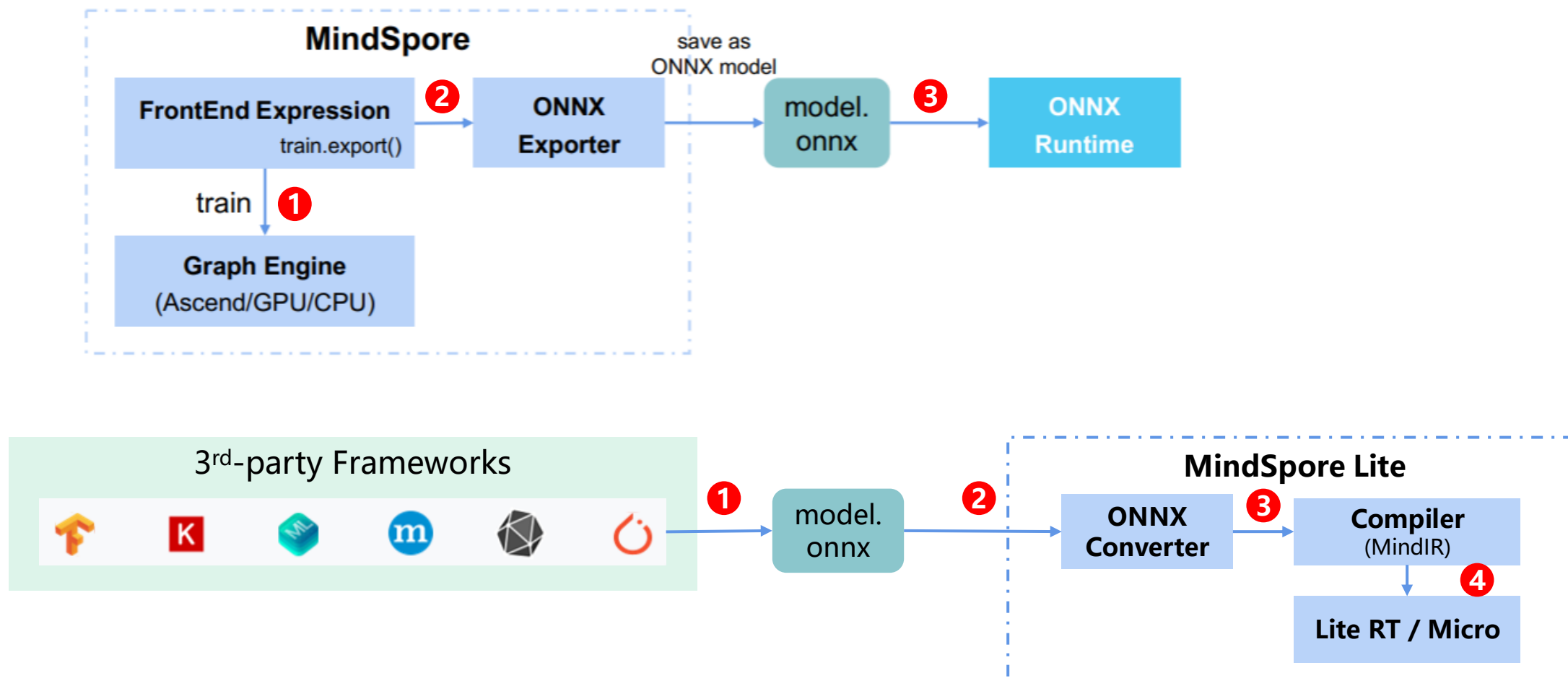
Edge

Cloud

**MindSpore with ONNX**



## How MindSpore works with ONNX?





MindSpore

## MindSpore ONNX support

### V0.1.0

- Operator support: **18**
- Network support: **3**



### V1.1.0 Network support:

- Fp32: **58**
- Fp16: **43**

#### models\_onnx.cfg

```
mtk_detect-mbv2-shortcut-400-400-simplified.onnx
mtk_emotions-d2012-75.8%.onnx
mtk_face_features_v3.onnx
emotion-ferplus-8.onnx
rcnn-ilsvrc13-9.onnx
efficientnet-lite4-11.onnx
mobilenetv2-7.onnx
shufflenet-v2-10.onnx
squeezenet1.1-7.onnx
densenet-9.onnx
ml_table_detection_fp32.onnx
ml_table_segment.onnx
googlenet-9.onnx
inception-v1-9.onnx
inception-v2-9.onnx
shufflenet-9.onnx
squeezenet1.0-9.onnx
residual_distill_cifar10_bs_1.onnx
residual_distill_cifar10_bs_32.onnx
residual_distill_bs_1.onnx
residual_distill_bs_32.onnx
ml_face_3d.onnx
gts_version-RFB-320_simplified.onnx
mnist-8.onnx
crnn_lite_lstm_v2.onnx;32,32,32,1
```

.....

#### models\_onnx\_fp16.cfg

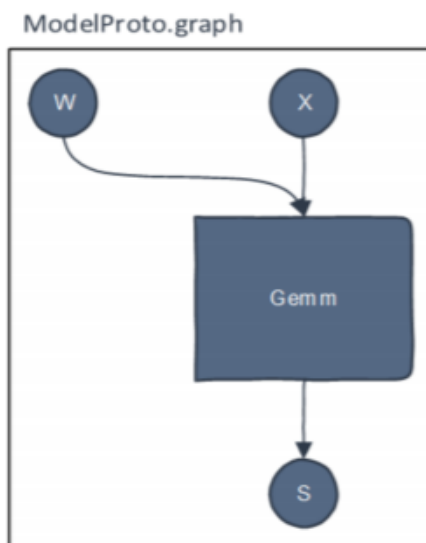
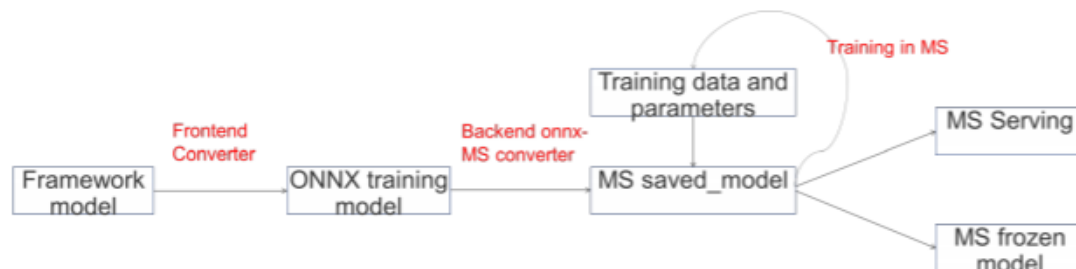
```
mtk_detect-mbv2-shortcut-400-400-simplified.onnx 4
mtk_emotions-d2012-75.8%.onnx 20
mtk_face_features_v3.onnx 20
emotion-ferplus-8.onnx 1
#rcnn-ilsvrc13-9.onnx 0.1
efficientnet-lite4-11.onnx 2
mobilenetv2-7.onnx 8
shufflenet-v2-10.onnx 5
squeezenet1.1-7.onnx 1
densenet-9.onnx 6
ml_table_detection_fp32.onnx 2
ml_table_segment.onnx 2
googlenet-9.onnx 3
inception-v1-9.onnx 3
inception-v2-9.onnx 4
shufflenet-9.onnx 1000
squeezenet1.0-9.onnx 5
residual_distill_cifar10_bs_1.onnx 1
residual_distill_cifar10_bs_32.onnx 2
residual_distill_bs_1.onnx 6
residual_distill_bs_32.onnx 30
ml_face_3d.onnx 2
gts_version-RFB-320_simplified.onnx 3
mnist-8.onnx 10
crnn_lite_lstm_v2.onnx;32,32,32,1 0.3
```

.....

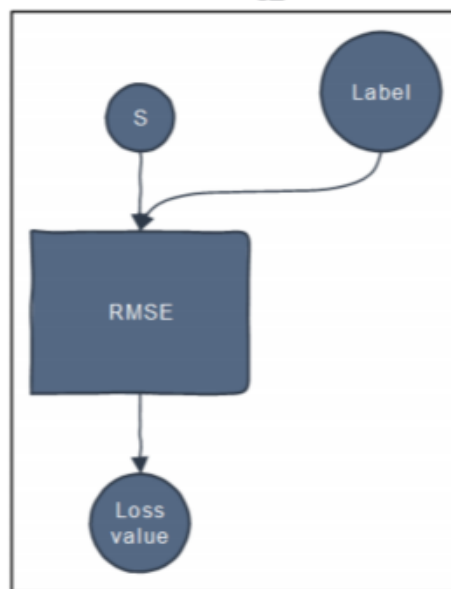
**Future plan**



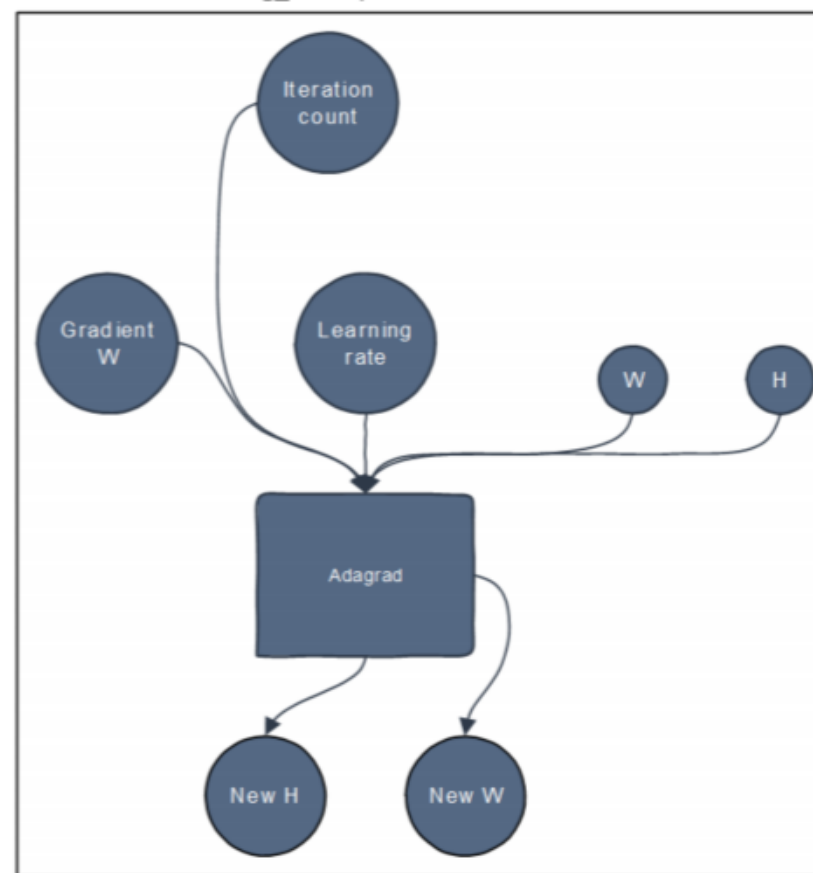
# Exploring MindSpore with ONNX Training



ModelProto.training\_info.loss



ModelProto.training\_info.optimizer







MindSpore

## Join us

- Website: [www.mindspore.cn](http://www.mindspore.cn)
- Gitee: [gitee.com/mindspore](https://gitee.com/mindspore)
- GitHub: [github.com/mindspore-ai](https://github.com/mindspore-ai)
- iHub: <https://code.ihub.org.cn/companies/4vioxkz2>
- Mailing-list: <https://mailweb.mindspore.cn/postorius/lists/>



Website



Bilibili



TikTok



QQ



Wechat

THANK YOU