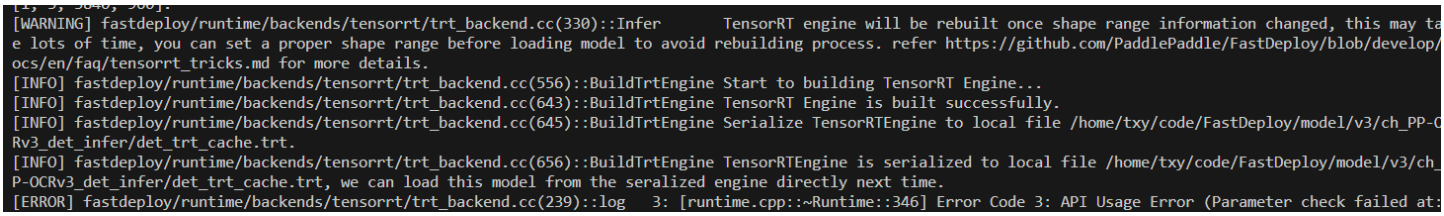
trt构建流程

1.使用fastdeploy进行trt推理

正常情况会出现如下日志：



大部分模型会存在动态Shape，例如分类的输入为[-1， 3， 224， 224]，表示其第一维（batch维）是动态的; 检测的输入[-1， 3， -1， -1]，表示其batch维，以及高和宽是动态的。而TensorRT在构建引擎时，需要知道这些动态维度的范围。因此，FastDeploy通过以下两种方式来解决

1. 自动设置动态Shape;在加载模型时，如若遇到模型包含动态Shape，则不会立刻创建TensorRT引擎，而是在实际输入数据预测时，获取到数据的Shape，再进行构建。

- **1.1 由于大部分模型在推理时，Shape都不会变，因此相当于只是将构建的过程推迟到预测阶段，整体没太大影响;**
- 1.2 **如若预测过程中，Shape在变化，FastDeploy会不断收集新的Shape，扩大动态维度的变化范围。每次遇到新的Shape且超出范围的，则更新范围，并重新构建TensorRT引擎。因此这样在遇到超过范围的Shape时，会重新花一定时间构建引擎，例如OCR模型存在这种现象，但随着不断预测，数据的Shape范围最终稳定后，便不会再重新构建。**

通常来说可以自动进行动态shape的获取，也可以通过手动，先手动设置好其动态范围，这样可以避免预测时重新构建

2.加载模型耗时长

TensorRT每次构建模型的过程较长，**FastDeploy提供了Cache机制帮助开发者将构建好的模型缓存在本地，这样在重新运行代码时，可以通过加载Cache，快速完成模型的加载初始化**。

接口传入文件路径字符串，当在执行代码时，

- 如若发现传入的文件路径不存在，则会构建TensorRT引擎，在构建完成后，将引擎转换为二进制流存储到此文件路径
- 如若发现传入的文件路径存在，则会跳过构建TensorRT引擎，直接加载此文件并还原成TensorRT引擎

因此，如若有修改模型，推理配置（例如Float32改成Float16），需先删除本地的cache文件，避免出错。

3.预测结果转为numpy

```
import fastdeploy as fd
import cv2
import numpy as np

model = fd.vision.ocr.PPOCRv4(
    det_model="",rec_model="",cls_model=None)
im = cv2.imread(image)
result = model.predict(im)
# convert label_map and score_map to numpy format
numpy_label_map = np.array(result.label_map)
numpy_score_map = np.array(result.score_map)
result = fd.vision.OCRResult()
result.label_map = numpy_label_map.tolist()
result.score_map = numpy_score_map.tolist()
```

4.使用CV-CUDA/CUDA加速GPU端到端推理性能

在编译时开启：export ENABLE_CVCUDA=ON

model.preprocessor.use_cuda(True, 0)

示例：

- 如果预处理第一个算子是resize，则要根据实际情况决定resize是否跑在GPU。因为当resize跑在GPU， 且图片解码在CPU时，需要把原图copy到GPU内存，开销较大，而resize之后再copy到GPU内存，则往往只需要 copy较少的数据

5.切换后端

```
import fastdeploy as fd
option = fd.RuntimeOption()

# 切换使用CPU/GPU
option.use_cpu()
option.use_gpu()

# 切换不同后端
option.use_paddle_backend() # Paddle Inference
option.use_trt_backend() # TensorRT
option.use_openvino_backend() # OpenVINO
option.use_ort_backend() # ONNX Runtime
##在我自己写的推理脚本中，删除了OpenVINO，但是在预编译时也将这几项进行了open
```

6.创建初始化

```
ocr = fd.vision.ocr.PPOCRv4(
det_model=det_model,
cls_model=None,
 rec_model=rec_model)
 ##可添加自己转化后的推理模型
```

7.脚本文件

trt_infer_fp16_cache.py

单独测试识别部分：rec_bs:测速分析：16：fp32: 1.97ms fp32:1.82

8: fp32: 2.02ms fp32 ： 1.85

8.安装+编译（官方）

编译过程需要满足

- gcc/g++ >= 5.4(推荐8.2)
- cmake >= 3.18.0

- python >= 3.6
- CUDA >= 11.2
- cudnn >= 8.2

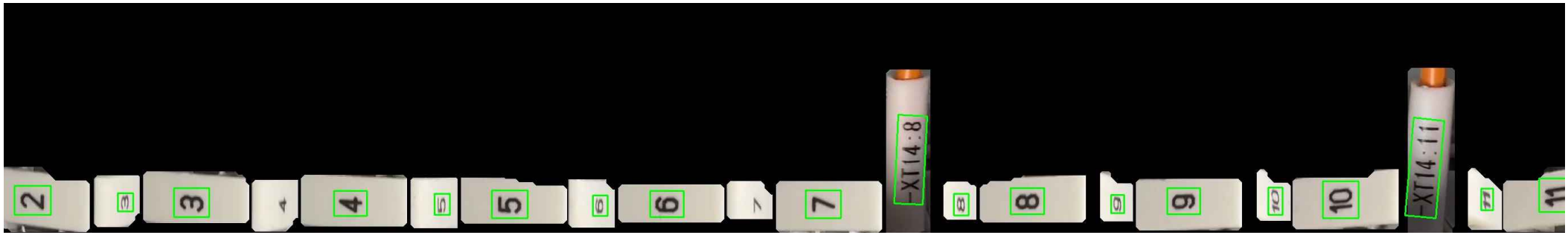
Python打包依赖，编译前请先执行 `wheelpip install wheel`

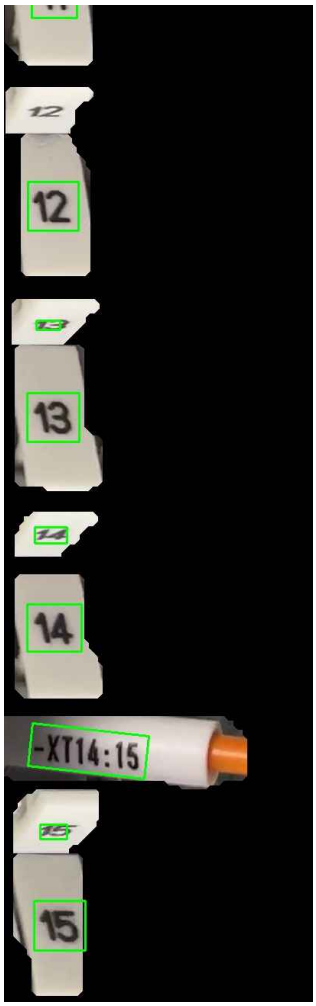
所有编译选项通过环境变量导入（可对文档中的第4点进行添加）

```
git clone https://github.com/PaddlePaddle/FastDeploy.git
cd FastDeploy/python
export ENABLE_ORT_BACKEND=ON
export ENABLE_PADDLE_BACKEND=ON
export ENABLE_OPENVINO_BACKEND=ON
export ENABLE_VISION=ON
export ENABLE_TEXT=ON
export ENABLE_TRT_BACKEND=ON
export WITH_GPU=ON
export TRT_DIRECTORY=/Paddle/TensorRT-8.4.1.5
export CUDA_DIRECTORY=/usr/local/cuda
# OPENCV_DIRECTORY可选，不指定会在编译过程下载FastDeploy预编译的OpenCV库
export OPENCV_DIRECTORY=/usr/lib/x86_64-linux-gnu/cmake/opencv4 \

python setup.py build
python setup.py bdist_wheel
###可对文档中的第4点进行添加
```

9.添加数据结果对比

现在模型效果

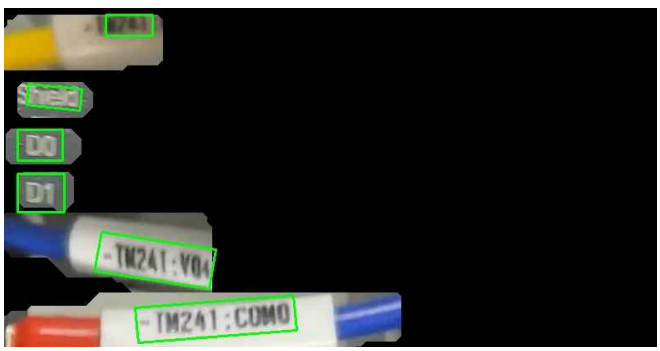

2
3
4
5
6
7
-XT14:8
8
9
10
-XT14:11
11

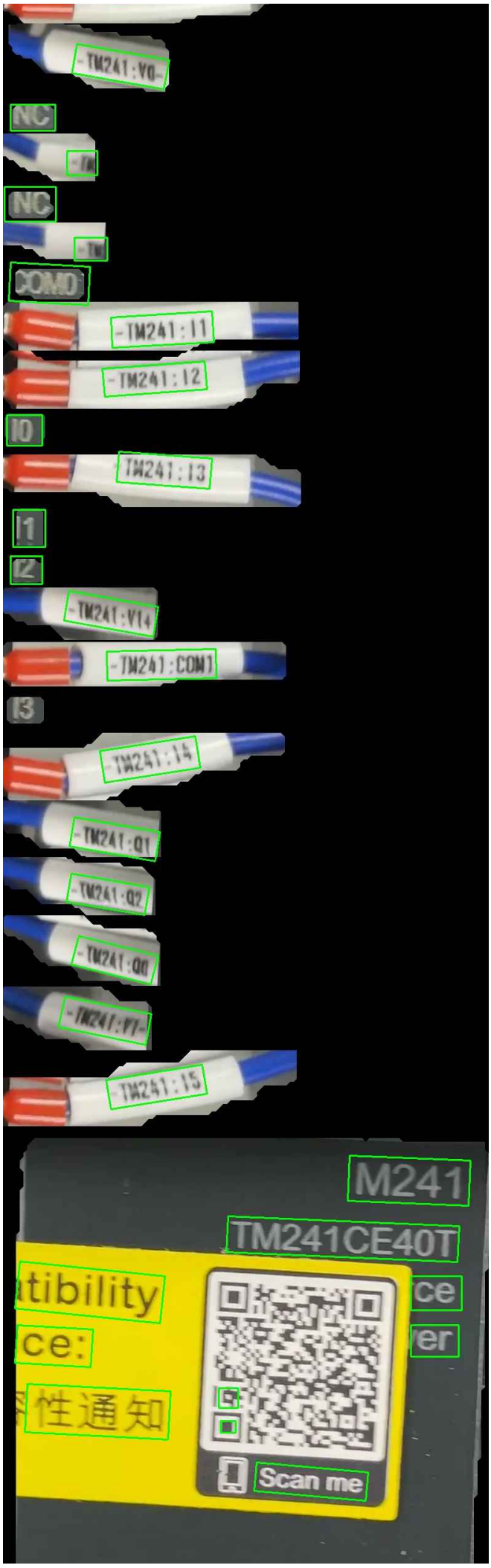


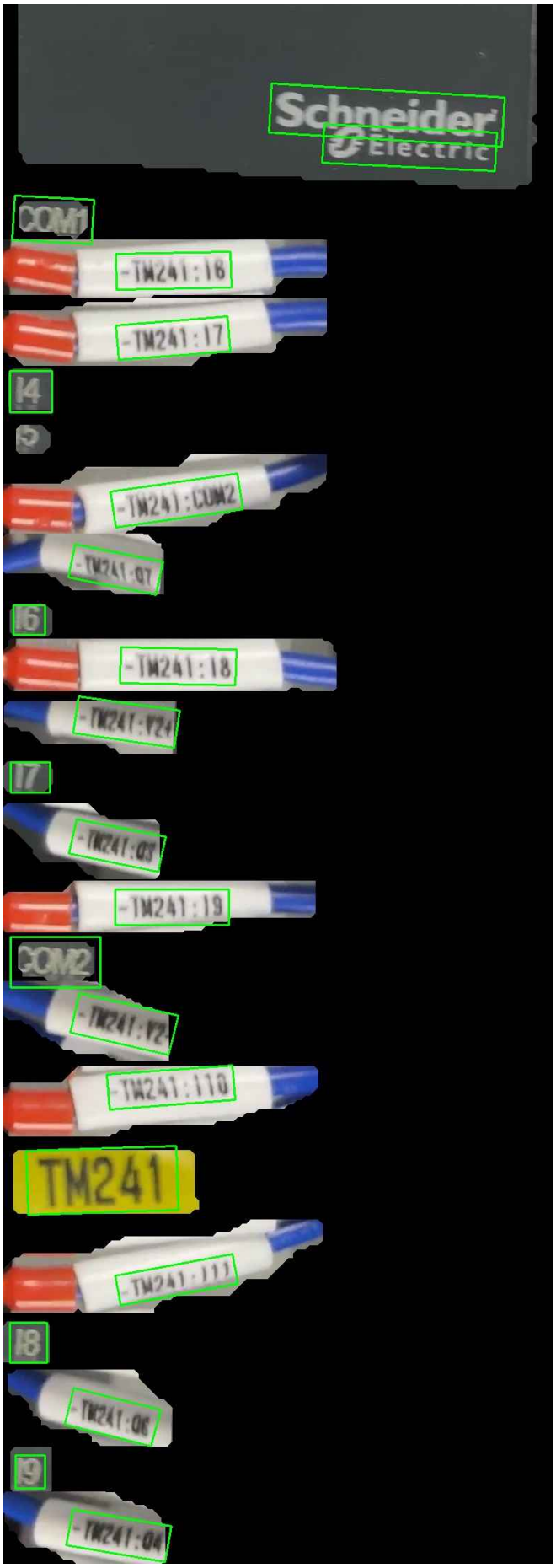
识别结果：

```
cost : 0.03218507766723633 s
det boxes: [[47,153],[78,153],[78,201],[47,201]]rec text: 1 rec score:0.589659
det boxes: [[74,303],[333,303],[333,444],[74,444]]rec text: XT14 rec score:0.999860
det boxes: [[98,569],[257,556],[261,607],[102,619]]rec text: -XT14:3 rec score:0.920201
det boxes: [[31,703],[82,703],[82,767],[31,767]]rec text: 2 rec score:0.997361
det boxes: [[37,885],[69,885],[69,912],[37,912]]rec text: 3 rec score:0.992192
det boxes: [[27,984],[78,984],[78,1046],[27,1046]]rec text: 3 rec score:0.998466
det boxes: [[29,1266],[73,1266],[73,1324],[29,1324]]rec text: 4 rec score:0.998958
det boxes: [[31,1443],[68,1443],[68,1470],[31,1470]]rec text: 5 rec score:0.995508
det boxes: [[25,1544],[74,1544],[74,1607],[25,1607]]rec text: 5 rec score:0.999206
det boxes: [[29,1722],[65,1722],[65,1748],[29,1748]]rec text: 6 rec score:0.972368
det boxes: [[27,1823],[73,1823],[73,1882],[27,1882]]rec text: 6 rec score:0.988535
```

```
det boxes: [[25,2097],[74,2097],[74,2159],[25,2159]]rec text: 7 rec score:0.995513
det boxes: [[51,2253],[207,2260],[204,2311],[49,2303]]rec text: -XT14:8 rec score:0.886726
det boxes: [[30,2358],[68,2358],[68,2384],[30,2384]]rec text: 8 rec score:0.985233
det boxes: [[32,2458],[78,2458],[78,2517],[32,2517]]rec text: 8 rec score:0.992275
det boxes: [[34,2635],[66,2635],[66,2658],[34,2658]]rec text: 9 rec score:0.957484
det boxes: [[32,2734],[78,2734],[78,2792],[32,2792]]rec text: 9 rec score:0.950624
det boxes: [[31,2912],[79,2912],[79,2937],[31,2937]]rec text: 10 rec score:0.993363
det boxes: [[25,3008],[90,3008],[90,3071],[25,3071]]rec text: 10 rec score:0.995965
det boxes: [[30,3153],[202,3168],[196,3222],[25,3207]]rec text: -XT14:11 rec score:0.941879
det boxes: [[39,3287],[77,3287],[77,3308],[39,3308]]rec text: 11 rec score:0.557845
det boxes: [[36,3389],[95,3389],[95,3450],[36,3450]]rec text: 11 rec score:0.991938
det boxes: [[31,3665],[97,3665],[97,3729],[31,3729]]rec text: 12 rec score:0.998867
det boxes: [[42,3847],[73,3847],[73,3859],[42,3859]]rec text:  rec score:0.000000
det boxes: [[30,3942],[98,3942],[98,4006],[30,4006]]rec text: 13 rec score:0.998505
det boxes: [[40,4118],[82,4118],[82,4139],[40,4139]]rec text: 14 rec score:0.470080
det boxes: [[30,4219],[101,4219],[101,4281],[30,4281]]rec text: 14 rec score:0.998462
det boxes: [[37,4375],[189,4392],[183,4448],[31,4431]]rec text: -XT14:15 rec score:0.952122
det boxes: [[47,4508],[82,4508],[82,4527],[47,4527]]rec text: 15 rec score:0.806172
det boxes: [[39,4608],[106,4608],[106,4673],[39,4673]]rec text: 15 rec score:0.997307
```




-TM241:V0-
NC
-TM
NC
-TM
COM0
-TM241:I1
-TM241:I2
I0
TM241:I3
I1
I2
-TM241:V14
-TM241:COM1
I3
-TM241:I4
-TM241:Q1
-TM241:Q2
-TM241:Q0
-TM241:V7-
-TM241:I5
M241
TM241CE40T
tibility
ce:
性通知
Scan me

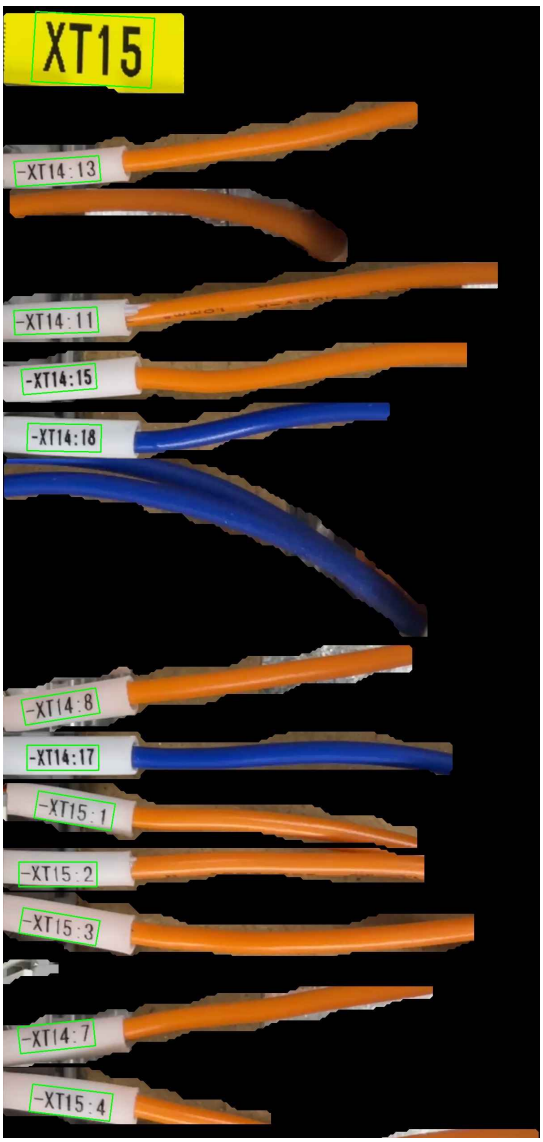


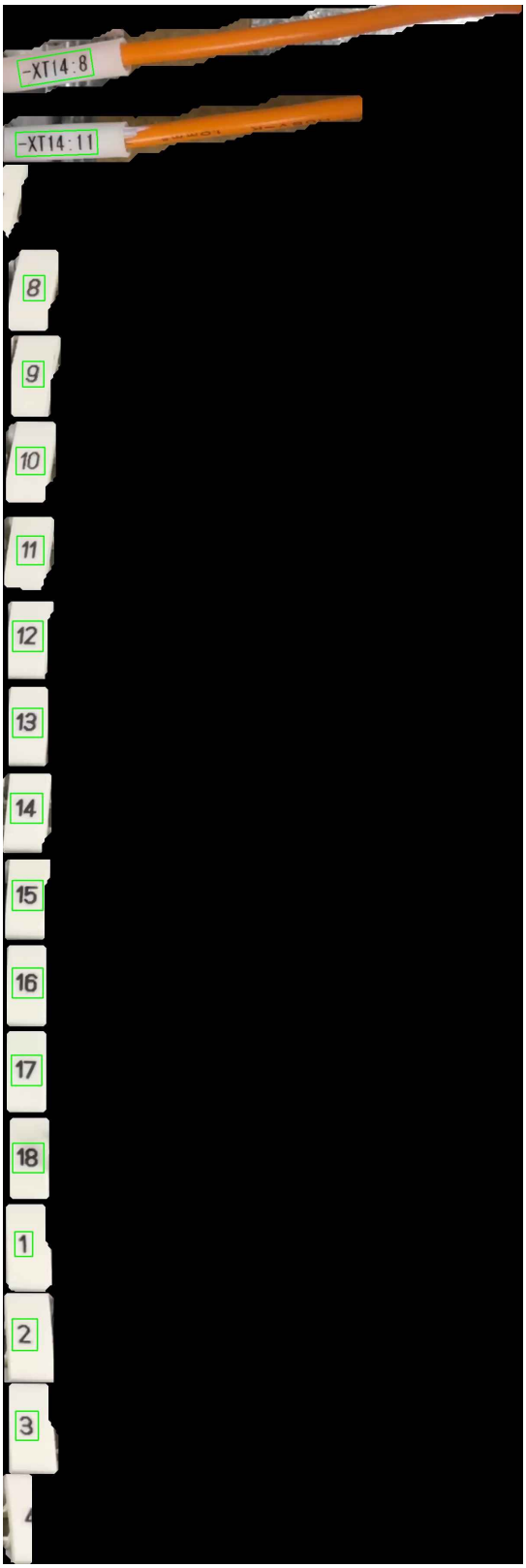

```
cost : 0.16536998748779297 s
det boxes: [[122,8],[178,8],[178,33],[122,33]]rec text: 741 rec score:0.680486
det boxes: [[29,91],[93,97],[91,123],[27,116]]rec text: Ted rec score:0.796900
```

```
det boxes: [[16,146],[70,146],[70,183],[16,183]]rec text: DO rec score:0.859039

det boxes: [[16,199],[72,199],[72,245],[16,245]]rec text: D1 rec score:0.923178

det boxes: [[117,269],[254,290],[246,337],[108,316]]rec text: -TM241:VO rec
score:0.761900
det boxes: [[157,360],[347,345],[351,387],[161,402]]rec text: -TM241:COMO rec
score:0.852212
det boxes: [[119,471],[268,497],[259,544],[111,518]]rec text: -TM241:VO- rec
score:0.773561
det boxes: [[12,569],[84,569],[84,611],[12,611]]rec text: NC rec score:0.960080

det boxes: [[103,644],[152,644],[152,683],[103,683]]rec text: -T rec
score:0.539720
det boxes: [[2,702],[85,702],[85,758],[2,758]]rec text: NC rec score:0.986101
det boxes: [[115,784],[168,784],[168,821],[115,821]]rec text:  rec
score:0.000000
det boxes: [[12,824],[140,831],[137,893],[9,886]]rec text: COMO rec
score:0.875429
det boxes: [[174,913],[337,903],[340,953],[176,962]]rec text: -TM241:11 rec
score:0.841814
det boxes: [[160,996],[325,984],[329,1029],[164,1041]]rec text: -TM241:12 rec
score:0.888785
det boxes: [[6,1071],[63,1071],[63,1120],[6,1120]]rec text: 10 rec
score:0.938446
det boxes: [[187,1130],[337,1141],[333,1190],[183,1179]]rec text: TM241:13 rec
score:0.920443
det boxes: [[16,1224],[68,1224],[68,1284],[16,1284]]rec text: 1 rec
score:0.962844
det boxes: [[12,1299],[63,1299],[63,1344],[12,1344]]rec text: 12 rec
score:0.413053
det boxes: [[106,1355],[250,1381],[242,1429],[98,1403]]rec text: -TM241:V14
rec score:0.795149
det boxes: [[167,1453],[343,1449],[344,1496],[168,1500]]rec text: -TM241:COM1
rec score:0.878773
det boxes: [[156,1614],[310,1590],[318,1641],[164,1665]]rec text: TM241:14 rec
score:0.795654
det boxes: [[115,1721],[253,1745],[245,1792],[107,1768]]rec text: -TM241:01
rec score:0.815473
det boxes: [[110,1812],[236,1834],[228,1879],[102,1858]]rec text: -TM241:Q2
rec score:0.717482
det boxes: [[122,1913],[250,1945],[238,1991],[110,1959]]rec text: -TMZA1:00
rec score:0.746011
det boxes: [[100,2011],[239,2039],[230,2089],[89,2060]]rec text: 241:1- rec
score:0.686419
det boxes: [[166,2146],[321,2121],[329,2168],[174,2193]]rec text: -T4241:15
rec score:0.825224
```

```
det boxes: [[559,2268],[754,2276],[751,2349],[556,2341]]rec text: M241 rec score:0.999164
det boxes: [[363,2366],[736,2382],[733,2440],[360,2424]]rec text: TM241CE40T rec score:0.996103
det boxes: [[27,2439],[261,2463],[253,2539],[19,2515]]rec text: atibility rec score:0.966913
det boxes: [[658,2463],[740,2463],[740,2518],[658,2518]]rec text: ce rec score:0.991547
det boxes: [[23,2542],[145,2549],[141,2610],[19,2603]]rec text: ce: rec score:0.965030
det boxes: [[658,2542],[735,2542],[735,2593],[658,2593]]rec text: er rec score:0.997671
det boxes: [[39,2637],[270,2649],[266,2727],[35,2715]]rec text:  rec score:0.000000
det boxes: [[348,2644],[379,2644],[379,2676],[348,2676]]rec text: 9 rec score:0.492025
det boxes: [[351,2697],[375,2697],[375,2716],[351,2716]]rec text: - rec score:0.113345
det boxes: [[409,2764],[589,2780],[585,2826],[405,2810]]rec text: Scan me rec score:0.993952
det boxes: [[382,3038],[714,3058],[710,3128],[378,3108]]rec text: Schneider rec score:0.998015
det boxes: [[457,3096],[703,3108],[700,3163],[454,3151]]rec text: SElectric rec score:0.956866
det boxes: [[16,3198],[129,3204],[125,3267],[12,3261]]rec text: COMI rec score:0.816508
det boxes: [[160,3281],[323,3278],[325,3329],[161,3332]]rec text: -TM241:16 rec score:0.828331
det boxes: [[160,3383],[319,3370],[323,3420],[164,3432]]rec text: -TM241:17 rec score:0.891662
det boxes: [[9,3448],[69,3448],[69,3507],[9,3507]]rec text: 14 rec score:0.972269
det boxes: [[152,3620],[333,3594],[341,3645],[160,3671]]rec text: -M241:CUM2 rec score:0.814113
det boxes: [[102,3695],[227,3720],[217,3767],[92,3742]]rec text: -M241-07 rec score:0.731979
det boxes: [[14,3782],[59,3782],[59,3824],[14,3824]]rec text: 16 rec score:0.952959
det boxes: [[167,3842],[332,3845],[330,3896],[166,3893]]rec text: -TM241:18 rec score:0.892993
det boxes: [[107,3912],[251,3932],[243,3985],[99,3964]]rec text: -N241:V24 rec score:0.699081
det boxes: [[10,4006],[66,4006],[66,4049],[10,4049]]rec text: 17 rec score:0.779501
det boxes: [[104,4087],[231,4112],[220,4162],[93,4136]]rec text: -24103 rec score:0.709776
```

```
det boxes: [[159,4187],[321,4187],[321,4238],[159,4238]]rec text: -1M241:19 rec score:0.857441
det boxes: [[10,4255],[138,4255],[138,4327],[10,4327]]rec text: COME rec score:0.793805
det boxes: [[108,4335],[249,4367],[235,4423],[95,4391]]rec text: -241 rec score:0.780834
det boxes: [[147,4451],[326,4438],[330,4487],[151,4501]]rec text: -TH241:110 rec score:0.894988
det boxes: [[32,4560],[246,4553],[249,4644],[35,4651]]rec text: TM241 rec score:0.998224
det boxes: [[159,4738],[326,4707],[334,4749],[167,4780]]rec text: -T241:111 rec score:0.700617
det boxes: [[9,4805],[62,4805],[62,4862],[9,4862]]rec text: 18 rec score:0.946872
det boxes: [[100,4898],[224,4929],[210,4981],[87,4950]]rec text: -T241:06 rec score:0.702381
det boxes: [[17,4994],[59,4994],[59,5041],[17,5041]]rec text: 19 rec score:0.979047
det boxes: [[99,5071],[239,5095],[230,5146],[89,5122]]rec text: -TM241:04 rec score:0.805946
```



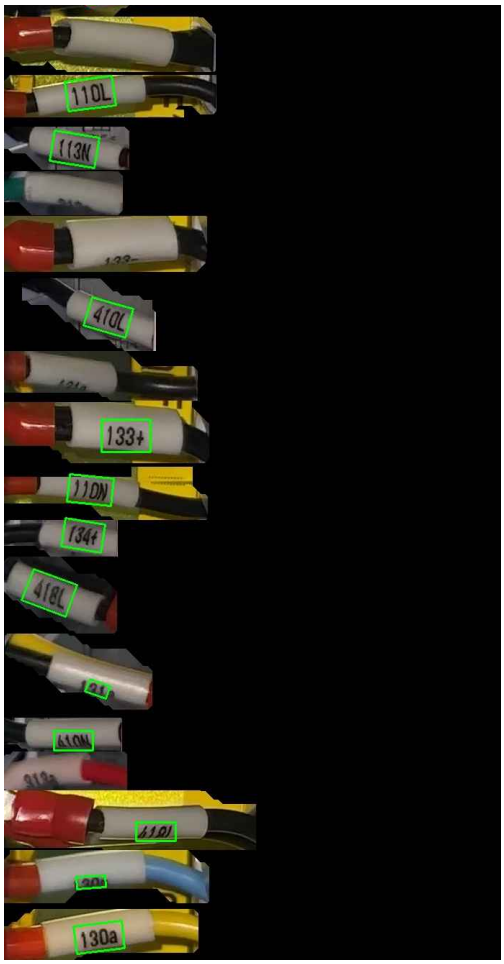


识别结果

```
cost : 0.16294026374816895 s
det boxes: [[73,12],[338,27],[330,183],[63,168]]rec text: XT15 rec score:0.999683
det boxes: [[24,347],[213,334],[218,390],[29,403]]rec text: -XT14:13 rec score:0.926431
det boxes: [[24,680],[209,672],[213,728],[26,734]]rec text: -XT14:11 rec score:0.922627
```

```
det boxes: [[40,812],[205,798],[209,854],[45,868]]rec text: -XT14:15 rec score:0.924615
det boxes: [[55,932],[219,935],[218,996],[53,993]]rec text: -XT14:18 rec score:0.934322
det boxes: [[40,1550],[206,1523],[216,1579],[50,1606]]rec text: -XT14:8 rec score:0.904030
det boxes: [[53,1651],[213,1651],[213,1707],[53,1707]]rec text: -XT14:17 rec score:0.947486
det boxes: [[79,1753],[250,1782],[240,1842],[69,1813]]rec text: -XT15:1 rec score:0.898311
det boxes: [[35,1912],[209,1912],[209,1967],[35,1967]]rec text: -XT15:2 rec score:0.911895
det boxes: [[45,2014],[216,2043],[206,2099],[35,2070]]rec text: -XT15:3 rec score:0.904153
det boxes: [[32,2281],[200,2263],[206,2322],[39,2340]]rec text: -XT14:7 rec score:0.880238
det boxes: [[66,2408],[245,2430],[237,2491],[58,2469]]rec text: -XT15:4 rec score:0.887178
det boxes: [[32,2654],[200,2626],[209,2687],[42,2714]]rec text: -XT14:8 rec score:0.893468
det boxes: [[29,2819],[216,2813],[218,2869],[30,2875]]rec text: -XT14:11 rec score:0.935541
det boxes: [[47,3149],[96,3149],[96,3207],[47,3207]]rec text: 8 rec score:0.995606
det boxes: [[45,3347],[94,3347],[94,3406],[45,3406]]rec text: 9 rec score:0.852599
det boxes: [[30,3545],[96,3545],[96,3608],[30,3608]]rec text: 10 rec score:0.997616
det boxes: [[32,3750],[94,3750],[94,3816],[32,3816]]rec text: 11 rec score:0.997870
det boxes: [[22,3946],[92,3946],[92,4016],[22,4016]]rec text: 12 rec score:0.999527
det boxes: [[22,4147],[91,4147],[91,4214],[22,4214]]rec text: 13 rec score:0.998755
det boxes: [[17,4343],[91,4343],[91,4412],[17,4412]]rec text: 14 rec score:0.998401
det boxes: [[21,4544],[92,4544],[92,4613],[21,4613]]rec text: 15 rec score:0.998512
det boxes: [[21,4746],[92,4746],[92,4815],[21,4815]]rec text: 16 rec score:0.998548
det boxes: [[19,4947],[89,4947],[89,5017],[19,5017]]rec text: 17 rec score:0.999239
det boxes: [[22,5150],[94,5150],[94,5218],[22,5218]]rec text: 18 rec score:0.998648
det boxes: [[27,5354],[68,5354],[68,5411],[27,5411]]rec text: 1 rec score:0.995555
```

```
28 det boxes: [[21,5555],[79,5555],[79,5628],[21,5628]]rec text: 2 rec
   score:0.998772
29 det boxes: [[29,5768],[81,5768],[81,5835],[29,5835]]rec text: 3 rec
   score:0.998775
```



识别结果

```
cost : 0.11083579063415527 s
det boxes: [[13,10],[175,15],[174,52],[12,47]]rec text: Schneider rec score:0.996893
det boxes: [[47,39],[167,43],[166,68],[46,64]]rec text: SElectric rec score:0.867213
det boxes: [[15,63],[152,67],[151,95],[14,91]]rec text: IC65N C16A rec score:0.920211
det boxes: [[12,229],[177,232],[177,262],[12,259]]rec text: Schneider rec score:0.997690
det boxes: [[53,251],[171,256],[170,281],[52,276]]rec text: SElectric rec score:0.940187
det boxes: [[17,276],[142,280],[141,309],[16,305]]rec text: iC65N C4A rec score:0.935632
det boxes: [[16,439],[173,443],[172,478],[15,474]]rec text: Schneider rec score:0.998638
det boxes: [[53,465],[170,468],[169,494],[52,491]]rec text: OElectric rec score:0.847988
det boxes: [[13,495],[141,499],[140,527],[12,524]]rec text: iC65N C4A rec score:0.934614
det boxes: [[15,655],[169,657],[169,682],[15,680]]rec text: Scnneider rec score:0.937288
```

```
det boxes: [[50,670],[165,674],[164,703],[49,699]]rec text: Delectric rec score:0.865721
det boxes: [[16,698],[136,702],[135,729],[15,725]]rec text: jC65N D6A rec score:0.861412
det boxes: [[13,846],[171,850],[170,885],[12,881]]rec text: Schneider rec score:0.998609
det boxes: [[50,872],[168,876],[167,904],[49,900]]rec text: SElectric rec score:0.908258
det boxes: [[29,913],[162,916],[162,944],[29,941]]rec text: iC65ND10A rec score:0.940731
det boxes: [[13,1048],[117,1048],[117,1128],[13,1128]]rec text: F18 rec score:0.994459
det boxes: [[22,1145],[74,1145],[74,1209],[22,1209]]rec text: 13 rec score:0.896445
det boxes: [[10,1227],[41,1227],[41,1277],[10,1277]]rec text: 6 rec score:0.869894
det boxes: [[46,1294],[123,1302],[115,1381],[37,1373]]rec text: QF rec score:0.977132
det boxes: [[10,1386],[111,1386],[111,1467],[10,1467]]rec text: M11 rec score:0.995158
det boxes: [[58,1507],[82,1520],[72,1537],[49,1524]]rec text: R1 rec score:0.486743
det boxes: [[115,1800],[163,1822],[149,1849],[101,1828]]rec text: 131c rec score:0.818394
det boxes: [[96,1872],[150,1877],[146,1922],[92,1917]]rec text: 110L rec score:0.922502
det boxes: [[83,1976],[143,1958],[155,1995],[94,2013]]rec text: 130b rec score:0.994865
det boxes: [[204,1970],[250,1977],[246,2005],[200,1998]]rec text: 9 rec score:0.517990
det boxes: [[119,2045],[185,2060],[176,2102],[109,2086]]rec text: 131D rec score:0.886535
det boxes: [[77,2261],[144,2261],[144,2307],[77,2307]]rec text: 231a rec score:0.995538
det boxes: [[111,2515],[157,2508],[162,2541],[118,2548]]rec text: 119L rec score:0.903514
det boxes: [[84,2657],[149,2649],[155,2690],[89,2698]]rec text: 110L rec score:0.968949
det boxes: [[70,2725],[132,2735],[125,2777],[63,2767]]rec text: 113N rec score:0.935571
det boxes: [[122,2957],[179,2973],[168,3013],[110,2996]]rec text: 410L rec score:0.979038
det boxes: [[135,3127],[203,3127],[203,3172],[135,3172]]rec text: 133+ rec score:0.979463
det boxes: [[91,3203],[152,3209],[148,3247],[87,3241]]rec text: 110N rec score:0.846091
```

```
35 det boxes: [[85,3264],[140,3273],[134,3312],[79,3303]]rec text: 134t rec
   score:0.853025
36 det boxes: [[41,3335],[101,3357],[85,3401],[24,3378]]rec text: 418L rec
   score:0.952032
37 det boxes: [[119,3488],[147,3498],[141,3515],[112,3505]]rec text: 2 rec
   score:0.330990
38 det boxes: [[69,3560],[123,3560],[123,3587],[69,3587]]rec text: SLON rec
   score:0.434535
39 det boxes: [[183,3687],[238,3687],[238,3713],[183,3713]]rec text: 6181 rec
   score:0.497699
40 det boxes: [[100,3763],[140,3761],[141,3777],[101,3780]]rec text: 30 rec
   score:0.760968
41 det boxes: [[96,3832],[163,3824],[167,3862],[101,3870]]rec text: 130a rec
   score:0.997343
```

10.模型及trt文件

new_ocr.zip
16.55MB

```
0
1
2
3
4
5
6
7
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9
:
;
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=
>
?
@
A
B
C
D
E
F
G
H
```

qx_ocr_dict.txt

替换原来的key_txt

参考文档

https://www.paddlepaddle.org.cn/fastdeploy-api-doc/python/html/vision_results_en.html

https://github.com/PaddlePaddle/FastDeploy/tree/release/1.0.7/examples/vision/ocr/PP-OCR/cpu-gpu/python

https://www.paddlepaddle.org.cn/fastdeploy-api-doc/python/html/ocr.html

https://baidu-paddle.github.io/fastdeploy-api/python/html/_modules/fastdeploy/runtime.html#RuntimeOption.enable_trt_fp16

去模糊构建

1.安装

```
git clone https://github.com/megvii-research/NAFNet
cd NAFNet
pip install -r requirements.txt
python setup.py develop --no_cuda_ext
```

```
addict
future
lmdb
numpy
opencv-python
Pillow
pyyaml
requests
scikit-image
scipy
tb-nightly
tqdm
yapf
```

requirements.txt

2.脚本文件

2.1推理图片

infer2.py

2.2推理视频

infer_video.py

3.辅助代码及配置

deblur.zip
3.49GB

这里面包含了模型及模型配置和数据，需将这些内容添加到集成代码中。

4.集成

inspector.py