

C-ANLS Description Notes

secure image processing package for smart car.

Release 7.8.0 (RC)

Last revised July 18, 2018

Resources Documents

[cfg-anls.h](#) source configuration file [original image information and processed image array.](#)
[extro-anls.h](#) external executable file [execution function,track information and parameters.](#)

[status] - analysis library

[exin-anls.c](#) information transfer station [data source address matching, open INFO standardization and vehicle status recording.](#)
[ex_mark.h](#) foreign symbol library [open and transparent road signs used to indicate road location.](#)
[core_fsm.h](#) main analysis state machine [image processing main state machine for global RCG.](#)
[sta_basic.h](#) foundation treatment [full edge search, corner capture and basic midline calculation method.](#)
[sta_cross.h](#) track cross treatment [cross independent state machine; support for continuous cross road handling.](#)
[sta_island.h](#) track island treatment [rotary island independent state machine.](#)
[sta_block.h](#) obstacle treatment [obstacle independent state machine designed for long distance RCG.](#)
[anls_mid.h](#) midline processing [get horizontal deviation \(using global dynamic algorithm\), curvature, slope and so on.](#)

[suprc] - support library

[common.h](#) common macro definition header file [c-anls common header file.](#)
[sup_math.h](#) mathematical operation support [used to improve the speed of complex floating point operations. such as SIN function, ATAN function, SQRT and so on.](#)
[sup_draw.h](#) path analysis image rendering [provide the corresponding method for drawing and analyzing and debugging the image.](#)
[sup_line.h](#) line definition and operation [line segmentation, merging and analysis algorithm.](#)
[sup_exfunc.h](#) global analysis function set [path analysis and processing function set based on the whole graph.](#)
[sup_ring.h](#) time record ring; data ring [the final solution to the track record of the racing car;data continuity \(defect: time delay\).](#)
[sup_tlock.h](#) trust lock(assurance options) [used to reduce or even eliminate accurate data mutations in real environments.](#)

Instruction Manual

- To modify the corresponding configuration information in [cfg-anls.h](#) (code-1 and code-2)

| code - 1 - configuration switch

```
#define IMG_DRAW_EN (Switch_1 == Switch_ON) //analysis of image drawing switch
#define IMG_SCALE_EN (Switch_2 == Switch_ON) //dial drawing switch
```

| code - 2 - configuration images

```
#define IMG_WHITE (1) //white definition
#define IMG_BLACK (0) //black definition

#define IMG_HEIGHT (60)//hight of image
#define IMG_WIDTH (120)//width of image

//judge whether a element is white
//Image_Cache,Images are stored in a two - dimensional array called Image_Cache
#define POINT_WHITE(x,y) (Image_Cache[y][x] == IMG_WHITE)
```

- Loading c-anls requires only [extro-anls.h](#) to be included in the corresponding file (code-3)

| code - 3 - invocable function

```
extern void anls_init(void); //初始化(匹配数据地址,刷新启动机制)
extern void anls_anls(void); //分析(主要路径分析函数)
extern void anls_fresh(void); //刷新(只刷新状态机功能,不对调试中的参数进行处理)
extern void anls_timer(void); //时间计数器(推荐置于3ms中断中)
extern TMND anls_state(int T); //T-时间节点 0-now 1-last 2-...
extern ARAY anls_image(void); //返回路径数组首地址(*hdp),rows*cols

extern ANLS_INFO pAnls; //分析获得的赛道信息
```