

Intelligent Traffic System

TCM403-A(AFR) Debugging Manual

Product:	TCM403
Publisher:	Jeff.Cao
Version:	V1.0
Date:	20191115



www.hikvision.com/europe product.eu@hikvision.com TCM403-A has two different kinds of types, including 0832 and 3813. Here we will introduce TCM403-

A(AFR)/0832 debugging steps. Device activation not included below.

- 1. Upgrade firmware
 - 1) First, import alg file.

2) Choose to upgrade in "Browse", upgrade file browse find box. the upgrade process takes about 1 minutes, after the completion of the camera upgrade selection to restart.

3) After the restart, select "Soft Reset", restart the camera.

Live View	Picture	Log	Configuration	🤱 admin 🛶 Logout
Device Status	Mainte	enance		
👻 Local Configur	ration			
Device Configu	uration	eboot		
Maintenan	ice l	Reboot	Reboot the device.	
System Co	nfiguration			
Encoding a	and Storage	efault		
Text Overla	ay	Soft Reset 3	Reset all the parameters, except the IP param	neters and user information, to the default settings.
Application	Mode	Hard Reset	Restore the device to the factory default statu	s.
Capture Pa	arameters			
Image Para	ameters E	xport Configuration File		
 Custom Inte 	erface (Export		
Exception		Export		
O User Mana	gement In	aport Configuration File		
		nort comparation the	Immed All	
		porting method		
	0	onfiguration File		Browse Import
	St	tatus		
		norade		
		pyruus		
	U	pgrading File		Browse Upgrade
	St	tatus		2
	N	ote : The upgrading ma	y take 1 to 10 minutes. Please do not power	off the device during upgrading.

2. System Configuration>TCP/IP: change device IP as you want.

HIKVISION	IDS-TCM	403-4	AFR										?
Live View	Pictur	re	e Log		Configuration		💄 admin 🥪 L				🛶 Logout		
 Device Status Local Configu 	ration	Device DST	Information TCP Messag	Installation e	Parameters	Serial Ports	TCP/IP	Port	HTTPS	Time	Traffic Parameters	Service	
Device Config System M	aintenance	NI	C Settings										
System C	onfiguration	NI	C Type		10M/100M/1	000M Self-ada	otive 🗸						
Encoding	and Storage	-	DHCP				_			10			
Text Over	ау	IP	v4 Address		192.168.1.24			Cr	ange	IP as	s you want		
Application	n Mode	IP	v4 Subnet Mas	sk	255.255.255	.0	- T						
Capture P	arameters	IP	v/ Default Gat	00/21/	102 169 1 1								
O Image Par	ameters	<u> </u>	v4 Delault Gat	eway	132.100.1.1								
O Custom In	terface	IP	v6 Mode		Auto-Obtain		~						
Exception		IP	v6 Address										
O User Mana	agement	IP	v6 Default Gat	eway									
		IP	v6 Subnet Mas	sk									
		M	AC Address		bc:ba:c2:fc:0	8:45							
		M	ти		1500								



3. System Configuration>Time: Select the right time zone and synchronize device time with PC.

HIKVISION	iDS-TCM	1403-	AFR									0
Live View	Pictu	re	Lo	og	Config	uration					💄 admin	🥪 Logout 🔳
 Device Status Local Configu 	s uration	Device DST	e Information TCP Messa	Installat ge	ion Parameters	Serial Ports	TCP/IP	Port	HTTPS	Time	Traffic Parameters	Service
Device Config System M	guration laintenance	Т	ime Settings		1	10) Amsterdar	n Berlin I	Dome I	Daris V	_		
System C	Configuration	s	vnchronizatior	Mode	Manual Sv	nchronization		Nome, 1	ans +			
 Encoding Text Over 	rlay	D	evice Time		2019-10-29	T19:09:54						
Applicatio	on Mode	S	et Time		2019-10-29	T19:09:49		Syncl	nronize wit	h PC		
Capture F	Parameters				-			022				2
Image Pa	irameters											-
O Custom Ir	nterface											Save
Exception	1											
O User Man	nagement											

4. System Configuration>DST: If this country has daylight summer time, then need to enable DST function, set start time and end time, and set DST bias which is usually 60 mins.

Live Vi	ew Pictu	re Lo	og Configu	uration	🚨 admin 🛶 Logo				
 Device Local (Status Configuration	Device Information	Installation Parameters	Serial Ports	TCP/IP	Port HTTPS	Time	Traffic Parameters	Service
Device	Configuration	Enable DST Start Time	Apr.	✓ First	✔ Sun	✔ 02	~	Set start t time, and	ime and end set DST bias
O E	ncoding and Storage	End Time	Oct.	✔ Last	✔ Sun	✔ 02	~	as 60 mins	•
O T	ext Overlay	DST Blas	60min	~					
O A	pplication Mode			_				-	
OC	apture Parameters								
() In	nage Parameters								Save
0 E	xception								
O U	lser Management								

5. Encoding and Storage>FTP: enable FTP if you need; set third party platform IP address, select directory structure as save in parent directory, set port and parent directory as custom, set user name and password; Select upload plate close-up if you want; Set the name rule by choosing the information you want to show.

Live View	Picture	L	Log Configuration				🤽 admin	🛶 Logou	
 Device Status Local Configuration Device Configuration System Maintenan System Configurat Executing and State 	ce 1	Upload to FTF	Image Encoding Itional Information	ROI Record	d Schedule	Redundant Stora	ge FTP		
Text Overlay Application Mode	2	Server Address	192.168.2.88	5		Directory Structure	Save in Pare	nt Dii 🗸	
Capture Paramete Image Parameters Exception	rs	Port User Name	21 [targasystem1			Parent Directory Level 2 Directory	Custom None	✓✓	
 User Management 		Password Confirm Passw	•••••••••	•		Level 3 Directory Level 4 Directory	None None	~	
	3	Upload Pla	ate Close-up			Separator:	-		~
	4	No. 1 2	Name1 Name2	me E	evice IP Ad	dress	Elements		

6. Application mode: only smart mode is available; select lane number; choose capture type as motor vehicle if you want to capture only motor vehicle, while choose all if you want to capture motorbikes at the same time; select lane direction; draw LPR area and finally click save.

Live View	Picture	Log	Configuration		💄 admin 🛶 Logout 💼
 Device Status Local Configur Device Configur 	ration Applic	cation Mode Sm cation Mode Sm	art Mode 🗸 🗸	Work Mode: Smart Mode	
System Ma	intenance nfiguration	Lanes 2	~	:0-29-2019 Tue 19:11:42	
 Encoding a Text Overlage 	nd Storage Captu	re Type Moto	or Vehicle 🗸		Lane Right Borderline
Application Capture Pa	n Mode irameters Lane	Direction Unk	nown 🗸		
 Image Para Custom Inter 	erface	d Lane No. 1			Lane Line2
 Exception User Manager 	gement			Lane	ine1
					TRAFFIC
				Draw LPR Area	
					Default Save

7. Draw lane line 1 2 and lane right borderline to make sure all the vehicle plate numbers are totally included in this area, because algorithm will not recognize the part exceeding the detection area.



8. Capture Parameters>Flash Light Parameters: IO1 is for internal light(IR), while IO2 and IO3 are for external supplement light; only constant light mode is available; Set duty ratio from 0 to 70 according to real light brightness requirement; the larger the number, the greater the intensity of IR lamp, generally recommended 10-15, if the license plate is too overexposure, you can reduce this parameter. Choose control constant light by schedule and select start time and end time.

Live View	Picture	Log	Configu	ration		đ	💄 admin 🛶 Logout 💼
 Device Status Local Configuration 	Licens	e Parameters Flas	h Light Parameters	Entrance and Exit	White-Black L	st Vehicle Feature	Context IPC
 Device Configu System Mai System Configure 	Iration Fl intenance IO:	ash Light Parameter	rs is for internal lig	ht, IO2 is for exte	rnal supplem	ent light	
 Encoding an Text Overla Application 	nd Storage IO y Du Mode	Output Mode ty Ratio	Constant Light	Mode 🗸] Set o to re norm	luty ratio from 0 to al light brightness al is 10-15	o 70 according requirement,
Capture Para	imeters	Control Constant Ligi Control Constant Ligi	ht by Brightness		Ch	oose control cons	stant light by schedule
 Exception User Manage 	gement	Start Time End Time	17:00 08:00			a select start time	
	Co	py to:	02				
							Save

9. Enable color and brand recognition

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If the brand(car logo) needs to be recognized, in order to ensure the recognition rate, it is recommended to install the camera in the middle of the lane; Car colors can only be identified during the day, and only black, white, gray in night.

HIKVISION	iDS-TCM403-	AFR		0
Live View	Picture	Log	Configuration	🤱 admin 🛶 Logout 📻
 Device Status Local Configur Device Configur System Ma System Co Encoding a Text Overla Application 	ation uration intenance nfiguration nd Storage ivy Mode	e Parameters Fic ehicle Feature] Vehicle Color Reco] Enable Car Logo R	ash Light Parameters Entrance and Exit W ognition Recognition Ensure the model file is imported co	/hite-Black List Vehicle Feature Context IPC
Capture Pa	arameters			Save
Custom Inte	erface			
O User Manaj	gement			

10. Image Parameters>General Parameter: normally set all the parameters as default. You can change

the sensitivity value of light compensation on license plate if the license plate is not bright enough.

Live View	Picture	e Log	Configuration		💄 admin 🛶 Logout
Device Status		General Parameter Video	Picture ICR		
Local Configur	ration			Normally set th	e parameters as default
Device Configu	uration	10 10 0/10 7 10-14	10	Saturation	0
O System Ma	aintenance	10-29-2019 Tue 19:14:	10	Sharpness	50
O System Co	onfiguration			White Balance	Auto WB1 🗸
Encoding a	and Storage			WDR Mode	Off
Text Overlage	ay			Iris Mode	Manual
Application	n Mode			Drichterer Enhand	
Capture Pa	arameters	a total a		Engniness Ennand	
Image Para	rameters				50
Custom Int	terface			Enable Defog	
O Exception				Light Compensation	ation on Licence Plate
🔘 User Mana	agement		TRAFFIC	Sensitivity	
		Capture Test		Enable Gamma	a Correction
		Hint: Test the function of	triggering the camera to capture.		

11. Image Parameters>Video: the default shutter speed value is 4000, and you can change it if there is image ghosting(normally can be configured to 1000-2000, is the best). The smaller the value is, the better result we get to solve image ghosting, which will reduce the image brightness. Set gain value according to vehicle license plate brightness during night time(0-50). Finally you need to set video standard as 50HZ or 60HZ according to the real situation in the project location country.

Live View	Picture	Log	Configuration		💄 admir	n 🛶 Logout 👔
 Device Status Local Configuration 	General	Parameter Video	Picture ICR	-		
Device Configuration	1	-29-2019 Tue 19:14:20		Brightness		50
System Maintenal System Configura	tion			Contrast		55
 Encoding and Sto 	rage			Shutter Speed (µs)	1000	25
O Text Overlay				Gain		35
O Application Mode				3D DNR	Normal Mode	
O Capture Paramete	ers			3D DNR Level		50
Image Parameter	s			2D DNR		
O Custom Interface				2D DNR Level	0	50
Exception				Enable Slow Shut	ter	
O User Managemen	t		TRAFFIC	Video Standard	50hz	~
		Capture Test				
	(C)Hi	nt: Test the function of tri	opering the camera to capture			

12. Image Parameters>ICR: start ICR mode if the internal light type is IR. It is recommended to select scheduled switch if you start ICR mode.

Live View	Picture	Log	Configuration		🙎 admin	I 🛶 Logout 💼
 Device Status Local Configur Device Configur 	G	eneral Parameter V	ideo Picture ICR			٦ ٦
System Ma	intenance					
O System Cor	nfiguration	NO.	Day/Night Mode	Start Time	End Time	
Encoding a	nd Storage	1	Day 🗸	07:30	17:00	
Text Overla	y	2	Night 🗸	17:01	07:29	
Application	Mode					
O Capture Pa	rameters					-
Image Para	ameters					
Custom Inte	erface					
Exception						
O User Manag	gement					
						Save

Note:

If ICR enables automatic switching, you must also enable "Capture Parameter"> "Flash light Parameter"> "Control constant Light by Brightness", the threshold of the fill light will be synchronized to the ICR threshold

Control Constant Light by Brightness

13. Finally, go to live view to finish lens adjustment, including zoom in or zoom out, focus and iris adjustment. After that, click live traffic statistics to check captured pictures.



14. After you click live traffic statistics in step 12, it will pop up the interface as below. First, you need to choose level 2 armed to arm camera. Second, you can find all the results in capture list and there is the directory at the right side where the captured pictures are stored.



15. Go to the directory in step13 to find the captured pictures. Use windows paint tool to

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open one picture and check the license plate number height as below. If the number height is not between 25 and 30, then you need to repeat step13 to step14.



If you have any question, you can contact *Europe Traffic Team*. We are looking forward to your reply.

