FXCAM camera family for number plate recognition

FXCAM advanced camera technology

All-in-One camera family for ANPR/LPR applications

FXCAM camera series

FXCAMd 102c
Professional smart camera

FXCAMd 102c includes an embedded PC with OCR software within the camera housing. Simple and easy IP connectivity. Special features: adaptive auto-focus, auto-brightness control functionality, built-in light sensor. There is no need for on-site setting after installation, due to its full remote control feature. FXCAMd 102c can be used at all continents, thanks to the high performant OCR engine. The applied world leader CARMEN® license plate recognition technology covers over 200 countries. Full processing - like time stamp - is done inside the unit. Images, license plate texts and time are stored in a database within the FXCAMd 102c memory with easy access through a built-in web-server.

The built-in software intelligence and hardware modules are based on ARH's 20 years experience in the field of OCR and ANPR/LPR camera technology. System developers are able to upload their own software to the camera PC. Outdoor construction (IP67) even for extree conditions, designed for 24/7/365 usage.

Extra Illuminator for FXCAMd series

There are special usage environments. At certain cases FXCAM cameras built-in, powerful illumination needs to be supported by external illuminators. When the goal is not only to read license plates but also to provide an overview image of the vehicle, extra illuminator could be the solution. Camera effective range can be also extended with these optional devices. Improper illumination is a common effect in cases where reflective and non-reflective license plates appear on the road and both kinds should be processed simultaneously. A solution for such need is a pair of extra illuminator to get quality images for both plate types. Synchronization system with FXCAMd cameras are done in ARH factory.

FXCAM cameras designed for ANPR/LPR applications

It is a usual requirement in today ANPR / LPR systems to achieve recognition accuracy close to 100%. The camera itself is a key element from system performance point of view.

The quality of the captured image has got a major effect in the read-rate of the complete application.

Industry experience shows that maximum OCR performance can not be achieved with general purpose cameras – or not even with devices simply modified for ANPR purposes.

The FXCAM advanced camera technology specially developed for number plate reading applications.

All models are designed to capture quality images for fast and accurate OCR processing.

FXCAM camera family is ideal for both freeflow traffic (motorways, red-light enforcement, congestion, etc.) and access control (parking access control, parking management, etc.) applications.

All-in-One FXCAM design means outstanding camera module, powerful illuminator and synchronizer unit, all in a single weatherproof housing. The FXCAM provides optimal image quality in various extreme operating environments like sunlight reflections and glare or exposure due to car headlights.

All the cameras are heavy duty and robust, designed for continuous outdoor usage (IP67 rated). Installation and startup process is easy and quick. Integrated high-power IR illuminator enables to be recognized the license plates clearly without disturbing the driver.

While illuminating power is high, consumption is kept low, to make possible operating from batteries.

ARH Adaptive Recognition Hungary

ARH Adaptive Recognition Hungary

Technical specifications
of FXCAM ANPR/LPR camera series

	FXCAMd 102	FXCAMd 202
Camera Sensor	B&W, Global shutter CMOS	B&W, Global shutter CMOS
Resolution	752x480, ROI support	752x480, ROI support
Lens	Motorized 3-36mm	Motorized 3-36mm
Iris, focus	SW adjustable	SW adjustable
Operational range	3-20m	3-20m
Filter	IR pass, included	IR pass, included
Illumination	Built-in IR, 850 nm	Built-in IR, 850nm
LED intensity	SW adjustable time & voltage	SW adjustable time & voltage
Synch system	Internal	Internal
Frame Rate per second (FPS)	60FPS	60FPS
Communication speed	~20FPS (at full size images)	~30FPS (at full size images)
Shutter time	SW adjustable	SW adjustable
	1/100s max	1/100s max
	1/30000s min	1/30000s min
Communication interface	Ethernet cable 100Mbit or USB (FXCAMd 102u)	Ethernet cable 100Mbit or USB (FXCAMd 202u)
Output	RAW images	RAW images
Ports	RS232/Serial	RS232/Serial
	GPI for trigger in (4-12 VDC)	GPI for trigger in (4-12V DC)
Power input	Reverse polarity protection	Reverse polarity protection
AC	24-28V AC	-
DC	30-36V DC	12V DC
Consumption	15W max	15W max
Heating	-	-
Compliance	CE, FCC, RoHS	CE, FCC, RoHS
Temperature Range	-20°C to +55°C	-20°C to +55°C
IP class	IP 67	IP 67
Dimensions (inc.sunshield)	330 x 157 x 150 mm	330 x 157 x 150mm
Weight (w/o bracket)	3.0kg / 4.0kg (inc. sunshield)	3.0kg / 4.0kg (inc. sunshield)
Default housing color	RAL 9007	RAL 9007
Sunshield	Included	Included
Wall mount bracket	Included	Included
Supported OS	Windows XP 32/64bit	Windows XP 32/64bit
	Windows Vista 32bit	Windows Vista 32bit
	Windows 7	Windows 7
	Linux 32/64bit	Linux 32/64bit
Supported programming languages	C, C++, C#, VB.NET, Java	C, C++, C#, VB.NET, Java
Extra features	Auto focus for easy installation	Auto focus for easy installation
	Auto brightness control	Auto brightness control

Technical specifications are subject to change without prior notice

	FXCAMd 102c	FXCAM IBW2000
Camera Sensor	B&W, Global shutter CMOS	B&W, Interlace 1/3" CCD 768x576 (PAL)
Resolution	752x480, ROI support	Effective 768x288 (PAL/2)
Lens	Motorized 3-36mm	-
Iris, focus	SW adjustable	Fixed, 12/16/25/35/50mm
Operational range	3-20m	Manual, factory preset
Filter	IR pass, included	3-13m
Illumination	Built-in IR, 850 nm	IR pass, included
LED intensity	SW adjustable time & voltage	Built-in IR, 850 nm
Synch system	Internal	Fixed
Frame Rate per second (FPS)	60 FPS	Internal
Communication speed	~20 FPS (at full size images)	25FPS
Shutter time	SW adjustable	Factory preset
	1/100s max	1/10000s for odd field
	1/30000s min	1/100000s for even field
Communication interface	Gigabit Ethernet	RG59, BNC coaxial
Output	Image, license plate, timestamp	PAL 1Vp-p 75Ohm
Ports	RS232/485 Serial	-
	GPI for trigger in (4-12V DC)	-
Power input	Reverse polarity protection	Reverse polarity protection
AC	24-28V AC	24-28V AC
DC	30-36V DC	24-40V DC
Consumption	17-48W (depends on heating)	7-25W
Heating	Included	Included
Compliance	RoHS	RoHS
Temperature Range	-10°C to +50°C	-20°C to +55°C
IP class	IP 67	IP 66
Dimensions (inc.sunshield)	290 x 218 x 155mm	240 x 178 x196 mm
Weight	5.5kg	4.5kg
Default housing color	RAL 9007	RAL 9200
Sunshield	Included	Included
Wall mount bracket	Included	Included
Supported OS	Factory installed Fedora Core 11*	N/A
Supported programming languages	HTML commands	N/A
Extra features	Auto focus for easy installation	Plug & Play
	Auto brightness control	
	OCR included in the camera	

Technical specifications are subject to change without prior notice

Optional, customized (OEM) cameras

ARH is dedicated to meet all the customer needs and ready to design modified product versions to meet specific project requirements.

Available options: color sensor, white light LED, wide range of LED selection (15-60 degree), customized housing color.

Free feel to contact us.

FXCAMd 102 & 202 key features

☑ Motorized zoom, focus and iris control
☑ Adjustable shutter, IR flash time & LED intensity control
☑ Controllable bandwidth usage and adjustable frame rate
☑ Direct interface for HW triggering
☑ Industrial design and low consumption

FXCAMd 102c key features

☑ Embedded world leading Carmen® ANPR software
☑ Adjustable shutter, IR flash time & LED intensity control
☑ Image and recognition result can be accessed easily through internet browser
☑ Ideal solution for sites with limited infrastructure

FXCAM IBW2000 key features

☑ Proven analog camera technology
☑ Factory preset focal distance
☑ Factory preset day & night mode
☑ No moving parts
☑ Hidden cables

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