ISO17215 Overview

Software Version 3.0.41 (Basic+) / 1.1.5 (Smart AI/ark-iso17215-server) / 1.0.0 (Equinox)

Settings

The settings for ISO17215 can be found on the camera website under Network>Ethernet>ISO17215. Of course, these settings are also available via the REST API ().

- **General port:** General port for ISO17215 communication. The default port is 17215.

- **Service discovery IP:** IP which is used to broadcast service discovery messages. The default is 255.255.255.255. If this is set to another value than 255.255.255.255 the camera will try to join that IP as a multicast group.

- **Service discovery port:** Port used for service discovery communication. The default port is 30490. It is also possible to set the general port and the service discovery port to the same value.

- **Instance ID:** Instance ID of the device. Default value is 0xFFFF. This special value means that the actual instance ID will be the last byte of the device's IP address (e.g. for IP 192.168.0.76 the instance ID will be 76). The website and REST API () will display the instance ID not as 0xFFFF but as the actual instance ID. To set the instance ID to the special value 0xFFFF you can set the instance ID on the website to the last byte of the IP address or set the ISO17215 instance ID register to 0xFFFF.

- **Save data to flash (0x0112; only for Basic+, dummy register on other cameras):** When set to enabled with every subscribe and unsubscribe the settings of the camera are saved to flash. This means when you subscribe a ROI and then restart the camera the same ROI will still be streamed. This saving to the flash introduces a rather large delay between subscribing ROIs so it is generally not recommended to enable this setting. When set to disabled the camera settings are not saved on subscribe/unsubscribe and also ROIs are not saved to flash when doing setROI. When set to 'Only ROI' there is no saving on subscribe/unsubscribe but ROIs are saved on setROI. Default is 'Only ROI'.

Implemented Functions

The following functions are implemented and work as described in the standard.

- getDataSheet (MethodID 0x0001)
- getCamStatus (MethodID 0x0002)
- setCamMode (MethodID 0x0003)
- setCamExclusive (MethodID 0x0011)
- eraseCamExclusive (MethodID 0x0019)
- setRegionOfInterest (MethodID 0x0101)
- setRegionsOfInterest (MethodID 0x0102)
- getRegionOfInterest (MethodID 0x0103)
- getRegionsOfInterest (MethodID 0x0104)
- eraseRegionOfInterest (MethodID 0x0109)
- setVideoFormat (MethodID 0x0111)
- getVideoFormat (MethodID 0x0113)
- eraseVideoFormat (MethodID 0x0119)
- SubscribeROIVideo (MethodID 0x0131)
- UnSubscribeROIVideo (MethodID 0x132)
- setCamControl (MethodID 0x0201)
- getCamControl (MethodID 0x0203)
- setCamRegister (MethodID 0x301)
- setCamRegisters (MethodID 0x302)
- getCamRegister (MethodID 0x303)
- getCamRegisters (MethodID 0x304)

Other functions are not implemented and the camera will return RC_E_UNKNOWN_METHOD.

Service Discovery

On startup the camera immediately starts sending service discovery offer messages to the service discovery IP. For several seconds it will send an offer every second and after that only every 10 seconds. When the camera receives a service discovery find message on the service discovery port it will either send a service offer directly to the sender of the find message if the unicast flag was set or it will send to service discovery IP if the unicast flag was not set. When the camera is restarted using the setCamMode function it will broadcast a stop offer message before rebooting. This does not happen when the camera is rebooted via the website/REST API ().

Registers

Address	Name	Value	Description
——-	———————	———	——————————-
0x0100	IP address 0	0xC0A8	The first two bytes of the IP address
0x0101	IP address 1	0x004C	The last two bytes of the IP address
0x0102	Subnet 0	0xFFFF	The first two bytes of the subnet mask
0x0103	Subnet 1	0xFF00	The last two bytes of the subnet mask
0x0104	Gateway 0	0x0000	The first two bytes of the default gateway
0x0105	Gateway 1	0x0000	The last two bytes of the default gateway
0x0106	DNS () 0	0x0808	The first two bytes of the primary DNS () server
0x0107	DNS () 1	0x0808	The last two bytes of the primary DNS () server
0x0108	DNS () secondary 0	0x0808	The first two bytes of the secondary DNS () server
0x0109	DNS () secondary 1	0x0404	The last two bytes of the secondary DNS () server
0x010A	DHCP	0x0000	DHCP disable/enable (0/1)
0x010B	MTU	0x05DC	Maximum transmission unit
0x010C	MAC 0 (read-only)	0x18FD	The first two bytes of the MAC (read-only)
0x010D	MAC 1 (read-only)	0xCBC0	The middle two bytes of the MAC (read-only)
0x010E	MAC 2 (read-only)	0x0112	The last two bytes of the MAC (read-only)
0x010F	ISO17215 instance ID	0xFFFF	-
0x0110	No stream at boot	0x0000	Disable/enable (0/1) all streams on boot
0x0111	Selected ROI	0x0000	Select a ROI (0=none, 1-9=ROI1-9, 10=ROI 0) to stream on boot
0x0112	ISO save data	0x0002	When to save camera stream settings (0=disabled, 1=enabled, 2=only roi); Only Basic+!
0x0200	H264 stream IP address 0	0xC0A8	The first two bytes of H264 stream destination IP
0x0201	H264 stream IP address 1	0x0096	The last two bytes of H264 stream destination IP
0x0202	H264 stream port	0x138C	-
0x0203	H264 GOP	0x0014	range is 1-240 on Basic+
0x0204	H264 stream port	0x0000	-
0x0210	MJPEG stream IP address 0	0xC0A8	The first two bytes of MJPEG stream destination IP
0x0211	MJPEG stream IP address 1	0x0096	The last two bytes of MJPEG stream destination IP
0x0212	MJPEG stream port	0x138E	-

0x0220	RTSP port	0x216A	-
0x0300	HDR mode	0x0001	Disable/enable (0/1) WDR/HDR
0x0400	Live indicator	0x0000	Disable/enable (0/1) the live indicator
0x0500	Register compatibility mode	0x0000	Disable/enable (0/1), enabling causes getCamRegister to return u32 value instead of u16
0x0600	Brightness	0x0008	Brightness value in range 0-20
0x0610	Backlight mode	0x0000	Backlight mode in range 0-2
0x0624	SaturationR	0x0013	Saturation red in range 0-40
0x0625	SaturationG	0x0013	Saturation green in range 0-40
0x0626	SaturationB	0x0014	Saturation blue in range 0-40
0x0900	Custom Register 0	0x0000	Custom Register 0
0x0901	Custom Register 1	0x0000	Custom Register 1
0x0902	Custom Register 2	0x0000	Custom Register 2
0x0903	Custom Register 3	0x0000	Custom Register 3
0x0904	Custom Register 4	0x0000	Custom Register 4
0x0905	Custom Register 5	0x0000	Custom Register 5
0x0906	Custom Register 6	0x0000	Custom Register 6
0x0907	Custom Register 7	0x0000	Custom Register 7
0x0908	Custom Register 8	0x0000	Custom Register 8
0x0909	Custom Register 9	0x0000	Custom Register 9
0x090A	Custom Register 10	0x0000	Custom Register 10
0x090B	Custom Register 11	0x0000	Custom Register 11
0x090C	Custom Register 12	0x0000	Custom Register 12
0x090D	Custom Register 13	0x0000	Custom Register 13
0x090E	Custom Register 14	0x0000	Custom Register 14
0x090F	Custom Register 15	0x0000	Custom Register 15

Compatibility registers

Address	Name	Value	Description
——-	—————————	———	————————————-
0xB00C	LED mode	0x0000	Dummy
0xB041	Stream protocol	0x0000	Dummy
0xB042	IP address 0	0x00C0	The first byte of the IP
0xB043	IP address 1	0x00A8	The second byte of the IP
0xB044	IP address 2	0x0000	The third byte of the IP

0xB045	IP address 3	0x004C	The fourth byte of the IP
0xB046	Subnet 0	0x00FF	The first byte of the IP
0xB047	Subnet 1	0x00FF	The second byte of the IP
0xB048	Subnet 2	0x00FF	The third byte of the IP
0xB049	Subnet 3	0x0000	The fourth byte of the IP
0xB04A	MAC 0	0x0018	The first byte of the MAC (read-only)
0xB04B	MAC 1	0x00FD	The second byte of the MAC (read-only)
0xB04C	MAC 2	0x00CB	The third byte of the MAC (read-only)
0xB04D	MAC 3	0x00C0	The fourth byte of the MAC (read-only)
0xB04E	MAC 4	0x0001	The fifth byte of the MAC (read-only)
0xB04F	MAC 5	0x0012	The sixth byte of the MAC (read-only)
0xB050	Flash mode	0x0000	Dummy
0xB051	Sensor temperature	0x0000	Dummy
0xB052	Board temperature	0x0025	Temperature (read-only)
0xB053	LED temperature	0x0000	Dummy
0xB054	LED percentage	0x0000	Dummy
0xB055	VLAN ID 0	0x0000	Dummy
0xB056	VLAN ID 1	0x0000	Dummy
0xB057	Stream ID 0	0x0000	Stream ID is sent as part of the RTP header as a 32 bit identifier; first byte
0xB058	Stream ID 1	0x0000	The second byte of stream ID
0xB059	Stream ID 2	0x0000	The third byte of stream ID
0xB05A	Stream ID 3	0x0000	The fourth byte of stream ID
0xB05B	Stream ID 4	0x0000	Dummy
0xB05C	Stream ID 5	0x0000	Dummy
0xB05D	Stream ID 6	0x0000	Dummy
0xB05E	Stream ID 7	0x0000	Dummy
0xB05F	MJPEG stream IP address 0	0x00C0	The first byte of the MJPEG stream destination IP
0xB060	MJPEG stream IP address 1	0x00A8	The second byte of the MJPEG stream destination IP
0xB061	MJPEG stream IP address 2	0x0000	The third byte of the MJPEG stream destination IP
0xB062	MJPEG stream IP address 3	0x0096	The fourth byte of the MJPEG stream destination IP
0xB063	Stream destination MAC 0	0x009C	If set, IP belonging to this MAC will be used instead of stream destination IP, first byte
0xB064	Stream destination MAC 1	0x002D	The second byte of stream destination MAC
0xB065	Stream destination MAC 2	0x00CD	The third byte of stream destination MAC
0xB066	Stream destination MAC 3	0x00BC	The fourth byte of stream destination MAC

0xB067	Stream destination MAC 4	0x0058	The fifth byte of stream destination MAC
0xB068	Stream destination MAC 5	0x007F	The sixth byte of stream destination MAC
0xB069	MJPEG stream port 0	0x0013	The first byte of MJPEG stream port
0xB06A	MJPEG stream port 1	0x008E	The second byte of MJPEG stream port
0xB06B	Selected ROI	0x0000	see 0x0111
0xB06C	No stream at boot	0x0000	see 0x0110
0xB06D	General port 0	0x0043	The first byte of ISO17215 general port
0xB06E	General port 1	0x003F	The second byte of ISO17215 general port
0xB06F	Stream source port 0	0x0000	Dummy
0xB070	Stream source port 1	0x0000	Dummy
0xB071	HDR mode	0x0001	see 0x0300
0xB072	Live indicator	0x0000	see 0x0400
0xB073	DHCP	0x0000	see 0x010A
0xB078	Wait MAC	0x0000	Dummy
0xB079	Wait PTP	0x0000	Dummy
0xB083	Custom Register 0	0x0000	Custom Register 0 Alias
0xB084	Custom Register 1	0x0000	Custom Register 1 Alias
0xB085	Custom Register 2	0x0000	Custom Register 2 Alias
0xB086	Custom Register 3	0x0000	Custom Register 3 Alias
0xB087	Custom Register 4	0x0000	Custom Register 4 Alias
0xB088	Custom Register 5	0x0000	Custom Register 5 Alias
0xB089	Custom Register 6	0x0000	Custom Register 6 Alias
0xB08A	Custom Register 7	0x0000	Custom Register 7 Alias
0xB08B	Custom Register 8	0x0000	Custom Register 8 Alias
0xB08C	Custom Register 9	0x0000	Custom Register 9 Alias
0xB08D	Custom Register 10	0x0000	Custom Register 10 Alias
0xB08E	Custom Register 11	0x0000	Custom Register 11 Alias
0xB08F	Custom Register 12	0x0000	Custom Register 12 Alias
0xB090	Custom Register 13	0x0000	Custom Register 13 Alias
0xB091	Custom Register 14	0x0000	Custom Register 14 Alias
0xB092	Custom Register 15	0x0000	Custom Register 15 Alias
0xB171	DHCP Hostname 0	0x0041	The first character of the camera name/dhcp hostname
0xB172	DHCP Hostname 1	0x0072	The second character of the camera name/dhcp hostname
0xB173	DHCP Hostname 2	0x006B	The third character of the camera name/dhcp hostname

0xB174	DHCP Hostname 3	0x0043	The fourth character of the camera name/dhcp hostname
0xB175	DHCP Hostname 4	0x0061	The fifth character of the camera name/dhcp hostname
0xB176	DHCP Hostname 5	0x006D	The sixth character of the camera name/dhcp hostname
0xB177	DHCP Hostname 6	0x0000	The seventh character of the camera name/dhcp hostname
0xB178	DHCP Hostname 7	0x0000	The eighth character of the camera name/dhcp hostname
0xB179	DHCP Hostname 8	0x0000	The ninth character of the camera name/dhcp hostname
0xB17A	DHCP Hostname 9	0x0000	The tenth character of the camera name/dhcp hostname
0xB17B	DHCP Hostname 10	0x0000	The eleventh character of the camera name/dhcp hostname
0xB17C	DHCP Hostname 11	0x0000	The twelfth character of the camera name/dhcp hostname
0xB17D	DHCP Hostname 12	0x0000	The thirteenth character of the camera name/dhcp hostname
0xB17E	DHCP Hostname 13	0x0000	The fourteenth character of the camera name/dhcp hostname
0xB17F	DHCP Hostname 14	0x0000	The fifteenth character of the camera name/dhcp hostname
0xB180	DHCP Hostname 15	0x0000	The sixteenth character of the camera name/dhcp hostname

All registers with the description 'Dummy' only exist for compatibility reasons and have no functionality. Changing the IP address via the registers won't change it immediately but only after a restart with the setCamMode function.