



A small, dark gray logo consisting of the word 'flic' in a lowercase, rounded font, with a small diamond symbol preceding the 'f'.

WAPP/GMAPP command set

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REVISION HISTORY

Notation definition

Type	Description
uint8	1-byte unsigned integer
uint16	2-bytes unsigned integer
uint32	4-bytes unsigned integer
uint64	8-bytes unsigned integer
int8	1-byte integer
int16	2-bytes integer
int32	4-bytes integer
int64	8-bytes integer
str[n]	String with length n
type[n]	array of type with length n
CHAR	unsigned char

*All integer types are little-endian.

Common Data Structure

st_EventResDate

Type	Description
uint16	Year
uint8	Month
uint8	Day of month
uint8	Day of week
uint8	Hour
uint8	Minute
uint8	Second
uint8	Event type
uint8	Status
uint8[2]	Reserved

st_EventRespHead

Type	Description
uint8[4]	Camera ID
uint8[5]	Reserved
uint8	End flag 1: SD unlocked 0: SD locked
uint8	count
uint8	UTC flag, reserved. Always 1.

st_EventRespData

Type	Description
uint16	Year
uint8	Month
uint8	Day of month
uint8	Day of week
uint8	Hour
uint8	Minute
uint8	Second
uint8	Event type, Reserved
uint8	Status, Reserved
uint8[2]	Reserved

st_schedule

Type	Description
uint8	Enable (not used)
uint8	Hour, 0~23
uint8	Minute, 0~59
uint8	Repeat in day of week (bitwise mask) Bit 0: None Bit 1: Sunday Bit 2: Monday ... Bit 6: Saturday

sensor_info

Type	Description
uint32	Sensor ID
uint8	Enable 0: disable 1: enable
uint8	Type 0x10: MAG 0x11: PIR 0x15: Button 0x16: Remoter 0x17: New remoter 0x19: Tag 0x24: Outdoor siren 0x25: Indoor siren 0x26: Power switch 0x28: Door chime 0x37: Smoke detector
uint8	Alarm
uint8	Node ID
uint8	Trigger to RX
uint8	Position, triggered -> move to other position
str[18]	Sensor name

Command Description

IOCTRL_TYPE_PUSH_CamIndex

Value	0x00	Description	Disabled
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IO_STREAM_VIDEO_START

Value	0x01	Dependent	ALL
Description	Start video		
Parameter	8Bytes		
Type	Note		
uint32	Camera ID for DWH 4 ch camera, for IPCAM series set 0		
uint8	Current video quality. multi-user live view @ different quality 0x00: By F/W setting, 0x01: Best quality, 0x02: Middle quality, 0x03 : Low quality		
uint8	RVDP answering 0: SRART VIDEO 1: START VIDEO by RVDP answering		
uint8[2]	Reserved		

IO_STREAM_VIDEO_STOP

Value	0x02	Dependent	ALL
Description	Stop video		
Parameter	N/A		

IO_STREAM_AUDIO_START

Value	0x03	Dependent	ALL
Description	Start audio		
Parameter	N/A		

IO_STREAM_AUDIO_STOP

Value	0x04	Dependent	ALL
Description	Stop audio		
Parameter	N/A		

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IO_SYS_DEVINFO_REQ

Value	0x05	Dependent	ALL
Description	Request of getting device info.		
Parameter	N/A		

IO_SYS_DEVINFO_RESP

Value	0x06	Dependent	ALL
Description	Response of IO_SYS_DEVINFO_REQ.		
Parameter	56bytes(old) or 88bytes(New)		
Type	Note		
str[16]	Model name		
str[16]	Vendor		
uint8[4]	F/W version		
uint8[4]	API version		
int32	Total volume (MB)		
int32	Free volume (MB)		
uint8	Status of SD card		
uint8	Flag of firmware need upgrade. If 1 means need upgrade else 0.		
uint8[4]	Remote version		
uint8[2]	Reserved		
New			
str[16]	Model name		
str[16]	Vendor, "JSW" only		
uint8[4]	F/W version		
uint8[4]	API version		
int32	Total volume (MB)		
int32	Free volume (MB)		
uint8	Status of SD card 0x00: normal 0x10: recording 0x20: busy 0x30: no card 0x40: slow 0xF0: error		
uint8	Flag of firmware need upgrade. If 1 means need upgrade else 0.		
uint8[2]	Padding		
uint8[4]	Remote F/W version		
str[16]	MCU version (WAPP-ES/ESR/JS/JSR/EI2/EI2R only)		
uint8[16]	Reserved		

IO_RECORDER_PLAY_CONTROL_REQ

Value	0x07	Dependent	ALL
Description	Request of playback & download control.		
Parameter	24bytes		
Type	Note		
uint32	Camera ID. For DWH 4 ch camera, for IPCAM series set 0		
uint32	Command 0x00: play 0x01: pause 0x02: resume 0x03: stop 0x04: end 0x10: download active 0x11: download pause 0x12: download resume 0x13: download cancel 0x14: download end 0xF0: void file 0xF1: sd busy 0xFF: unknown error		
uint8[4]	Reserved		
<u>st_EventResDate</u>	File filter		
uint8	Reserved, flag of UTC		
uint8	Reserved, Event channel		
uint8[2]	Reserved		

IO_RECORDER_PLAY_CONTROL_RESP

Value	0x08	Dependent	ALL
Description	Response of IO_RECORDER_PLAY_CONTROL_REQ		
Parameter	12bytes		
Type	Note		
uint8	<p>State type 0x00: play 0x01: pause 0x02: resume 0x03: stop 0x04: end 0x10: download active 0x11: download pause 0x12: download resume 0x13: download cancel 0x14: download end 0xf0 void file 0xf1: sd busy 0xff: unknow error</p>		
uint8[3]	Reserved		
uint8	<p>Result 0x01: abnormal 0xFF: regular</p>		
uint8	Reserved		
int16	Total package count		
int32	Total file size		

IO_PTZ_COMMAND

Value	0x09	Dependent	GMPT2/3 , WAPP-ES/ESR/JS/JSR/EI2/EI2R
Description	Set Pan/Tilt/Zoom.		
Parameter	8 bytes		
Type	Note		
uint8	PTZ Command 0x00: Stop 0x01: Up 0x02: Down 0x03: Left 0x04: Right 0x05: Left up (not used) 0x06: Left down (not used) 0x07: Right up (not used) 0x08: Right down (not used) 0x09: Zoom in (not used) 0x0A: Zoom out (not used) 0x0B: Auto scan (not used) 0x0C: Go to preset point 0x0D: Set preset point 0x10: Calibration		
uint8	for GMAPP: Up, Down, Left, Right -> don't care for WAPP: Up, Down, Left, Right -> move step Go to preset point / Set preset_point -> Go to or Save position		

IO_RECORDER_LIST_EVENT_REQ

Value	0x0A	Dependent	ALL
Description	Get event list.		
Parameter	24 bytes		
Type	Note		
uint8[8]	Reserved		
st_EventResDate	Start time		
st_EventResDate	End time		

IO_RECORDER_LIST_EVENT_RESP

Value	0x0B	Dependent	ALL
Description	Response to IO_RECORDER_LIST_EVENT_REQ.		
Parameter	12 + (n * 12) bytes, where 0<= n <= MAX_FILE_COUNT(100)		
Type	Note		
st_EventRespHead	Event list header		
st_EventRespData[n]	Event data		

IO_EVENT_NOTIFY

Value	0x0C	Dependent	ALL
Description	Send event notify.		
Parameter	12bytes		
Type	Note		
uint8[4]	Reserved		
int32	Event type 0x00: REC_BY_MANUALLY 0x01: REC_BY_PIR 0x02: REC_BY_PIR_WITH_SOFTWARE (Disabled) 0x03: REC_BY_SOFTWARE = 0x03 0x04: REC_BY_VOICE = 0x04 0x05: REC_BY_VOICE_PIR = 0x05 (Disabled) 0x06: REC_BY_SOFTWAR_VOICE_TEMP_HUMIDITY (Disabled) 0x07: REC_BY_TEMP_HUMDITY 0x08: REC_BY_TEMP_HUMIDITY_VOICE (Disabled) 0x09: REC_BY_HUMIDITY 0x0A: REC_BY_TEMP 0x0B: REC_BUT_SD_FULL 0x0C: REC_BUT_SD_EMPTY 0x0D: REC_BUT_SD_BAD 0x0E: REC_BY_DOORKEY 0x0F: EVENT_ARM 0x10: EVENT_DISARM 0x20: REC_BY_EXT_SENSOR 0x40: DOORKEY_ANSWERING 0x41: NOTIFICATION_SIREN_STARTED 0x42: NOTIFICATION_SIREN_STOPPED		
<u>st_EventResDate</u>	UTC time		
int32	UTC seconds		
uint8	Sensor type (for MP test only)		
uint8[3]	Reserved		

IO_EMAIL_ON_OFF_REQ

Value	0x0D	Dependent	ALL
Description	Set email notify ON/OFF.		
Parameter	4bytes		
Type	Note		
uint8	0: OFF 1: ON		
uint8[3]	Reserved		

IO_EMAIL_ON_OFF_RESP

Value	0x0E	Description	Disabled
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IOCTRL_TYPE_EVENT_NOTIFY_ON_OFF_REQ

Value	0x0F	Description	Disabled
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IOCTRL_TYPE_EVENT_NOTIFY_ON_OFF_RESP

Value	0x10	Description	Disabled
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IO_SYS_GET_ON_OFF_VALUE_REQ

Value	0x11	Dependent	ALL
Description	Get ON/OFF value.		
Parameter	N/A		

IO_SYS_GET_ON_OFF_VALUE_RESP

Value	0x12	Dependent	ALL
Description	Response of IO_SYS_GET_ON_OFF_VALUE_REQ.		
Parameter	8bytes		
Type	Note		
uint8	Email alert 0: OFF 1: ON		
uint8	Event notify 0: OFF 1: ON		
uint8	<i>ManuRecStatus : > 0 ; SD present</i>		
uint8	Auto deleting record 0: overwrite disable 1: overwrite enable		
uint8	Wireless mode 0: normal mode 1: AP mode		
uint8	SD state. (Disabled)		
uint8	Wifi control 0: disable 1: enable		
uint8	Reserved		

IO_STREAM_SPEAKER_START

Value	0x13	Dependent	GMPT2,GMAPP5,WAPP-ES/ESR,RVDP-ES/JS/DSI
Description	Start speaker.		
Parameter	N/A		

IO_STREAM_SPEAKER_STOP

Value	0x14	Dependent	GMPT2,GMAPP5,WAPP-ES/ESR,RVDP-ES/JS/DSI
Description	Stop speaker.		
Parameter	N/A		

IO_SYS_SET_PASSWORD_REQ

Value	0x15	Dependent	ALL
Description	Set new password.		
Parameter	64bytes		
Type	Note		
str[32]	Old password, A~Z, a~z, 0~9.		
str[32]	New password, A~Z, a~z, 0~9.		

IO_SYS_SET_PASSWORD_RESP

Value	0x16	Dependent	ALL
Description	Response of IO_SYS_SET_PASSWORD_REQ.		
Parameter	8bytes		
Type	Note		
uint8	0: success 1: fail		
uint8[7]	Reserved		

IO_STREAM_SET_VIDEO_PARAMETER_REQ

Value	0x17	Dependent	ALL
Description	Set video parameter.		
Parameter	8bytes		
Type	Note		
uint8	Camera index. (Disabled)		
uint8	Bit field Bit 1: set video parameter Bit 2: set mirror & flip Bit 4: set frequency		
uint8	Video quality 2: Low 4: Middle 5: High 6: the Best		
uint8	Orientation 0: normal 1: flip 2: mirror 3: flip and mirror		
uint8	Environment 0: 50Hz 1: 60Hz others: out door		
uint8[3]	Reserved		

IO_STREAM_SET_VIDEO_PARAMETER_RESP

Value	0x18	Dependent	ALL
Description	Response of IO_STREAM_SET_VIDEO_PARAMETER_REQ.		
Parameter	8bytes		
Type	Note		
uint8	0: OFF 1: ON		
uint8[7]	Reserved		

IO_STREAM_GET_VIDEO_PARAMETER_REQ

Value	0x19	Dependent	ALL
Description	Get video parameter.		
Parameter	N/A		

IO_STREAM_GET_VIDEO_PARAMETER_RESP

Value	0x1A	Dependent	ALL
Description	Response of IO_STREAM_GET_VIDEO_PARAMETER_REQ.		
Parameter	Same as <i>IO_STREAM_SET_VIDEO_PARAMETER_REQ</i>		

IO_WIFI_LIST_AP_REQ

Value	0x1B	Dependent	W/O RVDP-ES
Description	Get Wi-Fi list.		
Parameter	8bytes		
Type	Note		
uint8	0: start scan Wi-Fi AP 1: get current AP's SSID		
uint8[7]	Reserved		

IO_WIFI_LIST_AP_RESP

Value	0x1C	Dependent	ALL
Description	Response of IO_WIFI_LIST_AP_REQ.		
Parameter	36 * n bytes, where 0 <= n <= 20		
Type	Note		
str[32]	SSID		
uint8	Mode		
uint8	Encryption type 0x00: INVALID 0x01: NONE 0x02: WEP 0x03: WPA-PSK 0x04: WPA-AES 0x05: WPA2-PSK 0x06: WPA2-AES		
uint8	Signal, 0~100		
uint8	If camera connect to this AP is 1 else 0.		

IO_WIFI_SET_REQ

Value	0x1D	Dependent	W/O RVDP-ES
Description	Set Wi-Fi.		
Parameter	72bytes		
Type	Note		
str[32]	AP's SSID		
uint8	Mode, always 0.		
uint8	Encryption type 0x00: INVALID 0x01: NONE 0x02: WEP 0x03: WPA-PSK 0x04: WPA-AES 0x05: WPA2-PSK 0x06: WPA2-AES		
uint8[2]	Reserved		
str[32]	Password		
uint8[4]	Reserved		

IO_WIFI_SET_RESP

Value	0x1E	Dependent	ALL
Description	Response of IO_WIFI_SET_RESP.		
Parameter	8bytes		
Type	Note		
uint8	0: success others: error		
uint8[7]	Reserved		

IO_MOTION_SET_REQ

Value	0x1F	Dependent	ALL
Description	(Do not use it.) Set motion detect sensitive.		
Parameter	8bytes		
Type	Note		
uint8[4]	reserved		
uint8	Sensitive, 0~100.		
uint8[3]	Reserved		

IO_MOTION_SET_RESP

Value	0x20	Dependent	ALL
Description	(Do not use it.) Response of IO_MOTION_SET_REQ.		
Parameter	8bytes		
Type	Note		
uint8[4]	reserved		
uint8	Sensitive, 0~100.		
uint8[3]	Reserved		

IO_MOTION_GET_REQ

Value	0x21	Dependent	ALL
Description	(Do not use it) Get motion detection.		
Parameter	N/A		

IO_MOTION_GET_RESP

Value	0x22	Dependent	ALL
Description	(Did not use it) Response of IO_MOTION_GET_REQ.		
Parameter	8bytes		
Type	Note		
uint8[4]	reserved		
uint8	Sensitive, 0~100.		
uint8[3]	Reserved		

IOCTRL_TYPE_SET_LULLABY_REQ

Value	0x23	Dependent	ALL
Description	Set Lullaby parameter, for Baby cam only		
Parameter	8bytes		
Type	Note		
uint8	song number 0: off 1~4: seq. once 5: play all song		
uint8	Repeat indicator 0: Off 1: on		
uint8	Status. No need to set ; just respond lullaby playing status from device. 0: no playing 1: playing		
uint8	Volume. Default 2. 1~3 circular.		
uint8	Mode 0x00: normal 0x10: set repeat mode by Repeat byte 0x11: get all info		
uint8[3]	Reserved		

IOCTRL_TYPE_SET_LULLABY_RESP

Value	0x24	Dependent	ALL
Description	Response of IOCTRL_TYPE_SET_LULLABY_REQ.		
Parameter	Same as <i>IOCTRL_TYPE_SET_LULLABY_REQ</i>		

IOCTRL_TYPE_GET_LULLABY_REQ

Value	0x25	Dependent	ALL
Description	Get Lullaby parameter, for Baby cam only.		
Parameter	8bytes		

IOCTRL_TYPE_GET_LULLABY_RESP

Value	0x26	Dependent	ALL
Description	Response of IOCTRL_TYPE_GET_LULLABY_REQ.		
Parameter	Same as <i>IOCTRL_TYPE_SET_LULLABY_REQ</i> .		

IO_RECORDER_FORMAT_EXT_STORAGE_REQ

Value	0x27	Dependent	ALL
Description	Format external storage.		
Parameter	N/A		

IO_RECORDER_FORMAT_EXT_STORAGE_RESP

Value	0x28	Dependent	ALL
Description	Response of IO_RECORDER_FORMAT_EXT_STORAGE_REQ.		
Parameter	8bytes		
Type	Note		
uint8	0: SDCARD_STATUS_RECORDING, SDCARD_STATUS_BUSY or SDCARD_STATUS_SLOW 1: SDCARD_STATUS_NOCARD or SDCARD_STATUS_ERROR 5: SDCARD_STATUS_NORMAL		
uint8[7]	Reserved		
<pre>enum { SDCARD_STATUS_NORMAL = 0x00, SDCARD_STATUS_RECORDING = 0x10, SDCARD_STATUS_BUSY = 0x20, SDCARD_STATUS_NOCARD = 0x30, SDCARD_STATUS_SLOW = 0x40, SDCARD_STATUS_ERROR = 0xF0, }</pre>			

IO_RECORDER_MANUAL_REC_START

Value	0x29	Dependent	ALL
Description	Manual record		
Parameter	N/A		

IO_RECORDER_MANU_REC_STOP

Value	0x2A
Description	Disabled.

IO_EMAIL_SET_INFO_REQ

Value	0x2B	Dependent	ALL
Description	Set email.		
Parameter	264 bytes		
Type	Note		
str[64]	SMTP server		
int32	SMTP port		
uint8	SSL		
uint8[3]	Reserved		
str[80]	User name		
str[32]	Password		
str[80]	Receiver email		

IO_EMAIL_SET_INFO_RESP

Value	0x2C
Description	Disabled

IO_EMAIL_GET_INFO_REQ

Value	0x2D	Dependent	ALL
Description	Get Email.		
Parameter	8bytes		

IO_EMAIL_GET_INFO_RESP

Value	0x2E	Dependent	ALL
Description	Response of IO_EMAIL_GET_REQ.		
Parameter	Same as IO_EMAIL_SET_REQ		

IO_SYS_AUTH_ADMIN_PASSWORD_REQ

Value	0x2F	Dependent	ALL
Description	Authenticate administrator's password.		
Parameter	40bytes		
Type	Note		
str[32]	Password		
uint8[8]	Reserved		

IO_SYS_AUTH_ADMIN_PASSWORD_RESP

Value	0x30	Dependent	ALL
Description	Response of IO_SYS_AUTH_ADMIN_PASSWORD_REQ.		
Parameter	8bytes		
Type	Note		
uint8	Password error		
uint8	Auth linked > 0 : lock by other session		
uint32	Sequence number		
uint8[2]	Reserved		

IO_SYS_SET_ADMIN_PASSWORD_REQ

Value	0x31	Dependent	ALL
Description	Set administrator password.		
Parameter	64bytes		
Type	Note		
str[32]	Old password		
str[32]	New password		

IO_SYS_SET_ADMIN_PASSWORD_RESP

Value	0x32	Dependent	ALL
Description	Response of IO_SYS_SET_ADMIN_PASSWORD_REQ.		
Parameter	8bytes		
Type	Note		
uint8	0: OK 1: fail		
uint8 [7]	Reserved		

IOCTRL_TYPE_GET_WIFI_REQ

Value	0x33	Description	Disabled
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IOCTRL_TYPE_GET_WIFI_RESP

Value	0x34	Description	Disabled
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IO_SYS_PUSH_APP_UTC_TIME

Value	0x35	Dependent	ALL
Description	Send APP UTC time.		
Parameter	8bytes		
Type	Note		
int64	Seconds from 1900-01-01-00:00:00		

IO_SYS_SET_TIMEZONE_REQ

Value	0x36	Dependent	ALL
Description	Set time zone.		
Parameter	16bytes		
Type	Note		
str[12]	Timezone string, GMT-12:00~GMT+12:00		
uint8[2]	Reserved		
uint8	0: w/o DST 1: with DST		
uint8	Reserved		

IO_SYS_SET_TIMEZONE_RESP

Value	0x37	Description	Disabled
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IO_SYS_GET_TIMEZONE_REQ

Value	0x38	Dependent	ALL
Description	Get time zone.		
Parameter	8bytes		

IO_SYS_GET_TIMEZONE_RESP

Value	0x39	Dependent	ALL
Description	Response of IO_SYS_GET_TIMEZONE_REQ.		
Parameter	Same as IO_SYS_SET_TIMEZONE_REQ		

IO_PUSH_SET_TOKEN_ID_REQ

Value	0x3A	Description	Disabled
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IO_PUSH_SET_TOKEN_ID_RESP

Value	0x3B	Description	Disabled
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IOCTRL_TYPE_APNS_SET_CERT_REQ

Value	0x3C	Description	Disabled
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IOCTRL_TYPE_APNS_SET_CERT_RESP

Value	0x3D	Description	Disabled
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IOCTRL_TYPE_APNS_PUSH_IP_REQ

Value	0x3E	Description	Disabled
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IOCTRL_TYPE_APNS_PUSH_IP_RESP

Value	0x3F	Description	Disabled
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IO_RECORDER_AUTO_DEL_REC_ON_OFF_REQ

Value	0x40	Dependent	ALL
Description	Set auto delete recoding file.		
Parameter	8bytes		
Type	Note		
uint8	0: OFF 1: ON		
uint8[7]	Reserved		

IO_MOTION_SET_MODE_REQ

Value	0x41	Dependent	ALL
Description	Set detect mode.		
Parameter	8bytes		
Type	Note		
uint8[3]	Reserved		
uint8	Mode 0x00: MANUALLY 0x01: PIR 0x02: PIR_WITH_SOFTWARE (Disabled) 0x03: SOFTWARE 0x04: VOICE 0x05: VOICE and PIR (Disabled) 0x06: SOFTWARE, VOICE, TEMP, HUMIDITY (Disabled) 0x07: TEMP HUMDITY 0x08: TEMP HUMIDITY_VOICE (Disabled) 0x09: HUMIDITY 0x0A: TEMP 0x30: AI		
uint8[4]	Reserved		

IO_MOTION_SET_MODE_RESP

Value	0x42	Dependent	ALL
Description	Response of IO_MOTION_SET_MODE_REQ.		
Parameter	Same as <i>IO_MOTION_SET_MODE_REQ</i>		

IO_MOTION_GET_MODE_REQ

Value	0x43	Dependent	ALL
Description	Get detect mode.		
Parameter	N/A		

IO_MOTION_GET_MODE_RESP

Value	0x44	Dependent	ALL
Description	Response of IO_MOTION_GET_MODE_REQ.		
Parameter	Same as <i>IO_MOTION_GET_MODE_REQ</i>		

IO_PUSH_SET_SERVER_REQ

Value	0x45	Dependent	ALL
Description	Control apns push notification.		
Parameter	8bytes		
Type	Note		
uint8	Enable 0: disable 1: enable		
uint8[7]	Reserved		

IO_PUSH_SET_SERVER_RESP

Value	0x46	Description	Disabled
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IO_PUSH_GET_SERVER_REQ

Value	0x47	Dependent	ALL
Description	Get apns push notification status.		
Parameter	8bytes		

IO_PUSH_GET_SERVER_RESP

Value	0x48	Dependent	ALL
Description	Response of IO_PUSH_GET_SERVER_REQ.		
Parameter	8bytes		
Type	Note		
uint8	Enable 0: disable 1: enable		
uint8[7]	Reserved		

IOCTRL_TYPE_SET_LULLABY_VOLUME_REQ

Value	0x49	Dependent	ALL
Description	Set melody IC volume control.		
Parameter	8bytes		
Type	Note		
uint8	1: Lullaby_volume_down 2: Lullaby_volume_up 3: RVDP_BELL_CHANGE_VOLUME		
uint8[7]	Reserved		

IOCTRL_TYPE_SET_LULLABY_VOLUME_RESP

Value	0x4A	Dependent	ALL
Description	Response of IOCTRL_TYPE_SET_LULLABY_VOLUME_REQ.		
Parameter	Same as <i>IOCTRL_TYPE_SET_LULLABY_VOLUME_REQ</i>		

IO_MOTION_SET_SENSITIVITY_REQ

Value	0x4B	Dependent	ALL
Description	Set motion sensitivity.		
Parameter	2bytes		
Type	Note		
uint8	Day mode, 0~100.		
uint8	Night mode, 0~100.		

IO_MOTION_SET_SENSITIVITY_RESP

Value	0x4C	Dependent	ALL
Description	Response of IO_MOTION_SET_SENSITIVITY_REQ.		
Parameter	Same as <i>IO_MOTION_SET_SENSITIVITY_REQ</i>		

IO_MOTION_GET_SENSITIVITY_REQ

Value	0x4D	Dependent	ALL
Description	Get motion sensitivity.		
Parameter	Same as <i>IO_MOTION_SET_SENSITIVITY_REQ</i>		

IO_MOTION_GET_SENSITIVITY_RESP

Value	0x4E	Dependent	ALL
Description	Response of IOCTRL_TYPE_GET_MOTION_SENSITIVITY_REQ.		
Parameter	Same as <i>IO_MOTION_SET_SENSITIVITY_REQ</i>		

IO_SYS_REBOOT_REQ

Value	0x4F	Dependent	ALL			
Description	Set system reboot.					
Parameter	8bytes					
Type	Note					
uint8	enable					
uint8	Active F/W upgrade					
uint8[6]	Reserved					
enable: 1 , active_fw_upgrade:0 -> Manual reboot						
enable: 0 , active_fw_upgrade:1 -> Reboot than F/W upgrade						

IO_SYS_REBOOT_RESP

Value	0x50	Description	Disabled
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IO_SYS_SET_DEVICE_CUSTOM_INFO_REQ

Value	0x51	Dependent	ALL
Description	Set device name.		
Parameter	128bytes		
Type	Note		
str[16]	Customer's name		
str[32]	Device's name for PUSH and OSD presentation		
uint8[80]	Reserved		

IO_SYS_SET_DEVICE_CUSTOM_INFO_RESP

Value	0x52	Dependent	ALL
Description	Response of IO_SYS_SET_DEVICE_CUSTOM_INFO_REQ.		
Parameter	Same as <u>IO_SYS_SET_DEVICE_CUSTOM_INFO_REQ</u>		

IO_SYS_GET_DEVICE_CUSTOM_INFO_REQ

Value	0x53	Dependent	ALL
Description	Get device name.		
Parameter	Same as <u>IO_SYS_SET_DEVICE_CUSTOM_INFO_REQ</u>		

IO_SYS_GET_DEVICE_CUSTOM_INFO_RESP

Value	0x54	Description	Disabled
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IO_FW_SEND_IMAGE_STATUS_REQ

Value	0x55	Dependent	ALL
Description	(Deprecated) Send firmware status.		
Parameter	40bytes		
Type	Note		
int32	File size		
uint8[32]	File MD5 checksum		
uint8	Status 0x00: STOP 0x01: START 0x02: FINISH 0x03: FAIL FILEIO 0x04: FAIL TIMEOUT 0x05: FAIL WRONG MD5 0x06: REQUEST		

IO_FW_SEND_IMAGE_STATUS_RESP

Value	0x56	Dependent	ALL
Description	(Deprecated) Response of IO_FW_SEND_FIRMWARE_IMAGE_STATUS_REQ.		
Parameter	Same as <u>IO_FW_SEND_FIRMWARE_IMAGE_STATUS_REQ</u>		

IO_FW_SEND_IMAGE_REQ

Value	0x57	Dependent	ALL
Description	(Deprecated) Send firmware image.		
Parameter	1028bytes		
Type	Note		
int32	Firmware data size		
uint8[1024]	Firmware data		

IO_FW_SEND_IMAGE_RESP

Value	0x58	Description	Disabled
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IO_STREAM_SET_VIDEO_DWDR_SWITCH_REQ

Value	0x59	Dependent	ALL
Description	(Deprecated) Set video WDR.		
Parameter	8bytes		
Type	Note		
uint8	Enable 0: disable 1: enable		
uint8	Day/night		
uint8[6]	Reserved		

IO_STREAM_SET_VIDEO_DWDR_SWITCH_RESP

Value	0x5A	Dependent	ALL
Description	Response of IO_STREAM_SET_VIDEO_DWDR_SWITCH_REQ.		
Parameter	Same as <u>IO_STREAM_SET_VIDEO_DWDR_SWITCH_REQ</u>		

IO_STREAM_SET_VIDEO_DWDR_SWITCH_REQ

Value	0x5B	Dependent	ALL
Description	(Deprecated) Get video WDR settings.		
Parameter	Same as <u>IO_STREAM_SET_VIDEO_DWDR_SWITCH_REQ</u>		

IO_STREAM_SET_VIDEO_DWDR_SWITCH_RESP

Value	0x5C	Dependent	ALL
Description	Response of IO_STREAM_GET_VIDEO_DWDR_SWITCH_REQ.		
Parameter	Same as <u>IO_STREAM_SET_VIDEO_DWDR_SWITCH_REQ</u>		

IO_PTZ_SET_PRESET_NAME_REQ

Value	0x5D	Dependent	ALL
Description	(Deprecated) Set Pan/Tilt/Zoom preset name.		
Parameter	160bytes		
Type	Note		
str[16]	Preset1's name		
str[16]	Preset2's name		
str[16]	Preset3's name		
uint8[112]	Reserved		

IO_PTZ_SET_PRESET_NAME_RESP

Value	0x5E	Dependent	ALL
Description	(Deprecated) Response of IO_PTZ_SET_PRESET_NAME_REQ.		
Parameter	Same as <u>IO_PTZ_SET_PRESET_NAME_REQ</u>		

IO_PTZ_GET_PRESET_NAME_REQ

Value	0x5F	Dependent	ALL
Description	(Deprecated) Get Pan/Tilt/Zoom preset name.		
Parameter	Same as <u>IO_PTZ_SET_PRESET_NAME_REQ</u>		

IO_PTZ_GET_PRESET_NAME_RESP

Value	0x60	Dependent	ALL
Description	(Deprecated) Response of IOCTL_TYPE_GET_PTZ_PRESET_NAME_REQ.		
Parameter	Same as <u>IO_PTZ_SET_PRESET_NAME_REQ</u>		

IO_RVDP_SET_DOOR_BELL_REQ

Value	0x61	Dependent	RVDP-ES/JS/EGS/DSI
Description	Set RVDP doorbell.		
Parameter	8bytes		
Type	Note		
uint8	Track index		
uint8	Playing count duration. (Disabled)		
uint8	Volume		
uint8[5]	Reserved		

IO_RVDP_SET_DOOR_BELL_RESP

Value	0x62	Dependent	ALL
Description	Response of IO_RVDP_SET_DOOR_BELL_REQ.		
Parameter	Same as <u>IO_RVDP_SET_DOOR_BELL_REQ</u>		

IO_SYS_GET_ONET_DEVINFO_REQ

Value	0x64	Dependent	ALL
Description	Get device info.		
Parameter	8bytes (blank)		

IOCTRL_TYPE_GET_ONET_DEVINFO_RESP

Value	0x65	Dependent	ALL
Description	(Engineering API) Response of IOCTRL_TYPE_GET_ONET_DEVINFO_REQ.		
Parameter	32bytes		
Type	Note		
uint8	User Login		
uint8	User active		
uint8[6]	Reserved		
uint8	CPU used		
uint8	IO used		
int16	Memory used		
int16	Memory free		
uint8[2]	Reserved		
int16	File count of SD		
int16	Overwrite count of SD		
uint8[4]	Reserved		
uint8[4]	Lan IP		
uint8[4]	Wan IP		

IOCTRL_TYPE_SET_ONET_DEVINFO_REQ

Value	0x66	Description	Disabled
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IOCTRL_TYPE_SET_ONET_DEVINFO_RESP

Value	0x67	Description	Disabled
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IOCTRL_TYPE_SET_ONET_STATUS_REQ

Value	0x68	Description	Disabled
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IOCTRL_TYPE_SET_ONET_STATUS_RESP

Value	0x69	Description	Disabled
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IO_RECORDER_REMOVE_EVENT_LIST_REQ

Value	0x6A	Dependent	ALL
Description	Remove event files.		
Parameter	24 byte = (8) blank + (8) start time + (8) end time		
Type	Note		
uint8[8]	Reserved		
st_EventResDate	Start time		
st_EventResDate	End time		

IO_RECORDER_REMOVE_EVENT_LIST_RESP

Value	0x6B	Dependent	ALL
Description	Response of IO_RECORDER_REMOVE_EVENT_LIST_REQ.		
Parameter	12 + (12 * n) bytes, where n >= 0		
Type	Note		
st_EventRespHead	Event list header		
st_EventResDate	Event data		

IO_RECORDER_REMOVE_EVENT_REQ

Value	0x6C	Dependent	ALL
Description	Remove event file.		
Parameter	16 byte = (8) blank + (8) time		
Type	Note		
uint8[8]	Reserved		
st_EventResDate	Time		

IO_RECORDER_REMOVE_EVENT_RESP

Value	0x6D	Dependent	ALL
Description	Response of IO_RECORDER_REMOVE_EVENT_REQ.		
Parameter	Same as IO_RECORDER_REMOVE_EVENT_REQ		

IOCTRL_TYPE_UPGRADE_FIRMWARE_REQ

Value	0x6E	Description	Disabled
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IOCTRL_TYPE_UPGRADE_FIRMWARE_RESP

Value	0x6F	Description	Disabled
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IO_STREAM_SET_TIMESTAMP_SWITCH_REQ

Value	0x70	Dependent	WAPP
Description	Set time stamp format.		
Parameter	8bytes		
Type	Note		
uint8	Enable 0: disable 1: enable		
uint8	Position 0: Align top-left 1: Align top-center 2: Align top-right 3: Align bottom-left 4: Align bottom-center 5: Align bottom-right 6: Align center 7: Align none (This mode is only for osd mask with live view crop enabled)		
uint8	Board color 0x00: AQUA 0x01: BLACK 0x02: BLUE 0x03: BROWN 0x04: DODGER BLUE 0x05: GRAY 0x06: GREEN 0x07: KHAKI 0x08: LIGHTG REEN 0x09: MAGENTA 0x0A: ORANGE 0x0B: PINK 0x0C: RED 0x0D: SLATE BLUE 0x0E: WHITE 0x0F: YELLOW		
uint8	Font color. Value is the same as board color.		
uint8	0x01: YYYY-MM-DD ddd HH:mm:ss 0x02: YYYY-MM-DD ddd hh:mm:ssP 0x03: MM-DD-YYYY ddd HH:mm:ss 0x04: MM-DD-YYYY ddd hh:mm:ssP ddd = {"SUN", "MON", "TUE", "WED", "THU", "FRI", "SAT"} P = AM/PM		
uint8[3]	Reserved		

IO_STREAM_SET_TIMESTAMP_SWITCH_RESP

Value	0x71	Dependent	ALL
Description	Response of IO_STREAM_SET_TIMESTAMP_SWITCH_REQ.		
Parameter	Same as <u>IO_STREAM_SET_TIMESTAMP_SWITCH_REQ</u>		

IO_STREAM_GET_TIMESTAMP_SWITCH_REQ

Value	0x72	Dependent	ALL
Description	Get time stamp format.		
Parameter	Same as <u>IO_STREAM_SET_TIMESTAMP_SWITCH_REQ</u>		

IO_STREAM_GET_TIMESTAMP_SWITCH_RESP

Value	0x73	Dependent	ALL
Description	Response of IO_STREAM_GET_TIMESTAMP_SWITCH_REQ.		
Parameter	Same as <u>IO_STREAM_SET_TIMESTAMP_SWITCH_REQ</u>		

IOCTRL_TYPE_SET_MSK_SWITCH_REQ

Value	0x74	Description	Disabled
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IOCTRL_TYPE_SET_MSK_SWITCH_RESP

Value	0x75	Description	Disabled
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IOCTRL_TYPE_SET_MSK_SWITCH_REQ

Value	0x76	Description	Disabled
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IOCTRL_TYPE_GET_MSK_SWITCH_RESP

Value	0x77	Description	Disabled
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IOCTRL_TYPE_SET_VD_SENSITIVITY_REQ

Value	0x78	Description	Disabled
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IOCTRL_TYPE_SET_VD_SENSITIVITY_RESP

Value	0x79	Description	Disabled
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IOCTRL_TYPE_GET_VD_SENSITIVITY_REQ

Value	0x7A	Description	Disabled
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IOCTRL_TYPE_GET_VD_SENSITIVITY_RESP

Value	0x7B	Description	Disabled
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IOCTRL_TYPE_SET_BME280_THRESHOLDS_REQ

Value	0x7C	Description	Disabled
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IOCTRL_TYPE_SET_BME280_THRESHOLDS_RESP

Value	0x7D	Description	Disabled
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IOCTRL_TYPE_GET_BME280_THRESHOLDS_REQ

Value	0x8C	Description	Disabled
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IOCTRL_TYPE_GET_BME280_THRESHOLDS_RESP

Value	0x8D	Description	Disabled
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IOCTRL_TYPE_GET_BME280_STATUS_REQ

Value	0x7E	Description	Disabled
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IOCTRL_TYPE_GET_BME280_STATUS_RESP

Value	0x7F	Description	Disabled
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IO_STREAM_GET_VIDEO_BRIGHTNESS_REQ

Value	0x80	Description	All
Description	Get video brightness.		
Parameter	8bytes(blank)		

IO_STREAM_GET_VIDEO_BRIGHTNESS_RESP

Value	0x81	Dependent	ALL
Description	Response of IO_STREAM_GET_VIDEO_BRIGHTNESS_REQ.		
Parameter	8bytes		
Type	Note		
uint8	0: day 1: night		
uint8	Value, 1~5.		
uint8[6]	Reserved		

IO_STREAM_SET_VIDEO_BRIGHTNESS_REQ

Value	0x82	Dependent	ALL
Description	Set video brightness.		
Parameter	Same as <i>IO_STREAM_GET_VIDEO_BRIGHTNESS_RESP</i>		

IO_STREAM_SET_VIDEO_BRIGHTNESS_RESP

Value	0x83	Dependent	ALL
Description	Response of IO_STREAM_SET_VIDEO_BRIGHTNESS_REQ.		
Parameter	Same as <i>IO_STREAM_GET_VIDEO_BRIGHTNESS_RESP</i>		

IO_STREAM_GET_VIDEO_CONTRAST_REQ

Value	0x84	Description	Disabled
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IO_STREAM_GET_VIDEO_CONTRAST_RESP

Value	0x85	Description	Disabled
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IO_STREAM_SET_VIDEO_CONTRAST_REQ

Value	0x86	Description	Disabled
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IO_STREAM_SET_VIDEO_CONTRAST_RESP

Value	0x87	Description	Disabled
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IO_STREAM_SET_VIDEO_DWDR_INTENSITY_REQ

Value	0x88	Dependent	ALL
Description	(Deprecated) Set video WDR intensity.		
Parameter	8bytes		
Type	Note		
uint8	Intensity		
uint8[7]	Reserved		

IO_STREAM_SET_VIDEO_DWDR_INTENSITY_RESP

Value	0x89	Dependent	ALL
Description	Response of <i>IO_STREAM_SET_VIDEO_DWDR_INTENSITY_REQ</i> .		
Parameter	Same as <i>IO_STREAM_SET_VIDEO_DWDR_INTENSITY_REQ</i>		

IO_SETRAM_GET_VIDEO_DWDR_INTENSITY_REQ

Value	0x8A	Dependent	ALL
Description	(Deprecated) Get video WDR intensity.		
Parameter	Same as <i>IO_STREAM_SET_VIDEO_DWDR_INTENSITY_REQ</i>		

IO_STREAM_GET_VIDEO_DWDR_INTENSITY_RESP

Value	0x8B	Dependent	ALL
Description	Response of <i>IO_STREAM_GET_VIDEO_DWDR_INTENSITY_REQ</i> .		
Parameter	Same as <i>IO_STREAM_SET_VIDEO_DWDR_INTENSITY_REQ</i>		

IO_RVDP_SET_GATE_DOOR_REQ

Value	0x8E	Dependent	RVDP-ES/JS/EGS/DSI
Description	Set RVDP gate door.		
Parameter	8 bytes		
Type	Note		
CHAR	relay 1		
CHAR	relay 2		
CHAR	relay 3		
CHAR	disable relay 1		
CAHR	disable relay 2		
CHAR	disable relay 3		
CHAR[2]	reserve		

IO_RVDP_SET_GATE_DOOR_RESP

Value	0x8F	Dependent	RVDP-ES/JS/EGS/DSI
Description	Response of IO_RVDP_SET_GATE_DOOR_REQ.		
Parameter	same as IO_RVDP_SET_GATE_DOOR_REQ		

IO_GPIO_MPTEST_REQ

Value	0x90	Dependent	ALL
Description	(Engineering API) MP test GPIO.		
Parameter	8bytes		

IO_GPIO_MPTEST_RESP

Value	0x91	Dependent	ALL
Description	Response of IO_GPIO_MPTEST_GPIO_REQ.		
Parameter	8bytes		
Type	Note		
uint8	PIR		
uint8	Day/Night		
uint8	0		
uint8[5]	Reserved		

IO_GPIO_MPTEST_RESETPIN_REQ

Value	0x92	Description	Disabled
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IO_GPIO_MPTEST_RESETPIN_RESP

Value	0x93	Description	Disabled
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IO_RVDP_SET_PIR_SENSITIVITY_REQ

Value	0x94	Dependent	ALL
Description	(Deprecated) Set RVDP PIR sensitivity.		
Parameter	8bytes		
Type	Note		
uint8	PIR sensitivity level setting, 1~2		
uint8[7]	Reserved		

IO_RVDP_SET_PIR_SENSITIVITY_RESP

Value	0x95	Dependent	ALL
Description	Response of IO_RVDP_SET_PIR_SENSITIVITY_REQ.		
Parameter	Same as <u>IO_RVDP_SET_PIR_SENSITIVITY_REQ</u>		

IO_RVDP_GET_PIR_SENSITIVITY_REQ

Value	0x96	Dependent	ALL
Description	(Deprecated) Get RVDP PIR sensitivity.		
Parameter	Same as <u>IO_RVDP_SET_PIR_SENSITIVITY_REQ</u>		

IO_RVDP_GET_PIR_SENSITIVITY_RESP

Value	0x97	Dependent	ALL
Description	Response of IO_RVDP_GET_PIR_SENSITIVITY_REQ.		
Parameter	Same as <u>IO_RVDP_SET_PIR_SENSITIVITY_REQ</u>		

IO_RVDP_GET_DOOR_BELL_REQ

Value	0x98	Dependent	RVDP-ES/JS/EGS/DSI
Description	Get RVDP doorbell.		
Parameter	8bytes		
Type	Note		
uint8	Index		
uint8	Playing duration		
uint8	Volume		
uint8[5]	Reserved		

IO_RVDP_GET_DOOR_BELL_RESP

Value	0x99	Dependent	RVDP-ES/JS/EGS/DSI
Description	Response of IO_RVDP_GET_DOOR_BELL_REQ.		
Parameter	Same as <u>IO_RVDP_GET_DOOR_BELL_REQ</u>		

IO_RVDP_SET_BELL_INDEX_REQ

Value	0x9A	Dependent	RVDP-ES/JS/EGS/DSI
Description	Set RVDP bell index.		
Parameter	8bytes		

IO_RVDP_SET_BELL_INDEX_RESP

Value	0x9B	Dependent	RVDP-ES/JS/EGS/DSI
Description	Response of IO_RVDP_SET_BELL_INDEX_REQ.		
Parameter	8bytes		

IO_RVDP_GET_SWITCH_STATUS_REQ

Value	0x9C	Dependent	RVDP
Description	Get RVDP switch status.		
Parameter	8bytes		
Type	Note		
uint8	Type 0: Lock 1: Bell		
uint8	Enable		
uint8[6]	Reserved		

IO_RVDP_GET_SWITCH_STATUS_RESP

Value	0x9D	Dependent	RVDP
Description	Response of IO_RVDP_GET_SWITCH_STATUS_REQ.		
Parameter	Same as <i>IO_RVDP_GET_SWITCH_STATUS_REQ</i>		

IO_RVDP_SET_SWITCH_TYPE_REQ

Value	0x9E	Dependent	RVDP-ES/JS/EGS/DSI
Description	Set RVDP switch status.		
Parameter	Same as <i>IO_RVDP_GET_SWITCH_STATUS_REQ</i>		

IO_RVDP_SET_SWITCH_ENABLE_REQ

Value	0x9F	Dependent	RVDP-ES/JS/EGS/DSI
Description	Response of IOCTRL_TYPE_SET_RVDP_SWITCH_TYPE_REQ.		
Parameter	Same as <i>IO_RVDP_GET_SWITCH_STATUS_REQ</i>		

IO_MOTION_SET_MASK_REQ

Value	0xA0	Dependent	WAPP, RVDP
Description	Set motion mask.		
Parameter	16bytes		
Type	Note		
uint32	Motion mask of day		
uint32	Motion mask of night		
uint8[8]	Reserved		

The mask above is bitwise.

0	1	2	3	4
5	6	7	8	9
10	11	12	13	14
15	16	17	18	19
20	21	22	23	24

IO_MOTION_SET_MASK_RESP

Value	0xA1	Dependent	WAPP, RVDP
Description	Response of IO_MOTION_SET_MASK_REQ.		
Parameter	Same as <u>IO_MOTION_SET_MASK_REQ</u>		

IO_MOTION_GET_MASK_REQ

Value	0xA2	Dependent	WAPP, RVDP
Description	Get motion mask.		
Parameter	Same as <u>IO_MOTION_SET_MASK_REQ</u>		

IO_MOTION_GET_MASK_RESP

Value	0xA3	Dependent	WAPP, RVDP
Description	Response of IO_MOTION_GET_MASK_REQ.		
Parameter	Same as <u>IO_MOTION_SET_MASK_REQ</u>		

IO_CLOUD_SET_SERVICE_REQ

Value	0xA4	Dependent	ALL
Description	Set cloud service.		
Parameter	512bytes		
Type	Note		
uint8	Service 0: OFF 1: google drive 2: dropbox		
uint8	OAuth version 1: OAuth V1 2: OAuth V2		
str[128]	Key0		
str[128]	Key1		
str[128]	Key2		
uint8[126]	Reserved		

IO_CLOUD_SET_SERVICE_RESP

Value	0xA5	Dependent	ALL
Description	Response of IO_CLOUD_SET_SERVICE_REQ.		
Parameter	Same as <i>IOCTRL_TYPE_SET_CLOUD_SERVICE_REQ</i>		

IO_CLOUD_GET_SERVICE_REQ

Value	0xA6	Dependent	ALL
Description	Get cloud service setting.		
Parameter	N/A		

IO_CLOUD_GET_SERVICE_RESP

Value	0xA7	Dependent	ALL
Description	Response of IO_CLOUD_GET_SERVICE_REQ.		
Parameter	Same as <i>IO_CLOUD_SET_SERVICE_REQ</i>		

IO_CLOUD_SET_SN_REQ

Value	0xA8	Dependent	ALL
Description	Set cloud SN code.		
Parameter	256bytes		
Type	Note		
str[128]	SN code		
uint8[128]	Reserved		

IO_CLOUD_SET_SN_RESP

Value	0xA9	Dependent	ALL
Description	Response of IO_CLOUD_SET_SN_REQ.		
Parameter	8bytes		
Type	Note		
uint8	Result 0: fail 1: success		
uint8[7]	Reserved		

IO_CLOUD_GET_LIMIT_REQ

Value	0xAA	Dependent	ALL
Description	Get cloud limit.		
Parameter	N/A		

IO_CLOUD_GET_LIMIT_RESP

Value	0xAB	Dependent	ALL
Description	Response of IO_CLOUD_GET_LIMIT_REQ.		
Parameter	8bytes		
Type	Note		
st_EventResDate	Expired date		

IO_CLOUD_SET_PARM_REQ

Value	0xAC	Dependent	ALL
Description	Set cloud parameter.		
Parameter	4bytes		
Type	Note		
uint8	Service 0: OFF 1: google drive 2: dropbox		
uint8	MAX of backup file counts		
uint8	Overwrite 0: disable 1: enable		
uint8	Reserved		

IO_CLOUD_SET_PARM_RESP

Value	0xAD	Dependent	ALL
Description	Response of IO_CLOUD_SET_PARM_REQ.		
Parameter	Same as IO_CLOUD_SET_PARM_REQ		

IO_CLOUD_GET_PARM_REQ

Value	0xAE	Dependent	ALL
Description	Get cloud parameter.		
Parameter	N/A		

IO_CLOUD_GET_PARM_RESP

Value	0xAF	Dependent	ALL
Description	Response of IO_CLOUDGET_PARM_REQ.		
Parameter	Same as IO_CLOUD_SET_PARM_REQ		

IOCTRL_TYPE_SET_RF_PAIRING_REQ

Value	0xB0	Dependent	WAPP-ESR/JSR
Description	Set RF pairing.		
Parameter	8bytes		
Type	Note		
int32	RF SSID, N/A		
uint8	Node ID, N/A		
uint8	Device type 0x10: MAG 0x11: PIR 0x16: Remoter 0x24: Outdoor siren 0x25: Indoor siren 0x26: Power switch 0x37: Smoke detector		
uint8	Misc		
uint8	Reserved		

IOCTRL_TYPE_SET_RF_PAIRING_RESP

Value	0xB1	Dependent	ALL
Description	Response of IOCTRL_TYPE_SET_RF_PAIRING_REQ.		
Parameter	16bytes		
Type	Note		
int32	RF ssid		
uint8	Node ID		
uint8	Device type 0x10: MAG 0x11: PIR 0x16: Remoter 0x24: Outdoor siren 0x25: Indoor siren 0x26: Power switch 0x37: Smoke detector		
uint8	Misc		
uint8	Ret 1: pairing 2: busy		
uint8[8]	Reserved		

IOCTRL_TYPE_SET_RF_ADD_DEVICE_REQ

Value	0xB2	Dependent	WAPP-ESR/JSR
Description	Set RF add sensor.		
Parameter	32bytes		
Type	Note		
int32	Index, 3~16.		
<u>sensor_info</u>	Sensor item		

IOCTRL_TYPE_SET_RF_ADD_DEVICE_RESP

Value	0xB3	Dependent	ALL
Description	Response of IOCTRL_TYPE_SET_RF_ADD_DEVICE_REQ.		
Parameter	Same as <u>IOCTRL_TYPE_SET_RF_ADD_DEVICE_REQ</u>		

IOCTRL_TYPE_GET_RF_DEVICE_LIST_REQ

Value	0xB4	Dependent	WAPP-ESR/JSR
Description	Get RF device list.		
Parameter	8bytes		

IOCTRL_TYPE_GET_RF_DEVICE_LIST_RESP

Value	0xB5	Dependent	WAPP-ESR/JSR
Description	Response of IOCTRL_TYPE_GET_RF_DEVICE_LIST_REQ.		
Parameter	672 byte = 28 * MAX_SENSOR_LIST(24)		
Type	Note		
sensor_info [24]	Sensor item		

IO_RECORDER_SET_TIMELAPSE_REQ

Value	0xB6	Dependent	ALL
Description	(Do not use it!) Set time lapse.		
Parameter	8bytes		
Type	Note		
uint32	Interval		
uint8	enable		
uint8[3]	Reserved		

IO_RECORDER_SET_TIMELAPSE_RESP

Value	0xB7	Dependent	ALL
Description	(Do not use it!) Response of IO_RECORDER_SET_TIMELAPSE_REQ.		
Parameter	Same as IO_RECORDER_SET_TIMELAPSE_REQ		

IO_RECORDER_GET_TIMELAPSE_REQ

Value	0xB8	Dependent	ALL
Description	(Do not use it!) Get time lapse.		
Parameter	N/A		

IO_RECORDER_GET_TIMELAPSE_RESP

Value	0xB9	Dependent	ALL
Description	(Do not use it!) Response of IOCTRL_TYPE_GET_TIMELAPSE_REQ.		
Parameter	Same as IO_RECORDER_SET_TIMELAPSE_REQ		

IO_SIREN_SET_REQ

Value	0xBA	Dependent	ALL
Description	Set alarm.		
Parameter	44bytes		
Type	Note		
uint8	Enable 0: disable 1: enable		
uint8	Siren's volume 0:MAX 5:MUTE		
uint8	Siren's duration Value: 15~60 (seconds)		
uint8	Reserved		
<u>st_schedule</u>	Time to siren be armed		
<u>st_schedule</u>	Time to siren be disarmed		
str[32]	Admin's password		

IO_SIREN_SET_RESP

Value	0xBB	Dependent	ALL
Description	Response of IO_SIREN_SET_REQ.		
Parameter	Same as <i>IO_SIREN_SET_REQ</i>		
<i>admin_password = 0x00 : success , 0x01: password error</i>			

IO_SIREN_GET_REQ

Value	0xBC	Dependent	WAPP-ES/ESR, WAPP-JS/JSR
Description	Get alarm settings.		
Parameter	N/A		

IO_SIREN_GET_RESP

Value	0xBD	Dependent	ALL
Description	Response of IO_SIREN_GET_REQ.		
Parameter	Same as <i>IO_SIREN_SET_REQ</i>		

IO_RECORDER_SYNC_EVENT_REQ

Value	0xBE	Dependent	ALL
Description	(Engineering API) Sync cloud event files.		
Parameter	16bytes		
Type	Note		
uint8[8]	Reserved		
<u>st_EventResDate</u>	Sync time		

IO_RECORDER_SYNC_EVENT_RESP

Value	0xBF	Dependent	ALL
Description	(Engineering API) Response of IO_RECORDER_SYNC_EVENT_REQ.		
Parameter	8bytes		
Type	Note		
uint8	Sync result 0: not found 1: OK		
uint8[7]	Reserved		

IO_SYS_EXTERN_GPIO_CTRL_REQ

Value	0xC0	Dependent	ALL
Description	Extern GPIO control.		
Parameter	8bytes		
Type	Note		
uint8	GPIO_ctrl_A 0: Set Low 1: Set High		
uint8[7]	Reserved		

IO_SYS_EXTERN_GPIO_CTRL_RESP

Value	0xC1	Dependent	ALL
Description	Response of IO_SYS_EXTERN_GPIO_CTRL_REQ.		
Parameter	Same as <u>IO_SYS_EXTERN_GPIO_CTRL_REQ</u>		

IO_RVDP_SET_EXTERN_RELAY_REQ

Value	0xC2	Dependent	RVDP-ES/JS/EGS/DSI
Description	Set RVDP extern relay.		
Parameter	8bytes		
Type	Note		
uint8	Delay 1~5 seconds of Relay 1.		
uint8	Delay 1~5 seconds of Relay 2.		
uint8	Delay 1~5 seconds of Relay 3.		
uint8	Delay 1~5 seconds of Relay 4.		
uint8[4]	Reserved		

IO_RVDP_SET_EXTERN_RELAY_RESP

Value	0xC3	Dependent	ALL
Description	Response of IO_RVDP_SET_EXTERN_RELAY_REQ.		
Parameter	Same as <u>IOCTRL_TYPE_SET_RVDP_EXTERN_RELAY_REQ</u>		

IO_RVDP_GET_EXTERN_RELAY_REQ

Value	0xC4	Dependent	RVDP-ES/JS/EGS/DSI
Description	Get RVDP extern relay.		
Parameter	Same as <u>IO_RVDP_SET_EXTERN_RELAY_REQ</u>		

IO_RVDP_GET_EXTERN_RELAY_RESP

Value	0xC5	Dependent	ALL
Description	Response of IO_RVDP_GET_EXTERN_RELAY_REQ.		
Parameter	Same as <u>IO_RVDP_SET_EXTERN_RELAY_REQ</u>		

IO_STREAM_SET_AUDIO_SETTING_REQ

Value	0xC6	Dependent	RVDP-ES/JS/EGS/DSI
Description	Set audio.		
Parameter	16bytes		
Type	Note		
uint8	Codec ID of audio out		
uint8	Sample rate of audio out		
uint8	Data bits of audio out		
uint8	Channels of audio out		
uint8	Volume control of push to talk 0:MAX 4:MIN		
uint8	ECC of audio out		
uint8[2]	Reserved		
uint8	Codec ID of audio in		
uint8	Sample rate of audio in		
uint8	Data bits of audio in		
uint8	Channels of audio in		
uint8	Volume of audio in		
uint8	ECC of audio in		
uint8[2]	Reserved		

IO_STREAM_SET_AUDIO_SETTING_RESP

Value	0xC7	Dependent	ALL
Description	Response of IO_STREAM_SET_AUDIO_SETTING_REQ.		
Parameter	Same as <u>IO_STREAM_SET_AUDIO_SETTING_REQ</u>		

IO_STREAM_GET_AUDIO_SETTING_REQ

Value	0xC8	Dependent	RVDP-ES/JS/EGS/DSI
Description	Get audio setting.		
Parameter	Same as <u>IO_STREAM_SET_AUDIO_SETTING_REQ</u>		

IO_STREAM_SET_AUDIO_SETTING_RESP

Value	0xC9	Dependent	ALL
Description	Response of IO_STREAM_GET_AUDIO_SETTING_REQ.		
Parameter	Same as <u>IO_STREAM_SET_AUDIO_SETTING_REQ</u>		

IO_WIFI_SET_EXTERN_REQ

Value	0xCA	Dependent	RVDP- DSI
Description	Set Wi-Fi parameter.		
Parameter	8bytes		
Type	Note		
uint8	Enable 0: disable wifi 1: enable wifi		
uint8	Frequency 0: dual band 1: 2.4G 2: 5G		
uint8[6]	reserved		

IO_WIFI_SET_EXTERN_RESP

Value	0xCB	Dependent	ALL
Description	Response of IO_WIFI_SET_EXTERN_REQ.		
Parameter	Same as IO_WIFI_SET_EXTERN_REQ		

IO_WIFI_GET_EXTERN_REQ

Value	0xCC	Dependent	RVDP- DSI
Description	Get Wi-Fi parameter.		
Parameter	Same as IO_WIFI_SET_EXTERN_REQ		

IO_WIFI_GET_EXTERN_RESP

Value	0xCD	Dependent	ALL
Description	Response of IO_WIFI_GET_EXTERN_REQ.		
Parameter	Same as IO_WIFI_SET_EXTERN_REQ		

IO_LIGHTING_SET_SETTING_REQ

Value	0xD0	Dependent	WAPP-LSEA
Description	Set Lighting parameters.		
Parameter	160 bytes		
Type	Note		
uint8	Enable lighting 0:OFF 1:Always ON 2:Auto		
uint8	Brightness, 0 ~ 100		
uint8	Red (Reserved)		
uint8	Green (Reserved)		
uint8	Blue (Reserved)		
uint8	Auto mode 0:by schedule 1:by sunrise/sunset(Reserved) 2:by trigger		
uint8[2]	Reserved		
<u>st_schedule</u>	Time to lighting on		
<u>st_schedule</u>	Time to lighting off		
str[32]	Country Name(Reserved for auto mode of sunrise/sunset)		
str[32]	Region Name(Reserved for auto mode of sunrise/sunset)		
uint64	Local time of Sunrise (seconds from 1970-01-01 00:00:00)		
uint64	Local time of Sunset (seconds from 1970-01-01 00:00:00)		
uint8[32]	Reserved 2		

IO_LIGHTING_SET_SETTING_RESP

Value	0xD1	Dependent	WAPP-LSEA
Description	Response of IO_LIGHTING_SET_SETTING_REQ.		
Parameter	Same as <u>IO_LIGHTIN_SET_SETTING_REQ</u>		

IO_LIGHTING_GET_SETTING_REQ

Value	0xD2	Dependent	WAPP-LSEA
Description	Get Lighting parameters.		
Parameter	N/A		

IO_LIGHTING_GET_SETTING_RESP

Value	0xD3	Dependent	WAPP-LSEA
Description	Response of IO_LIGHTING_GET_SETTING_REQ.		
Parameter	Same as IO_LIGHTING_SET_SETTING_REQ		

IO_SIREN_SING

Value	0xD4	Dependent	WAPP-LSEA
Description	Let camera sound alarm.		
Parameter	8bytes		
Type	Note		
uint8	Siren's command 0: shut up 1:Sing		
uint8[7]	Reserved		

IO_SIREN_GET_STATUS_REQ

Value	0xD5	Dependent	WAPP-LSEA
Description	Get alarm's status of camera.		
Parameter	N/A		

IO_SIREN_GET_STATUS_RESP

Value	0xD6	Dependent	WAPP-LSEA
Description	Response of IO_SIREN_GET_STATUS_REQ.		
Parameter	8bytes		
Type	Note		
uint8	Siren's status 0: stopped 1: started		
uint8[7]	Reserved		

st_EvnetResDate	
uint16	year
uint8	month (1 - 12)
uint8	day (1 - 31)
uint8	wday
uint8	hour
uint8	min
uint8	sec

IOCTRL_TYPE_LISTEVENT_TIMELINE_REQ

Value	0x0210	Dependent	
Description	download a jpeg of event		
Parameter	8bytes		
Type			
st_EvnetResDate	start time		
st_EvnetResDate	end time		

IOCTRL_TYPE_LISTEVENT_TIMELINE_RESP

Value	0x0211	Dependent	
Description	Response of IOCTRL_TYPE_LISTEVENT_TIMELINE_REQ.		
Parameter	1008bytes		
Type			
uint8[1008]	7day * 24hr * pre 10mins		

IOCTRL_TYPE_LISTEVENT_SNAPSHOT_REQ

Value	0x0216	Dependent	
Description	download a jpeg of event		
Parameter	8bytes		
Type	Note		
st_EvnetResDate	1.	timestamp of the event	
	2.	take a realtime snapshot if date.year == 0	

IOCTRL_TYPE_LISTEVENT_SNAPSHOT_RESP

Value	0x0217	Dependent	
Description	Response of IOCTRL_TYPE_LISTEVENT_SNAPSHOT_REQ.		
Parameter	12bytes		
Type	Note		
st_EvnetResDate	Datetime of event. Should be the same as REQ		
uint32	Size of JPEG		

st_Rect	
int32	x1 (left)
int32	y1 (top)
int32	x2 (right)
int32	y2 (bottom)

st_ROI	
st_Rect[3]	interest ROI
uint8[16]	reserved
st_Rect[3]	exclude ROI
uint8[16]	reserved

IOCTRL_TYPE_SET_ROI_REQ

Value	0x800A	Dependent	
Description	Set ROI of Object Detection		
Parameter	128bytes		
Type	Note		
st_ROI			

IOCTRL_TYPE_SET_ROI_RESP

Value	0x800B	Dependent	
Description	Response of IOCTRL_TYPE_SET_ROI_REQ.		
Parameter	8bytes		
Type	Note		
uint8	1:OK, 0:ERROR		
uint8[7]	reserved		

IOCTRL_TYPE_GET_ROI_REQ

Value	0x800C	Dependent	
Description	Get ROI of object detection		
Parameter	8 bytes		
Type			
uint8[8]	reserved		

IOCTRL_TYPE_GET_ROI_RESP

Value	0x800D	Dependent	
Description	Response of IOCTRL_TYPE_GET_ROI_REQ.		
Parameter	128bytes		
Type			
st_ROI			

st_FW_ID	
uint32	scpu_version
uint32	scpu_build
uint32	ncpu_version
uint32	ncpu_build
uint32	model_version
uint32	model_build

st_object_detection_setting	
uint8[4]	reserved
st_FW_ID	current version
st_FW_ID	remote version
uint8[28]	reserved
uint8[16]	enable flag of each class type
uint8[16]	score of each class type
uint8[48]	reserved
uint8[16]	visible flag of each class type
uint8[64]	reserved

IOCTRL_TYPE_SET_OBJECT_DETECTION_REQ

Value	0x800C	Dependent	
Description	Set settings of object detection		
Parameter	240 bytes		
Type			
st_object_detection_setting			

IOCTRL_TYPE_SET_OBJECT_DETECTION_RESP

Value	0x800D	Dependent	
Description	Response of IOCTRL_TYPE_SET_OBJECT_DETECTION_REQ.		
Parameter	240 bytes		
Type			
st_object_detection_setting	Should be the same as req		

IOCTRL_TYPE_GET_OBJECT_DETECTION_REQ

Value	0x800C	Dependent	
Description	Get settings of object detection		
Parameter	8 bytes		
Type	Note		
uint8[8]		reserved	

IOCTRL_TYPE_GET_OBJECT_DETECTION_RESP

Value	0x800D	Dependent	
Description	Response of IOCTRL_TYPE_GET_OBJECT_DETECTION_REQ		
Parameter	240 bytes		
Type	Note		
st_object_detection_setting			



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