Datavideo DVIP Control Operation Guide

Table of Content

1 Physical Layer

1.1 Control Interface : Ethernet

1.2 Communication Speed : 10/100Mbps

1.3 Control Protocol : TCP/IP

2 General Connection Information

2.1 By default the DVIP is configured to operate at a DHCP mode. User can re-configure to use fixed IP address

2.2 TCP/IP Control port number :

2.2.1 TCP port : 5002

2.2.2 UDP port : 5002

3 Data Packet

3.1 Control Command Packet (TCP)

3.1.1 The control command will send via TCP packet

3.1.2 Performing a “TCP connect” to the device using the designated IP address and Port 5002.

3.1.3 DVIP device TCP Server Port number : 5002

3.1.4 Command Packets use a simple TCP packet structure as follow:

Byte Order	Description
0	Packet Length High Byte
1	Packet Length Low Byte
2	Command_Data[0]
……	…..
513	Command_Data[511]

3.1.5 Packet Length = length of Command_Data + 2

3.1.6 The different Datavideo product control protocol (Switcher, Recorder, Monitor....) will be encapsulated into Command_Data array and then send out. Please refer tothe separate specific protocol document.

3.2 Control Command Return Packet (TCP)

3.2.1 The return data (TCP) packet of DVIP device will be :

Byte Order	Description
0	Packet Length High Byte
1	Packet Length Low Byte
2	DVIP Device Return_Data[0]
……	…..
513	DVIP Device Return_Data[511]

Example:

Control PTC-150 Camera (Addr: 1) Pan Left at Speed = 10 :

0x00 0x0B 0x81 0x01 0x06 0x01 0x0A 0x0A 0x01 0x03 0xFF

Packet Length VISCA command to Pan PTC-150 Left at speed = 10

3.3 Broadcast Packet

3.3.1 Controller uses broadcast packet to obtain DVIP devices information in the same network

3.3.2 Destination IP address : 255.255.255.255

3.3.3 DVIP device Server (UDP) Port number : 5002

3.3.4 Broadcast packet format:

Byte (8 bites)	Description
0	Packet Length High Byte
1	Packet Length Low Byte
2	Type Code : 0x80
3	Command
4	Parameter1
……	…..
251	Parameter248

3.3.4.1 Packet Length = Command + Length of Parameter + 2

3.3.5 Broadcast Command List

3.3.5.1 Request network information of all DVIP devices at same network

3.3.5.1.1 Command Type : Broadcast

3.3.5.1.2 Support Levels : Mandatory

3.3.5.1.3 Command to DVIP device

Request DVIP devices network information, include DHCP mode, DHCP Host name, IP address, Net mask, MAC address, Gateway, Primary DNS and Secondary DNS		
Command	0x00	
Parameter1	0x45	'E'
Parameter2	0x54	'T'
Parameter3	0x48	'H'
Parameter4	0x5F	'_'
Parameter5	0x52	'R'
Parameter6	0x45	'E'
Parameter7	0x51	'Q'

3.3.5.1.4 Return from DVIP device

Length	**Description**
1 byte	Data Length High Byte
1 byte	Data Length Low Byte
1 byte	Type Code : 0x80
1 byte	Response Code : 0x00
1 byte	DHCP 0: Disable 1: Enable
16 bytes	DHCP Host name (15 bytes max) + NULL (0x00) terminated
6 bytes	MAC address
4 bytes	IP address
4 bytes	Net mask
4 bytes	Gateway
4 bytes	Primary DNS address
4 bytes	Secondary DNS address
1 byte	Device occuiped (number of active TCP, RS connections)

3.3.5.2 Request firmware revision of specific DVIP device

3.3.5.2.1 Command Type : Broadcast

3.3.5.2.2 Support Levels : Mandatory

3.3.5.2.3 Command to DVIP device

Request firmware revision of specific DVIP		
Command	0x01	
Parameter1	DVIP MAC address[0]	
Parameter2	DVIP MAC address[1]	
Parameter3	DVIP MAC address[2]	
Parameter4	DVIP MAC address[3]	
Parameter5	DVIP MAC address[4]	
Parameter6	DVIP MAC address[5]	
Parameter7	0x46	'F'
Parameter8	0x57	'W'
Parameter9	0x56	'V'
Parameter10	0x45	'E'
Parameter11	0x52	'R'
Parameter12	0x5F	'_'
Parameter13	0x52	'R'
Parameter14	0x45	'E'
Parameter15	0x51	'Q'

3.3.5.2.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x06 (Data Length Low Byte)
1 byte	Type Code : 0x80
1 byte	Response Code : 0x01
1 byte	Firmware Revision Major Number
1 byte	Firmware Revision Minor Number

3.3.5.3 Configure DHCP mode of specific DVIP device

3.3.5.3.1 Command Type : Broadcast

3.3.5.3.2 Support Levels : Mandatory

3.3.5.3.3 Command to DVIP device

Configure DHCP mode of specific DVIP device		
Command	0x02	
Parameter1	DVIP MAC address[0]	
Parameter2	DVIP MAC address[1]	
Parameter3	DVIP MAC address[2]	
Parameter4	DVIP MAC address[3]	
Parameter5	DVIP MAC address[4]	
Parameter6	DVIP MAC address[5]	
Parameter7	0x53	'S'
Parameter8	0x45	'E'
Parameter9	0x54	'T'
Parameter10	0x5F	'_'
Parameter11	0x44	'D'
Parameter12	0x48	'H'
Parameter13	0x43	'C'
Parameter14	0x50	'P'
Parameter15	0x4D	'M'
Parameter16	0x4F	'O'
Parameter17	0x44	'D'
Parameter18	0x45	'E'
Parameter19	0x00 : Disable 0x01 : Enable	

3.3.5.3.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code : 0x80
1 byte	Response Code : 0x02

1 byte	0x06 (ACK) 0x15 (NACK)

3.3.5.4 Configure IP & Gateway address of specific DVIP device

3.3.5.4.1 Command Type : Broadcast

3.3.5.4.2 Support Levels : Mandatory

3.3.5.4.3 Command to DVIP device

Configure IP & Gateway address of specific DVIP device		
Command	0x03	
Parameter1	DVIP MAC address[0]	
Parameter2	DVIP MAC address[1]	
Parameter3	DVIP MAC address[2]	
Parameter4	DVIP MAC address[3]	
Parameter5	DVIP MAC address[4]	
Parameter6	DVIP MAC address[5]	
Parameter7	0x53	'S'
Parameter8	0x45	'E'
Parameter9	0x54	'T'
Parameter10	0x5F	'_'
Parameter11	0x49	'I'
Parameter12	0x50	'P'
Parameter13	0x41	'A'
Parameter14	0x44	'D'
Parameter15	0x52	'R'
Parameter16	IP_Address[0]	
Parameter17	IP_Address[1]	
Parameter18	IP_Address[2]	
Parameter19	IP_Address[3]	
Parameter20	Gateway[0]	
Parameter21	Gateway[1]	
Parameter22	Gateway[2]	
Parameter23	Gateway[3]	

3.3.5.4.4 Return from DVIP device

Length	Description
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code : 0x80
1 byte	Response Code : 0x03
1 byte	0x06 (ACK) 0x15 (NACK)

3.3.5.5 Request specific DVIP to reboot (software reset)

3.3.5.5.1 Command Type : Broadcast

3.3.5.5.2 Support Levels : Optional

3.3.5.5.3 Command to DVIP device

Request specific DVIP device to reboot (software reset)		
Command	0x04	
Parameter1	DVIP MAC address[0]	
Parameter2	DVIP MAC address[1]	
Parameter3	DVIP MAC address[2]	
Parameter4	DVIP MAC address[3]	
Parameter5	DVIP MAC address[4]	
Parameter6	DVIP MAC address[5]	
Parameter7	0x52	'R'
Parameter8	0x45	'E'
Parameter9	0x53	'S'
Parameter10	0x45	'E'
Parameter11	0x54	'T'

3.3.5.5.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code : 0x80
1 byte	Response Code : 0x04
1 byte	0x06 (ACK) 0x15 (NACK)

3.3.5.6 Get Vendor and Product ID of specific DVIP device

3.3.5.6.1 Command type : Broadcast

3.3.5.6.2 Support Levels : Mandatory

3.3.5.6.3 Command to DVIP device

Get Vendor and Product ID of specific DVIP device		
Command	0x40	
Parameter1	DVIP MAC address[0]	
Parameter2	DVIP MAC address[1]	
Parameter3	DVIP MAC address[2]	
Parameter4	DVIP MAC address[3]	
Parameter5	DVIP MAC address[4]	
Parameter6	DVIP MAC address[5]	
Parameter7	0x47	'G'
Parameter8	0x45	'E'
Parameter9	0x54	'T'
Parameter10	0x5F	'_'
Parameter11	0x4D	'M'
Parameter12	0x4F	'O'
Parameter13	0x44	'D'
Parameter14	0x45	'E'
Parameter15	0x4C	'L'

3.3.5.6.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x08 (Data Length Low Byte)
1 byte	Type Code : 0x80
1 byte	Response Code : 0x40
2 bytes	Vendor ID
2 bytes	Product ID

3.3.5.7 Get Model Name of specific DVIP device

3.3.5.7.1 Command Type : Broadcast

3.3.5.7.2 Support Levels : Recommended

3.3.5.7.3 Command to DVIP device

Get Model Name of specific DVIP device		
Command	0x41	
Parameter1	DVIP MAC address[0]	
Parameter2	DVIP MAC address[1]	
Parameter3	DVIP MAC address[2]	
Parameter4	DVIP MAC address[3]	
Parameter5	DVIP MAC address[4]	
Parameter6	DVIP MAC address[5]	
Parameter7	0x47	'G'
Parameter8	0x45	'E'
Parameter9	0x54	'T'
Parameter10	0x5F	'_'
Parameter11	0x4D	'M'
Parameter12	0x4F	'O'
Parameter13	0x44	'D'
Parameter14	0x45	'E'
Parameter15	0x4C	'L'
Parameter16	0x5F	'_'
Parameter17	0x4E	'N'
Parameter18	0x41	'A'
Parameter19	0x4D	'M'
Parameter20	0x45	'E'

3.3.5.7.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x14 (Data Length Low Byte)
1 byte	Type Code : 0x80
1 byte	Response Code : 0x41

16 bytes	Model name 16 bytes max. NULL (0x00) padding if less than 16 bytes, e.g. “KMU-100\0\0\0\0\0\0\0\0\0”

3.3.5.8 Get Detailed Version Information of specific DVIP device

3.3.5.8.1 Command Type : Broadcast

3.3.5.8.2 Support Levels : Vendor-Dependent

3.3.5.8.3 Command to DVIP device

Get Detailed Version Information of specific DVIP device		
Command	0x42	
Parameter1	DVIP MAC address[0]	
Parameter2	DVIP MAC address[1]	
Parameter3	DVIP MAC address[2]	
Parameter4	DVIP MAC address[3]	
Parameter5	DVIP MAC address[4]	
Parameter6	DVIP MAC address[5]	
Parameter7	0x47	'G'
Parameter8	0x45	'E'
Parameter9	0x54	'T'
Parameter10	0x5F	'_'
Parameter11	0x56	'V'
Parameter12	0x45	'E'
Parameter13	0x52	'R'
Parameter14	0x53	'S'
Parameter15	0x49	'I'
Parameter16	0x4F	'O'
Parameter17	0x4E	'N'

3.3.5.8.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x14 (Data Length Low Byte)
1 byte	Type Code : 0x80
1 byte	Response Code : 0x42
4 bytes	Firmware A Version
4 bytes	Firmware B Version

4 bytes	Firmware C Version
4 bytes	Hardware Version/Firmware D Version

3.3.5.9 Get Preset Count

3.3.5.9.1 Command Type : Broadcast

3.3.5.9.2 Support Levels : Recommended

3.3.5.9.3 Command to DVIP device

Get Preset Count		
Command	0x43	
Parameter1	DVIP MAC address[0]	
Parameter2	DVIP MAC address[1]	
Parameter3	DVIP MAC address[2]	
Parameter4	DVIP MAC address[3]	
Parameter5	DVIP MAC address[4]	
Parameter5	DVIP MAC address[5]	
Parameter7	0x47	'G'
Parameter8	0x45	'E'
Parameter9	0x54	'T'
Parameter10	0x5F	'_'
Parameter11	0x50	'P'
Parameter12	0x52	'R'
Parameter13	0x45	'E'
Parameter14	0x53	'S'
Parameter15	0x45	'E'
Parameter16	0x54	'T'
Parameter17	0x5F	'_'
Parameter18	0x43	'C'
Parameter19	0x4F	'O'
Parameter20	0x55	'U'
Parameter21	0x4E	'N'
Parameter22	0x54	'T'

3.3.5.9.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x06 (Data Length Low Byte)

1 byte	Type Code : 0x80
1 byte	Response Code : 0x40
1 byte	0x06 (ACK) 0x15 (NACK)
1 byte	Presets count if DVIP device ACK

3.3.5.10 Get Preset Name

3.3.5.10.1 Command Type : Broadcast

3.3.5.10.2 Support Levels : Recommended

3.3.5.10.3 Command to DVIP device

Get Preset Name		
Command	0x44	
Parameter1	DVIP MAC address[0]	
Parameter2	DVIP MAC address[1]	
Parameter3	DVIP MAC address[2]	
Parameter4	DVIP MAC address[3]	
Parameter5	DVIP MAC address[4]	
Parameter6	DVIP MAC address[5]	
Parameter7	0x47	'G'
Parameter8	0x45	'E'
Parameter9	0x54	'T'
Parameter10	0x5F	'_'
Parameter11	0x50	'P'
Parameter12	0x52	'R'
Parameter13	0x45	'E'
Parameter14	0x53	'S'
Parameter15	0x45	'E'
Parameter16	0x54	'T'
Parameter17	0x5F	'_'
Parameter18	0x4E	'N'
Parameter19	0x41	'A'
Parameter20	0x4D	'M'
Parameter21	0x45	'E'
Parameter22	0x01 ~ Preset Counts	

3.3.5.10.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x24 (Data Length Low Byte)

1 byte	Type Code : 0x80
1 byte	Response Code : 0x44
32 bytes	Preset name 32 bytes max. NULL (0x00) padding if less than 32 bytes.

3.4 UDP Packet

3.4.1 Controller use UDP packet to obtain DVIP devices information or configure DVIP device in the same network.

3.4.2 Destination IP address : IP address of DVIP device

3.4.3 DVIP device UDP Server Port number : 5002

3.4.4 UDP Packet format

Byte (8 bites)	Description
0	Packet Length High Byte
1	Packet Length Low Byte
2	Type Code : 0x81
3	Command
4	Parameter1
……	…..
251	Parameter248

3.4.4.1 Packet Length = Command + Length of Parameter + 2

3.4.5 UDP Command List

3.4.5.1 Request network information of specific DVIP device

3.4.5.1.1 Command Type : UDP

3.4.5.1.2 Support Levels : Mandatory

3.4.5.1.3 Command to DVIP device

Request DVIP devices network information, include DHCP mode, DHCP Host name, IP address, Net mask, MAC address, Gateway, Primary DNS, Secondary DNS		
Command	0x00	
Parameter1	0x45	'E'
Parameter2	0x54	'T'
Parameter3	0x48	'H'
Parameter4	0x5F	'_'
Parameter5	0x52	'R'
Parameter6	0x45	'E'
Parameter7	0x51	'Q'

3.4.5.1.4 Return from DVIP device

Length	**Description**
1 byte	Data Length High Byte
1 byte	Data Length Low Byte
1 byte	Type Code : 0x81
1 byte	Response Code : 0x00
1 byte	DHCP 0: Disable 1: Enable
16 bytes	DHCP Host name (15 bytes max) + NULL (0x00) terminated
6 bytes	MAC address
4 bytes	IP address
4 bytes	Net mask
4 bytes	Gateway
4 bytes	Primary DNS address
4 bytes	Secondary DNS address
1 byte	Device occupied (number of active TCP, RS connections)

3.4.5.2 Request firmware revision of DVIP device

3.4.5.2.1 Command Type : UDP

3.4.5.2.2 Support Levels : Mandatory

3.4.5.2.3 Command to DVIP device

Request firmware revision of DVIP device		
Command	0x01	
Parameter1	0x46	'F'
Parameter2	0x57	'W'
Parameter3	0x56	'V'
Parameter4	0x45	'E'
Parameter5	0x52	'R'
Parameter6	0x5F	'_'
Parameter7	0x52	'R'
Parameter8	0x45	'E'
Parameter9	0x51	'Q'

3.4.5.2.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x06 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x01
1 byte	Firmware Revision Major Number
1 byte	Firmware Revision Minor Number

3.4.5.3 Configure DHCP mode of DVIP device

3.4.5.3.1 Command Type : UDP

3.4.5.3.2 Support Levels : Mandatory

3.4.5.3.3 Command to DVIP device

Configure DHCP mode of DVIP device		
Command	0x02	
Parameter1	0x53	'S'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x44	'D'
Parameter6	0x48	'H'
Parameter7	0x43	'C'
Parameter8	0x50	'P'
Parameter9	0x4D	'M'
Parameter10	0x4F	'O'
Parameter11	0x44	'D'
Parameter12	0x45	'E'
Parameter13	0x00 : Disable 0x01 : Enable	

3.4.5.3.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x02
1 byte	0x06 (ACK) 0x15 (NACK)

3.4.5.4 Configure IP & Gateway address of DVIP device

3.4.5.4.1 Command Type : UDP

3.4.5.4.2 Support Levels : Mandatory

3.4.5.4.3 Command to DVIP device

Configure IP & Gateway address of DVIP device		
Command	0x03	
Parameter1	0x53	'S'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x49	'I'
Parameter6	0x50	'P'
Parameter7	0x41	'A'
Parameter8	0x44	'D'
Parameter9	0x52	'R'
Parameter10	IP_address[0]	
Parameter11	IP_address[1]	
Parameter12	IP_address[2]	
Parameter13	IP_address[3]	
Parameter14	Gateway[0]	
Parameter15	Gateway[1]	
Parameter16	Gateway[2]	
Parameter17	Gateway[3]	

3.4.5.4.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x03
1 byte	0x06 (ACK) 0x15 (NACK)

3.4.5.5 Request DVIP device to reboot (software reset)

3.4.5.5.1 Command Type : UDP

3.4.5.5.2 Support Levels : Optional

3.4.5.5.3 Command to DVIP device

Reset to factory default		
Command	0x04	
Parameter1	0x52	'R'
Parameter2	0x45	'E'
Parameter3	0x53	'S'
Parameter4	0x45	'E'
Parameter5	0x54	'T'

3.4.5.5.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code ; 0x81
1 byte	Response Code : 0x04
1 byte	0x06 (ACK) 0x15 (NACK)

3.4.5.6 Set DHCP Host Name of DVIP device

3.4.5.6.1 Command Type : UDP

3.4.5.6.2 Support Levels : Mandatory

3.4.5.6.3 Command to DVIP device

Set DHCP host name of DVIP device		
Command	0x09	
Parameter1	0x53	'S'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x44	'D'
Parameter6	0x48	'H'
Parameter7	0x43	'C'
Parameter8	0x50	'P'
Parameter9	0x4E	'N'
Parameter10	0x41	'A'
Parameter11	0x4D	'M'
Parameter12	0x45	'E'
Parameter13 …	Name (ASCII), 15 bytes max	
Parameter	NULL(0x00) terminate	

3.4.5.6.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x09
1 byte	0x06 (ACK) 0x15 (NACK)

3.4.5.7 Set Net Mask of DVIP device

3.4.5.7.1 Command Type : UDP

3.4.5.7.2 Support Levels : Mandatory

3.4.5.7.3 Command to DVIP device

Set Net mask of DVIP device		
Command	0x0B	
Parameter1	0x53	'S'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x4E	'N'
Parameter6	0x45	'E'
Parameter7	0x54	'T'
Parameter8	0x4D	'M'
Parameter9	0x41	'A'
Parameter10	0x53	'S'
Parameter11	0x4B	'K'
Parameter12	Net_Mask[0]	
Parameter13	Net_Mask[1]	
Parameter14	Net_Mask[2]	
Parameter15	Net_Mask[3]	

3.4.5.7.4 Return form DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x0B
1 byte	0x06 (ACK) 0x15 (NACK)

3.4.5.8 Set Gateway of DVIP device

3.4.5.8.1 Command Type : UDP

3.4.5.8.2 Support Levels : Mandatory

3.4.5.8.3 Command to DVIP device

Set Gateway address of DVIP device		
Command	0x0C	
Parameter1	0x53	'S'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x47	'G'
Parameter6	0x41	'A'
Parameter7	0x54	'T'
Parameter8	0x45	'E'
Parameter9	0x57	'W'
Parameter10	0x41	'A'
Parameter11	0x59	'Y'
Parameter12	Gateway_IP[0]	
Parameter13	Gateway_IP[1]	
Parameter14	Gateway_IP[2]	
Parameter15	Gateway_IP[3]	

3.4.5.8.4 Return form DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x0C
1 byte	0x06 (ACK) 0x15 (NACK)

3.4.5.9 Set Primary DNS address of DVIP device

3.4.5.9.1 Command Type : UDP

3.4.5.9.2 Support Levels : Mandatory

3.4.5.9.3 Command to DVIP device

Set Primary DNS address of DVIP device		
Command	0x0D	
Parameter1	0x53	'S'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x50	'P'
Parameter6	0x52	'R'
Parameter7	0x49	'I'
Parameter8	0x44	'D'
Parameter9	0x4E	'N'
Parameter10	0x53	'S'
Parameter11	Primary_DNS_IP[0]	
Parameter12	Primary_DNS_IP[1]	
Parameter13	Primary_DNS_IP[2]	
Parameter14	Primary_DNS_IP[3]	

3.4.5.9.4 Return form DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code ; 0x81
1 byte	Response Code : 0x0D
1 byte	0x06 (ACK) 0x15 (NACK)

3.4.5.10 Set Secondary DNS address of DVIP device

3.4.5.10.1 Command Type : UDP

3.4.5.10.2 Support Levels : Mandatory

3.4.5.10.3 Command to DVIP device

Set Secondary DNS address of DVIP device		
Command	0x0E	
Parameter1	0x53	'S'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x53	'S'
Parameter6	0x45	'E'
Parameter7	0x43	'C'
Parameter8	0x44	'D'
Parameter9	0x4E	'N'
Parameter10	0x53	'S'
Parameter11	Secondary_DNS_IP[0]	
Parameter12	Secondary_DNS_IP[1]	
Parameter13	Secondary_DNS_IP[2]	
Parameter14	Secondary_DNS_IP[3]	

3.4.5.10.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x0E
1 byte	0x06 (ACK) 0x15 (NACK)

3.4.5.11 Get Vendor and Product ID of specific DVIP device

3.4.5.11.1 Command type : UDP

3.4.5.11.2 Support Levels : Mandatory

3.4.5.11.3 Command to DVIP device

Get Vendor and Product ID of specific DVIP device		
Command	0x40	
Parameter1	0x47	'G'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x4D	'M'
Parameter6	0x4F	'O'
Parameter7	0x44	'D'
Parameter8	0x45	'E'
Parameter9	0x4C	'L'

3.4.5.11.4 Return from DVIP Device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x08 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x40
2 bytes	Vendor ID
2 bytes	Product ID

3.4.5.12 Get Model Name of specific DVIP device

3.4.5.12.1 Command type : UDP

3.4.5.12.2 Support Levels : Recommended

3.4.5.12.3 Command to DVIP device

Get Model Name of specific DVIP device		
Command	0x41	
Parameter1	0x47	'G'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x4D	'M'
Parameter6	0x4F	'O'
Parameter7	0x44	'D'
Parameter8	0x45	'E'
Parameter9	0x4C	'L'
Parameter10	0x5F	'_'
Parameter11	0x4E	'N'
Parameter12	0x41	'A'
Parameter13	0x4D	'M'
Parameter14	0x45	'E'

3.4.5.12.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x14 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x41
16 bytes	Model name 16 bytes max. NULL (0x00) padding if less than 16 bytes, e.g. “KMU-100\0\0\0\0\0\0\0\0\0”

3.4.5.13 Get Detailed Version Information of specific DVIP device

3.4.5.13.1 Command Type : UDP

3.4.5.13.2 Support Levels : Vendor-dependent

3.4.5.13.3 Command to DVIP device

Get Detailed Version Information of specific DVIP device		
Command	0x42	
Parameter1	0x47	'G'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x56	'V'
Parameter6	0x45	'E'
Parameter7	0x52	'R'
Parameter8	0x53	'S'
Parameter9	0x49	'I'
Parameter10	0x4F	'O'
Parameter11	0x4E	'N'

3.4.5.13.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x14 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x42
4 bytes	Firmware A Version
4 bytes	Firmware B Version
4 bytes	Firmware C Version
4 bytes	Hardware Version/Firmware D Version

3.4.5.14 Get Preset Count

3.4.5.14.1 Command Type : UDP

3.4.5.14.2 Support Levels : Recommended

3.4.5.14.3 Command to DVIP device

Get Preset Count		
Command	0x43	
Parameter1	0x47	'G'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x50	'P'
Parameter6	0x52	'R'
Parameter7	0x45	'E'
Parameter8	0x53	'S'
Parameter9	0x45	'E'
Parameter10	0x54	'T'
Parameter11	0x5F	'_'
Parameter12	0x43	'C'
Parameter13	0x4F	'O'
Parameter14	0x55	'U'
Parameter15	0x4E	'N'
Parameter16	0x54	'T'

3.4.5.14.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x06 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Type Code : 0x43
1 byte	0x06 (ACK) 0x15 (NACK)
1 byte	Presets count if DVIP device ACK

3.4.5.15 Get Preset Name

3.4.5.15.1 Command Type : UDP

3.4.5.15.2 Support Levels : Recommended

3.4.5.15.3 Command to DVIP device

Get Preset Count		
Command	0x44	
Parameter1	0x47	'G'
Parameter2	0x45	'E'
Parameter3	0x54	'T'
Parameter4	0x5F	'_'
Parameter5	0x50	'P'
Parameter6	0x52	'R'
Parameter7	0x45	'E'
Parameter8	0x53	'S'
Parameter9	0x45	'E'
Parameter10	0x54	'T'
Parameter11	0x5F	'_'
Parameter12	0x4E	'N'
Parameter13	0x41	'A'
Parameter14	0x4D	'M'
Parameter15	0x45	'E'
Parameter16	0x01 ~ Preset Counts	

3.4.5.15.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x24 (Data Length Low Byte)
1 byte	Type Code : 0x81
1 byte	Response Code : 0x44
32 bytes	Preset name 32 bytes max. NULL (0x00) padding if less than 32 bytes.

3.4.5.16 Recall Preset

3.4.5.16.1 Command Type : UDP

3.4.5.16.2 Support Levels : Recommended

3.4.5.16.3 Command to DVIP device

Get Preset Count		
Command	0x45	
Parameter1	0x52	'R'
Parameter2	0x45	'E'
Parameter3	0x43	'C'
Parameter4	0x41	'A'
Parameter5	0x4C	'L'
Parameter6	0x4C	'L'
Parameter7	0x5F	'_'
Parameter8	0x50	'P'
Parameter9	0x52	'R'
Parameter10	0x45	'E'
Parameter11	0x53	'S'
Parameter12	0x45	'E'
Parameter13	0x54	'T'
Parameter14	0x01	Preset Number

3.4.5.16.4 Return from DVIP device

Length	**Description**
1 byte	0x00 (Data Length High Byte)
1 byte	0x05 (Data Length Low Byte)
1 byte	Type Code: 0x81
1 byte	Response Code: 0x45
1 byte	0x06 (ACK) 0x15 (NACK)

Appendix 1

Broadcast command index

Command	Code	Support Levels	Note
ETH_REQ	0x00	Mandatory	Find DVIP devices in the same network.
FWVER_REQ	0x01	Mandatory	Get firmware information of specific (MAC address) DVIP device.
SET_DHCPMODE	0x02	Mandatory	Set DHCP mode of specific (MAC address) DVIP device.
SET_IPADR	0x03	Mandatory	Set IP & Gateway address of specific (MAC address) DVIP device.
RESET	0x04	Mandatory	Request specific (MAC address) DVIP device to reboot (software reset)
GET_MODEL	0x40	Mandatory	Get Vendor and Product IP of specific (MAC address) DVIP device.
GET_MODEL_NAME	0x41	Recommended	Get model name of specific (MAC address) DVIP device.
GET_VERSION	0x42	Vendor-Dependent	Get detailed version information of specific (MAC address) DVIP device.
GET_PRESET_COUNT	0x43	Recommended	Get preset count number of specific (MAC address) DVIP device
GET_PRESET_NAME	0x44	Recommended	Get preset name of specific preset number of specific (MAC address) DVIP device

Appendix 2

UDP command index

Command	Code	Support Levels	Note
ETH_REQ	0x00	Mandatory	Get network information of specific (IP address) DVIP device
FWVER_REQ	0x01	Mandatory	Get firmware revision of specific (IP address) DVIP device
SET_DHCPMODE	0x02	Mandatory	Configure DHCP mode of specific (IP address) DVIP device
SET_IPADR	0x03	Mandatory	Configure IP & Gateway address of specific (IP address) DVIP device
RESET	0x04	Optional	Request specific (IP address) DVIP device to reboot (software reset)
SET_DHCPNAME	0x09	Mandatory	Set DHCP host name of specific (IP address) DVIP device
SET_NETMASK	0x0B	Mandatory	Set Net Mask of specific (IP address) DVIP device
SET_GATEWAY	0x0C	Mandatory	Set Gateway address of specific (IP address) DVIP device
SET_PRIDNS	0x0D	Mandatory	Set Primary DNS address of specific (IP address) DVIP device
SET_SECDNS	0x0E	Mandatory	Set Secondary DNS address of specific (IP address) DVIP device
GET_MODEL	0x40	Mandatory	Get VID & PID of specific (IP address) DVIP device
GET_MODEL_NAME	0x41	Recommended	Get product name of specific (IP address) DVIP device
GET_VERSION	0x42	Vendor-Dependent	Get detailed version information of specific (IP address) DVIP device
GET_PRESET_COUNT	0x43	Recommended	Get preset count number of specific (IP address) DVIP device
GET_PRESET_NAME	0x44	Recommended	Get preset name of specific preset number of specific (IP address) DVIP device
RECALL_PRESET	0x45	Recommended	Recall preset date of specific preset number of specific (IP address) DVIP device

Appendix 3

Product Category ID (PID-0)

Product Category	ID (PID-0)
Switcher	0x10
Recorder	0x20
Camera	0x30
Remote Controller	0x40
Converter	0x50
Streaming Server	0x60

Appendix 4

Product ID List

PID-0	PID-1	Model Name	Remark
Switcher			
0x10	0x01	SE-500MU	
0x10	0x02	SE-3200	
0x10	0x03	HS-1300	
0x10	0x04	SE-500MU-4K	
Chroma Key			
0x15	0x01	DVK-400	
Recorder			
0x20	0x01	HDR-80	
0x20	0x02	HDR-90	
Camera			
0x30	0x01	PTC-150	
0x30	0x02	PTC-150T	
0x30	0x03	PTC-200	
0x30	0x04	PTC-200T	
0x30	0x05	BC-80	
0x30	0x06	BC-200	
0x30	0x07	BC-50	
0x30	0x08	BC-100	
0x30	0x09	PTC-140	
0x30	0x0A	PTC-140T	
0x30	0x0B	PTC-280	
0x30	0x0C	PTC-300	
0x30	0x0D	BC-15P	
0x30	0x0E	BC15 NDI	
Remote Controller			
0x40	0x01	RMC-300	
Converter			

0x55	0xaa	KMU-100	