



Network/Digital Video Recorder

Communication Matrix

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Source Device	Source IP Address	Source Port Number	Destination Device	Destination IP Address	Destination Port Number (Listening)	Protocol	Port Description	Destination Port Configurable (Yes/No)	Authentication Mode	Encryption Mode	Enabled by Default (Yes/No)	Version	Special Scenario
Web Client	Web Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	80	TCP	Web Service Port (TLS)	Yes	User Name/Password	MD5	Yes		
Web Client (TLS)	Web Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	443	TCP	Web Service Port	Yes	User Name/Password	TLS1.1 TLS1.2	No		
SDK Client	SDK Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	8000	TCP	SDK Service Port	Yes	User Name/Password	RSA	Yes		
SDK Client (TLS)	SDK Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	8443	TCP	SDK Service Port (TLS)	Yes	User Name/Password	TLS	Yes		
RTSP Client	RTSP Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	554	TCP	RTSP Get Stream Port	Yes	User Name/Password	MD5	Yes		
Wuhan Cloud Client	Wuhan Cloud Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	6001	TCP	Wuhan Cloud Management Port	No	User Name/Password	HMAC	No		
Wuhan Cloud Client	Wuhan Cloud Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	6002	TCP	Wuhan Cloud Data Port	No	User Name/Password	HMAC	No		
Wuhan Cloud Client	Wuhan Cloud Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	6011	TCP	Wuhan Cloud, Communication Port Between Client and Cloud Storage Signaling Gateway	No	User Name/Password	HMAC	Yes		
Wuhan Cloud Client	Wuhan Cloud Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	6120	TCP	Wuhan Cloud, Picture URL Download Port from Cloud Storage	No	User Name/Password	HMAC	Yes		
Wuhan Cloud Client	Wuhan Cloud Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	8009	TCP	Wuhan Cloud HTTP Port	No	User Name/Password	HMAC	No		
Wuhan Cloud Client	Wuhan Cloud Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	9999	TCP	Wuhan Cloud Heartbeat Port	No	User Name/Password	HMAC	No		
Websocket Client	Websocket Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	7681	TCP	Websocket Listening Port	No	session/token	SHA256	Yes		
SNMP Client	SNMP Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	161	TCP	SNMP Management Service	Yes	User Name/Password	Refer to SNMP Protocol Authentication Method	No		
SNMP Client	SNMP Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	162	TCP	SNMP Port Trap	Yes	User Name/Password		No		
Hot Spare Device	Hot Spare Device IP Address	1025 to 65535	HIK Device	HIK Device IP Address	10001	TCP	Hot Spare Port	No	User Name/Password		No		
Device Adopts Hikvision Protocol	IP Address of Device that Adopts Hikvision Protocol	1025 to 65535	HIK Device	HIK Device IP Address	7989	UDP	IP Camera Add Status Port	No			Yes		

National Standard Client	National Standard Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	5061	TCP	National Standard Service Port	Yes	User Name/Password	Refer to GB 28181 Authentication Method	Yes
Onvif Device	Onvif Device	1025 to 65535	HIK Device	Onvif Service Multicast Address	3702	UDP	Onvif Service Port	No			No
SSH Client	SSH Client IP Address	1025 to 65535	HIK Device	HIK Device IP Address	22	TCP	SSH Service Port	No	User Name/Password	AES	No
Device Adopts Hikvision Protocol	IP Address of Device that Adopts Hikvision Protocol	1025 to 65535	HIK Device	HIK Device IP Address	30960	TCP	IP Camera Alarm Listening Port	No			Yes
IoT Device	IoT Device IP Address	1025 to 65535	HIK Device	HIK Device IP Address	30999	TCP	IoT Alarm Listening Port	Yes			No
UPnP Opposite End Device	UPnP Opposite End Device IP Address	1025 to 65535	HIK Device	HIK Device IP Address	49152	UDP	UPnP Device Discover Port	No			No
Internal Process	127.0.0.1	7002	Internal Process	127.0.0.1	7001	TCP	Internal Communication Port	No			No
Internal Process	127.0.0.2	1025 to 65535	Internal Process	127.0.0.2	53000	TCP	Internal Communication Port	No			Yes
Internal Process	127.0.0.1	7001	Internal Process	127.0.0.1	7002	TCP	Internal Communication Port	No			Yes
HIK Device	HIK Device IP Address	1025 to 65535	FTP Server	FTP Server IP Address	21	TCP	FTP Port	No	User Name/Password	Refer to FTP Protocol Authentication Method	No
HIK Device	HIK Device IP Address	9010	Hik-Connect Server	Alarm Client IP Address	1025 to 65535	TCP	Hik-Connect Data Port	No			No
HIK Device	HIK Device IP Address	9020	Hik-Connect Server	Hik-Connect Server IP Address	1025 to 65535	TCP	Hik-Connect Data Port	No			No
HIK Device	HIK Device IP Address	9030	Hik-Connect Server	Hik-Connect Server IP Address	1025 to 65535	TCP	Hik-Connect Data Port	No			No
HIK Device	HIK Device IP Address	9030	Hik-Connect Server	Hik-Connect Server IP Address	1025 to 65535	TCP	Hik-Connect Data Port	No			No
HIK Device	HIK Device IP Address	9032	Hik-Connect Server	Hik-Connect Server IP Address	1025 to 65535	TCP	Hik-Connect Data Port	No			No
HIK Device	HIK Device IP Address	9033	Hik-Connect Server	Hik-Connect Server IP Address	1025 to 65535	TCP	Hik-Connect Data Port	No			No
HIK Device	HIK Device IP Address	9034	Hik-Connect Server	Hik-Connect Server IP Address	1025 to 65535	TCP	Hik-Connect Data Port	No			No
HIK Device	HIK Device IP Address	1025 to 65535	Hik-Connect Server	Hik-Connect Server IP Address	8666		Hik-Connect Data Port	No			No
HIK Device	HIK Device IP Address	9035	Hik-Connect Server	Hik-Connect Server IP Address	1025 to 65535	TCP	Hik-Connect Data Port	No			No

HIK Device	HIK Device IP Address	1025 to 65535	Device Adopts Hikvision Protocol	Camera IP Address	8000	TCP	IP Camera Connection Port	No	User Name/Password (Conditionally Require)		No
HIK Device	HIK Device IP Address	1025 to 65535	Device Adopts Hikvision Protocol	Camera IP Address	Range (1 to 65535) Default Port 554	TCP	IP Camera Get Stream Port	Yes	User Name/Password (Conditionally Require)	MD5	No
HIK Device	HIK Device IP Address	1025 to 65535	NTP Server	NTP Server IP Address	Range (1 to 65535) Default Port 123	TCP	NTP Time Sync Server Port	Yes			No
HIK Device	HIK Device IP Address	1025 to 65535	SMTP (TLS)	SMTP Server IP Address	Range (1 to 65535) Default 25	TCP	SMTP Server Port	Yes	User Name/Password	SMTP Encryption Method is Provided by SMTP Server	No
HIK Device	HIK Device IP Address	1025 to 65535	SMTP Server	SMTP Server IP Address	Range (1 to 65535) Default 25	TCP	SMTP Server Port	Yes	User Name/Password	SMTP Encryption Method is Provided by SMTP Server	No
HIK Device	HIK Device IP Address	37020	Other HIK Device	239.255.255.250	37020	UDP	SADP Service Port	No	User Name/Password (HIK device does not require authentication. Authentication is required when modifying parameter via SADP protocol)	SADP Encryption Method Confirm	Yes
HIK Device	HIK Device IP Address	1025 to 65535	IP Server DDNS Server	DDNS Server IP Address	Range (1 to 65535)	UDP	DDNS Service Port	No	User Name/Password (Conditionally Require)	DDNS Service Provides Business and Private Encryption Method	No
HIK Device	HIK Device IP Address	1025 to 65535	DYNDNS_DDNSServer	DYNDNSDDNS Server IP Address	Range (1 to 65535)	UDP	DYNDNS DDNS Service Port	No	User Name/Password (Conditionally Require)	DDNS Service Provides Business and Private	No
HIK Device	HIK Device IP Address	1025 to 65535	EASYDDNS DDNS Server	EASYDDNS DDNS Server IP Address	Range (1 to 65535)	UDP	EASYDDNS DDNS Service Port	No	User Name/Password (Conditionally Require)	DDNS Service Provides Business and Private	No
HIK Device	HIK Device IP Address	1025 to 65535	ORAY DDNS Server	ORAY DDNS Server IP Address	Range (1 to 65535)	UDP	ORAY DDNS Service	No	User Name/Password (Conditionally Require)	DDNS Service Provides Business and Private	No

HIK Device	HIK Device IP Address	1025 to 65535	noIP DDNS Server	noIP DDNS Server IP Address	Range (1 to 65535)	UDP	noIP DDNS Service	No	User Name/Password (Conditionally Require)	DDNS Service Provides Business and Private	No
HIK Device	HIK Device IP Address	1025 to 65535	NFS Server	NFS Server IP Address	2049	TCP	NFS Service	No			No
HIK Device	HIK Device IP Address	1025 to 65535	NAS Server	NAS Server IP Address	1025 to 65535 (Depend on NAS Server)	TCP	NAS Service Port	No			No
HIK Device	HIK Device IP Address	1025 to 65535	IPSAN Server	IPSAN Server IP Address	1025 to 65535 (Depend on IPSAN Server)	TCP	IPSAN Service Port	No			No
HIK Device	HIK Device IP Address	1025 to 65535	National Standard Server (Platform)	HIK Device IP Address	5061	TCP	National Standard Client Port	Yes	User Name/Password (Default Password) SIP ID	Refer to GB 28181 Authentication Method	No
HIK Device	NO IP Address	67	DHCP服务器	DHCP Server IP Address	68	UDP	DHCP Port	No			No
HIK Device	HIK Device IP Address	8888	Wi-Fi Service	Route IP	1 to 65535	TCP	Wi-Fi Signaling Interaction Port	No			No
HIK Device	HIK Device IP Address	9999	Wi-Fi Service	Route IP	1 to 65535	TCP	Upgrade Dedicated Port	No			No
HIK Device	HIK Device IP Address	1025 to 65535	DNS Server	DNS Server IP	53	TCP	DNS Service Port	No			No
HIK Device	HIK Device IP Address	1025 to 65535	Security Control Panel	Security Control Panel IP Address	1025 to 65535	TCP	Security Control Panel Port	No			No