



TR-069 Configuration and Support Instructions

Version: <1.1>

Release date: <2018-06-12>



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1 Overview

1.1 Introduction to TR-069

TR-069 is one of the technical specifications developed by the DSL Forum. It is short for Customer Premise Equipment (CPE) WAN Management Protocol. The TR-069 protocol establishes a framework for an automatic configuration server (ACS) to implement secure and automatic CPE configuration management. Figure 2-1 shows the TR-069 design diagram.

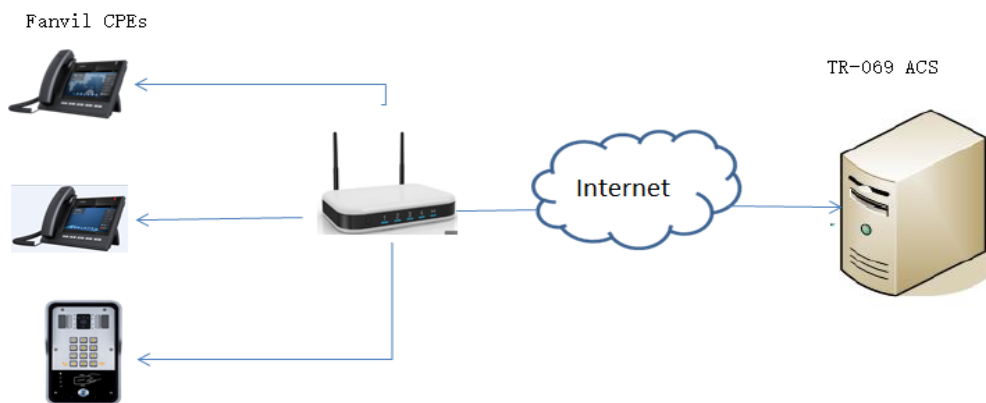


Figure 2-1 TR-069 design diagram

TR-069 is an application layer protocol with wide applicability and no access restrictions. TR-069 allows users to manage universal devices regardless of their types and manufacturers, ensuring remote and centralized device management in an easy and secure manner over the network.

1.2 Applicable Scope

This document applies to Fanvil access control devices and phones.

2 Configuration on the Phone

By default, TR-069 is disabled on the phone. You can log in to the phone webpage for configuration. The following describes how to configure TR-069 on the phone X6 as an example.

- Log in to the phone webpage as an administrator.
- Choose **System > Auto Provision > TR069**.
- In the **TR069** pane, set parameters, as shown in Figure 3-1.

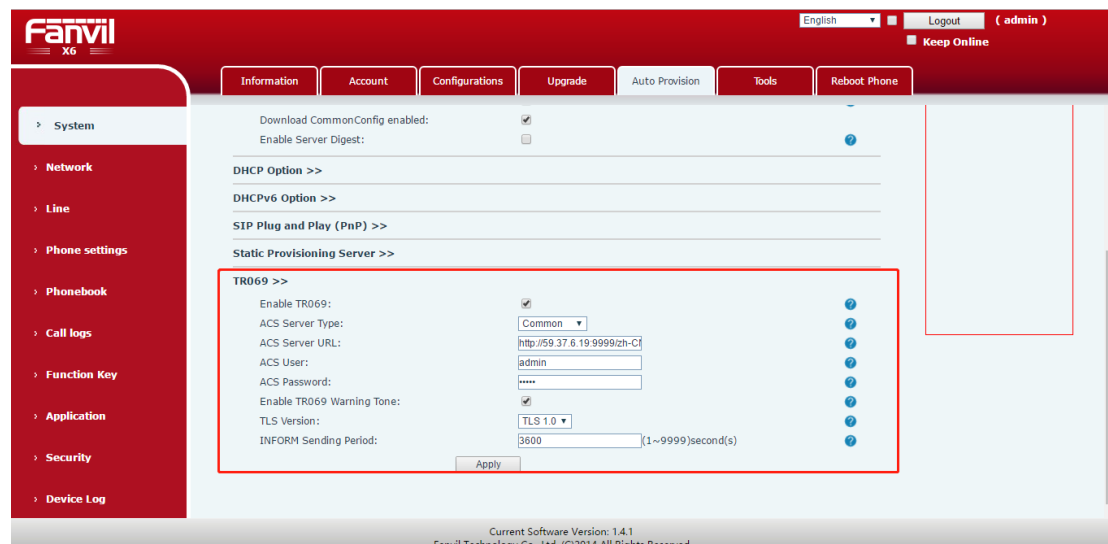


Figure 3-1

Parameter description:

Parameter	Description
Enable TR069	Select this option.
ACS Server Type	Select Common .
ACS Server URL	http://192.144.136.170:80/zh-CN/Acs/Index
ACS User	FDMS login user name, for example, holly.yao.
ACS Password	Encrypted FDMS login password (Note: The encrypted password is available in Quick Configuration on the FDMS home page.)
STUN Server URL	192.144.136.170
Enable STUN	Select this option.

Click **Apply** for the settings to take effect.

3 RPC Methods Supported by Phones

Remote procedure call (RPC) methods are used for two-way communication between the CPE and the ACS. The ACS configures and monitors CPE parameters by using RPC methods to obtain or set parameters. The following table describes the RPC methods supported by Fanvil IP phones.

RPC Method	Description
GetRPCMethods	Supports all functions supported by the ACS query phone.
SetParameterValues	Modifies some device (CPE) configuration items and parameters remotely on the management server (ACS).
GetParameterValues	Reads some device (CPE) configuration items and parameters remotely on the management server (ACS).
GetParameterNames	Obtains accessible device (CPE) parameters on the management server (ACS).
GetParameterAttributes	Obtains one or more device (CPE) parameter attributes on the management server (ACS).
SetParameterAttributes	Sets one or more device (CPE) parameter attributes on the management server (ACS).
Download	Upgrades the device (CPE) firmware or configuration file remotely on the management server (ACS).
FactoryReset	Restores default device (CPE) settings remotely on the management server (ACS).
Reboot	Restarts the device (CPE) remotely on the management server (ACS).

The ACS supports the following functions to centrally manage a series of IP devices by using the preceding RPC methods:

- Automatic configuration and dynamic services
TR-069 allows you to configure the CPE on the ACS at any time after the CPE is online or when the CPE is online for the first time, for example, by using the set method in CPE functions.
- Software and hardware image management

TR-069 defines the mechanisms for software and hardware version number authentication, download triggering (both the CPE and ACS can initiate downloads), and download failure notification.

➤ Status and performance monitoring

TR-069 defines a mechanism that allows CPEs to notify its status to the ACS dynamically.

4 Supporting TR-111

TR-111 belongs to the TR-069 protocol family and is a functional extension of TR-069. The TR-111 standard defines two extended CMWP (TR-069 defined) mechanisms that enhance remote management of devices connected over a LAN by using an Internet gateway.

The two mechanisms are as follows:

- Device and gateway association: Allows the ACS to identify the gateway to which the device is connected.
- Connection request through the NAT gateway: Allows the ACS to initiate a TR-069 session by using the device connected to the NAT gateway.

4.1 Device and Gateway Association

Because the CPE is not directly displayed on the Internet, it is not possible to contact the CPE directly. This mechanism is used to connect the CPE to the gateway to which the CPE is connected. By using the information sent from the CPE, the ACS can identify the gateway and establish a session with the gateway. The gateway connection must comply with the TR-111 specification.

4.2 Connection Request Through the NAT Gateway

When the CPE is located behind the NAT gateway and is assigned a private address, the CPE must be NAT-bound with the ACS through the NAT gateway. Then the ACS can initiate a session with the CPE. To complete the communication, the ACS must be associated with a STUN server for a new UDP-based connection request mechanism.

5 Parameter Models

Two suites of data models are available because the network architecture supports two device types:

- Internet gateway devices
- Common LAN devices under the gateway

The TR-069 protocol defines data models for Internet gateway devices.

- Parameter names: organized in a hierarchical structure similar to a tree. The trunk is objects to be configured, and the leaves are parameters to be configured. All parameters have read/write attributes.
- Parameter types: SOAP-based data types

The following table lists the main parameter models supported by Fanvil IP devices.

Device information:

Node Name	Type	Description
InternetGatewayDevice.DeviceInfo.	Object	Device information
InternetGatewayDevice.DeviceInfo.Manufacturer	String	Device manufacturer
InternetGatewayDevice.DeviceInfo.ManufacturerOUI	String	Device manufacturer ID
InternetGatewayDevice.DeviceInfo.ModelName	String	Product model
InternetGatewayDevice.DeviceInfo.Description	String	Product description
InternetGatewayDevice.DeviceInfo.ProductClass	String	Product series
InternetGatewayDevice.DeviceInfo.SerialNumber	String	Product serial number
InternetGatewayDevice.DeviceInfo.SoftwareVersion	String	Product software version
InternetGatewayDevice.DeviceInfo.HardwareVersion	String	Product hardware version
InternetGatewayDevice.DeviceInfo.SpecVersion	String	Specified device version, which must be 1.0.
InternetGatewayDevice.DeviceInfo.ProvisioningCode	String	Device deployment code
InternetGatewayDevice.DeviceInfo.UpTime	String	Device startup time
InternetGatewayDevice.DeviceInfo.DeviceLog	String	Device log
InternetGatewayDevice.DeviceInfo.VendorConfigFile. {i}.	Object	Product configuration file information
InternetGatewayDevice.DeviceInfo.VendorConfigFile. {i}.Name	String	Product configuration file name
InternetGatewayDevice.DeviceInfo.VendorConfigFile. {i}.Version	String	Version number of the product configuration file
InternetGatewayDevice.DeviceInfo.VendorConfigFile. {i}.Date	String	Generation date of the product configuration file

InternetGatewayDevice.DeviceInfo.VendorConfigFile.{i}.Description	String	Product configuration file description
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TR-069 information

Node Name	Type	Description
InternetGatewayDevice.ManagementServer.	Object	TR-069 information
InternetGatewayDevice.ManagementServer.URL	String	TR-069 server (ACS) URL
InternetGatewayDevice.ManagementServer.Username	String	TR-069 server (ACS) user name
InternetGatewayDevice.ManagementServer.Password	String	TR-069 server (ACS) password
InternetGatewayDevice.ManagementServer.PeriodicInformEnable	String	The CPE periodically sends information to the server or not.
InternetGatewayDevice.ManagementServer.PeriodicInformInterval	String	CPE information sending period
InternetGatewayDevice.ManagementServer.PeriodicInformTime	String	Time when the CPE sends information to the server
InternetGatewayDevice.ManagementServer.ParameterKey	String	
InternetGatewayDevice.ManagementServer.ConnectionRequestURL	String	CPE URL address
InternetGatewayDevice.ManagementServer.ConnectionRequestUsername	String	Authentication user name for the ACS connecting to the CPE
InternetGatewayDevice.ManagementServer.ConnectionRequestPassword	String	Authentication password for the ACS connecting to the CPE
InternetGatewayDevice.ManagementServer.UDPConnectionRequestAddress	String	Public network IP address and port for the ACS connecting to the CPE
InternetGatewayDevice.ManagementServer.UDPConnectionRe	String	Notification within

questAddressNotificationLimit		the time limit when the Internet IP address and port corresponding to UDP are changed
InternetGatewayDevice.ManagementServer.STUNEnable	String	Enable STUN or not.
InternetGatewayDevice.ManagementServer.STUNServerAddresses	String	STUN server address
InternetGatewayDevice.ManagementServer.STUNServerPort	String	STUN server port
InternetGatewayDevice.ManagementServer.STUNUsername	String	STUN server user name
InternetGatewayDevice.ManagementServer.STUNPassword	String	STUN server password
InternetGatewayDevice.ManagementServer.STUNMaximumKeepAlivePeriod	String	Maximum connection period of the STUN server
InternetGatewayDevice.ManagementServer.STUNMinimumKeepAlivePeriod	String	Minimum connection period of the STUN server
InternetGatewayDevice.ManagementServer.NATDetected	String	Check for address and port mapping after you enable STUN.
InternetGatewayDevice.ManagementServer.KickURL	String	
InternetGatewayDevice.ManagementServer.UpdatesManaged	String	The ACS manages CPE upgrade or not.

SNTP

Node Name	Type	Description
InternetGatewayDevice.Time.	object	Simple Network Time Protocol (SNTP) configuration on the product
InternetGatewayDevice.Time.Enable	Boolean	Enable SNTP or not.
InternetGatewayDevice.Time.NTPServer1	string	SNTP server address
InternetGatewayDevice.Time.NTPServer2	string	Second SNTP server

		address
InternetGatewayDevice.Time.CurrentLocalTime	dateTime	Current local time
InternetGatewayDevice.Time.LocalTimeZone	String	Current time zone
InternetGatewayDevice.Time.LocalTimeZoneName	String	Current time zone name

Device configuration in route/bridge mode

Node Name	Type	Description
InternetGatewayDevice.Layer3Forwarding.	Object	Configuration of the packet forwarding device in routing mode (configuration in routing and bridge modes)
InternetGatewayDevice.Layer3Forwarding.ForwardNumberOfEntries	Unsigned	Number of routing and bridging instances (There are several packet forwarding devices, typically, one.)
InternetGatewayDevice.Layer3Forwarding.Forwarding.{i}.	object	TCP/IP layer-3 forwarding table of the device
InternetGatewayDevice.Layer3Forwarding.Forwarding.1.Enable	string	Enable the forwarding directory or not (disabled by default).
InternetGatewayDevice.Layer3Forwarding.Forwarding.1.Status	string	Forwarding device status

InternetGatewayDevice.Layer3Forwarding.Forwarding.1.Type	string	Forwarding type (Disabled , Enabled , or Error)
InternetGatewayDevice.Layer3Forwarding.Forwarding.{i}.DestIPAddress	string	Forwarding destination address
InternetGatewayDevice.Layer3Forwarding.Forwarding.{i}.DestSubnetMask	string	Subnet mask of the destination address
InternetGatewayDevice.Layer3Forwarding.Forwarding.{i}.SourceIPAddress	string	Source address
InternetGatewayDevice.Layer3Forwarding.Forwarding.{i}.SourceSubnetMask	string	Subnet mask of the source address
InternetGatewayDevice.Layer3Forwarding.Forwarding.{i}.GatewayIPAddress	string	Gateway IP address
InternetGatewayDevice.Layer3Forwarding.Forwarding.{i}.Interface	string	Network interface
InternetGatewayDevice.Layer3Forwarding.Forwarding.{i}.ForwardingMetric	string	Forwarding metric (If the value is -1, the metric system is not used.)

Device information on the WAN port

Node Name	Type	Description
InternetGatewayDevice.WANDevice.{i}.	Object	Device information on the WAN port
InternetGatewayDevice.WANDevice.{i}.WANConnectionNumberOfEntries	unsignedInteger	
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfig.	Object	WAN port network

		configuration
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfiguration.EnabledForInternet	boolean	Enable the WAN port connecting to the external network (always enabled).
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfiguration.WANAccessType	string	WAN access type (DSL)
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfiguration.Layer1UpstreamMaxBitRate	unsignedInt	Maximum bit rate for network upload (theoretical value)
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfiguration.Layer1DownstreamMaxBitRate	unsignedInt	Maximum bit rate for network download (theoretical value)
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfiguration.PhysicalLinkStatus	string	Physical network connection status (network cable connected or not)
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfiguration.TotalBytesSent	unsignedInt	Total number of bytes sent by the CPE to the ACS
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfiguration.TotalBytesReceived	unsignedInt	Total number of bytes received by

		the CPE from the ACS
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfig.TotalPacketsSent	unsignedInt	Total number of packets sent by the CPE to the ACS
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfig.TotalPacketsReceived	unsignedInt	Total number of packets received by the CPE from the ACS
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfig.MaximumActiveConnections	unsignedInt	
InternetGatewayDevice.WANDevice.{i}.WANCommonInterfaceConfig.NumberOfActiveConnections	unsignedInt	
InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.	Object	
InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.Enable	Boolean	Enable or disable connection instances.
InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.PossibleConnectionTypes	String	
InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.Name	String	Readable user name for the connection
InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.NATEnabled	Boolean	
InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.AddressingType	String	Method for allocating an address to a WAN port of the CPE for the connection

<p>InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.ExternalIPAddress</p>	<p>String</p>	<p>External IP address that NAT uses for the connection. This parameter is available only when AddressingType is Static.</p>
<p>InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.SubnetMask</p>	<p>String</p>	<p>Subnet mask of the WAN interface. This parameter is available only when AddressingType is Static.</p>
<p>InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.DefaultGateway</p>	<p>String</p>	<p>IP address of the default gateway for the connection. This parameter is available only when AddressingType is Static.</p>
<p>InternetGatewayDevice.WANDevice.{i}.WANConnectionDevice.{i}.WANIPConnection.{i}.DNSServers</p>	<p>String</p>	<p>A comma-separated list of DNS server IP addresses for the connection</p>

GUI information

Node Name	Type	Description
InternetGatewayDevice.UserInterface.	Object	GUI information
InternetGatewayDevice.UserInterface.UpgradeAvailable	String	The CPE can be upgraded or not.
InternetGatewayDevice.UserInterface.CurrentLanguage	String	Current GUI language

VoIP information

Node Name	Type	Description
InternetGatewayDevice.Services.VoiceService.{i}.	object	VoIP information
InternetGatewayDevice.Services.VoiceService.{i}.VoiceServiceNumberOfEntries	unsigned Int	Number of VoIP instances, that is, 1
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfileNumberOfEntries	unsigned Int	Number of VoiceProfile instances
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.	object	Overall functions of the product VoIP
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.MaxProfileCount	string	Number of profiles on the voice server, for example, sip h.323
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.MaxLineCount	string	Maximum number of lines supported on the voice server (several SIP lines)

InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.MaxSessionCount	string	Maximum number of sessions supported on the voice server
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SignalingProtocols	string	Supported VoIP protocols
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.FaxT38	boolean	T38 fax supported or not
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.FaxPassThrough	boolean	Fax transmission supported or not
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.ModemPassThrough	boolean	Modem penetration supported or not
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.ToneGeneration	boolean	Tones supported or not
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.RingGeneration	boolean	Ringtones supported or not
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.VoiceLineTests	boolean	Remote line testing supported or not
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP	object	Specific SIP functions
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIPRole	string	VoIP CPE role
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIPExtensions	string	SIP extension method name, which

		must be capitalized
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP.Transports	string	SIP-supported transport protocol
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP.URISchemes	string	URL support scheme
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP.EventSubscription	boolean	Subscription of SIP events supported or not
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP.ResponseMap	boolean	Mapping of SIP response tables supported or not
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP.TLSAuthenticationProtocols	string	TLS supported encryption mode
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP.TLSAuthenticationKeySize	string	TLS authentication key size
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.SIP.TLSEncryptionProtocols	string	TLS key exchange algorithm
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.H323.	object	VoIP protocol, the same as SIP
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.H323.FastStart	boolean	H323 fast startup supported or not
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.H323.H235AuthenticationMethods	string	H323 authentication method

InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.Codecs	object	A table is used to describe a set of supported codecs. Each entry refers to a different combination of codecs and bitrates.
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.Codecs.{i}.EntryId	unsigned Int	Identifier of each entry in the table
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.Codecs.{i}.Codec	string	Codec
InternetGatewayDevice.Services.VoiceService.{i}.Capabilities.Codecs.{i}.BitRate	unsigned Int	Bit rate, in bits per second. The value must be appropriate for the specified codec.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}	object	
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Reset	boolean	Reset this line or not.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.NumberOfLines	unsigned Int	Number of lines in VoiceProfile (Each VoiceProfile corresponds to one SIP line.)

InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Name	string	Line ID
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SignalingProtocol	string	Line signaling type, for example, SIP
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.MaxSessions	unsigned Int	Maximum number of sessions supported on the voice server
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.DTMFMethod	string	Obtain the DTMF type of the line.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.STUNEnable	boolean	Enable STUN or not.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.STUNServer	string	STUN server address and domain name
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.RTP.	object	The voices associated with voice configuration file parameters are sent in the RTP stream.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.RTP.LocalPortMin	unsigned Int	Minimum value of the RTP port, that is, initialization

		value
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.RTP.LocalPortMax	unsigned Int	Maximum value of the RTP port
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.RTP.DSCPMark	string	DSCP mark (differential service code point, set to "-" by default)
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.RTP.TelephoneEventPayloadType	string	Payload type for RTP phone events
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.	object	Product SIP line configuration
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.Enable	boolean	Enable SIP registration.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.DirectoryNumber	string	SIP registration number
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.Status	string	SIP registration status
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallState	string	Line call status
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.RingMuteStatus	string	Incoming call muted or not
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.RingVolumeStatus	string	Incoming call volume
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.SIP.	object	Line registration information

InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.SIP.AuthUserName	string	Line registration user name
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.SIP.AuthPassword	string	Line registration password
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.	object	Call settings
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.CallWaitingEnable	boolean	Enable call waiting or not.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.CallForwardUnconditionalEnable	boolean	Enable call forwarding.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.CallForwardUnconditionalNumber	string	Unconditional call forwarding number
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.CallForwardOnBusyEnable	boolean	Enable busy calls.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.CallForwardOnBusyNumber	string	Busy call forwarding number
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.CallForwardOnNoAnswerEnable	boolean	Enable unanswered call forwarding.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.CallForwardOnNoAnswerNumber	string	Unanswered call forwarding number
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.CallTransferEnable	boolean	Enable call forwarding.

InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.MWIEnable	boolean	Enable the message waiting mechanism or not.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.MessageWaiting	string	All messages read or not.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.AnonymousCalEnable	boolean	Enable anonymous calls.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.Line.{i}.CallingFeatures.DoNotDisturbEnable	boolean	Enable DND.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP	object	SIP proxy configuration
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.ProxyServer	string	Proxy server IP address
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.ProxyServerPort	string	Proxy server port
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.ProxyServerTransport	string	Transport protocol. Transport protocol used in SIP communication. 0 is UDP, 1 is TCP, and 3 is TLS.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.RegistrarServer	string	SIP server address
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.RegistrarServerPort	string	SIP server port

InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.RegistrarServerTransport	string	Transport protocol. Transport protocol used in SIP communication. 0 is UDP, 1 is TCP, and 3 is TLS.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.UserAgentDomain	string	Local domain name. SIP domain name.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.UserAgentPort	string	SIP server port
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.UserAgentTransport	string	Transport protocol used in SIP communication. 0 is UDP, 1 is TCP, and 3 is TLS.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.Organization	string	Use organization headers (Fanvil) in text strings.
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.RegisterRetryInterval	string	Retry interval for SIP registration
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.RegisterExpires	string	Actual retry interval for SIP registration

InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.DSCPMark	unsigned Int	DSCP mark (differential service code point, set to "- " by default)
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.VLANIDMark	int	
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.EthernetPriorityMark	int	
InternetGatewayDevice.Services.VoiceService.{i}.VoiceProfile.{i}.SIP.X_ATP_OptionTime.	object	
InternetGatewayDevice.Services.VoiceService.1.VoiceProfile.6.SIP.X_ATP_OptionTime.IntervalTime	tUnsigne d	Monitoring time interval
InternetGatewayDevice.Services.VoiceService.1.VoiceProfile.6.SIP.X_ATP_OptionTime.OptionsType	unsigned Int	Monitoring types SIP option and UDP