biamp.

Devio
Text Protocol
v2.0

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Devio Text Protocol

Using a terminal emulator the Devio API can be accessed via the Management port.

The connection used by a Devio if 'Plain Text DTP' is enabled in the device Properties is RAW. If Plain Text DTP is disabled, an SSH session is required. User authentication is required upon connection to either method. The password configured on the unit is required.

Once authenticated, additional commands can be actioned.

RAW Connection settings

1. Enter the IP address or hostname of the device
2. Connection Type: Raw
3. Port: 4030
4. Open the connection and enter a carriage return <CR> to access the password prompt
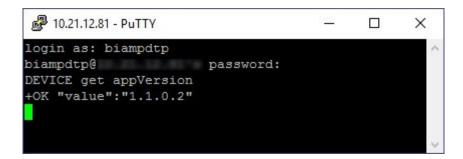5. Enter the device password (default 'devio')

SSH Connection settings

1. Enter the IP address or hostname of the device
2. Connection Type: SSH
3. Port: *<as specified in the device properties sheet in the SAU>*
4. Open the connection
5. Enter the user: **biampdtp** <-this is fixed and is unable to be modified
6. Enter the device password (default is 'devio' and will be masked)
7. *Optional:* Enter **DEVICE get appVersion**, or other DTP command for a response to confirm authentication. If authentication fails, an **Access denied** response will be given and the password prompt presented again
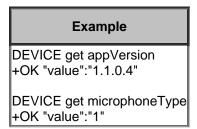
Syntax

The command structure is formatted in the following manner:

<Instance_Tag> <Command> <Attribute> [value]

- **Instance_Tag:** is always required. Is case sensitive. See the Instance Tag section for more information.
- **Command:** is always required. This can be requesting, setting or resetting an Attribute. See the Command section for more information.
- **Attribute:** is always required. Review the Attribute section for more details.
- **Value:** may be required depending on the Command or Attribute being referenced. If not required a value should not be defined.

A number of response strings will be shown for correct and incorrect commands.

Example
DEVICE get appVersion +OK "value":"1.1.0.4" DEVICE get microphoneType +OK "value":"1"

Instance Tag

The Instance Tag defines an instruction and function for a Hardware item to perform. It is case sensitive and must be in capital letters.

Instance Tag	Attribute Description
DEVICE	The Devio that the third party system is connected to.

Command

The Command field specifies what is to be done. The following table lists the Attribute commands that are supported. These are case sensitive and the availability of the command would depend on the Attribute. The following table shows the Commands which only apply to Attribute Codes. An Attribute Code may not support all of them, but it will support at least one.

Command	Attribute Description
get	An attribute to be read. The value will be returned in response
set	An attribute to be set to a specific value
reset	Sets the attribute back to the factory default setting

Attribute

The Attribute Code defines the portion of the Devio to be controlled.

The Model column specifies if the attribute is specific to certain Devio equipment.

The following DTP attributes are Read Only:

DTP Attribute	DTP Attribute	Value Min	Value Max	Default	Model
productId	Product ID	0	50	Devio SCR-25	All
appVersion	Application Version	0	12	STR(FIRMWARE_VERSION)	All
handsFreeVersion	Bluetooth Version	0	12	0.0.0.0	SCR-25
snmpVersion	SNMP Version	0	12	5.7.2.1	All
serialNumber	Serial Number	0	12	0	All

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macAddress	Ethernet MAC address	0	12	0	All
microphoneType	Microphone Type	0	2	1	All
numberOfMicrophones	Number of Microphones	0	2	1	All
lineFault	Line Fault	0	1	false	All
callInProgress	Call in Progress	0	1	false	All
micAudioPresent	Microphone Audio Present	0	1	false	All
farEndAudioPresent	Far-end Audio Present	0	1	false	All
usbConnection	Upstream USB Connection Type	0	3	0	All
autoSetupStatus	Auto Setup Status	0	20	Idle	All
autoSetupStatusCode	Auto Setup Status Code	0	8	0	All
rieLog	RIE log text	0	2048		All
micCapsMetersCh1	Mic. Capsule Meters Ch1	8	8	0.0	All
micCapsMetersCh2	Mic. capsule meters Ch2	8	8	0.0	All
micInputMeterCh1	Mic. Input Meter Ch1	-100.0	0.0	-100.0	All
micInputMeterCh2	Mic. input Meter Ch2	-100.0	0.0	0.0	All
activeMicChannels	Active Automixer Mic. Channels	2	2	0	All
softCodecInputMeter	Soft CODEC Input Meter	-100.0	0.0	0.0	All
softCodecOutputMeter	Soft CODEC Output Meter	-100.0	0.0	0.0	All
headsetInputMeter	Headset Input Meter	-100.0	0.0	0.0	SCR-25 CR-1
headsetOutputMeter	Headset Output Meter	-100.0	0.0	0.0	SCR-25 CR-1
ampOutputMeter	Amplifier Output Meter	-100.0	0.0	0.0	All

lineOutputMeter	Line Output Meter	-100.0	0.0	0.0	All
bfAzimuthAngleCh1	Beam Former Azimuth Angle Ch1	6	6	0.0	All
bfAzimuthAngleCh2	Beam Former Azimuth Angle Ch2	6	6	0.0	All
bfElevationAngleCh1	Beam Former Elevation Angle Ch1	6	6	0.0	All
bfElevationAngleCh2	Beam Former Elevation Angle Ch2	6	6	0.0	All
aecMetersCh1	AEC Meter Ch1	3	3	0.0	All
aecMetersCh2	AEC Meter Ch2	3	3	0.0	All
agc0SNRMeter	AGC 0 SNR Meter	0.0	50.0	0.0	All
agc0GainMeter	AGC 0 Gain Meter	-25.0	25.0	0.0	All
agc1SNRMeter	AGC 1 SNR Meter	0.0	50.0	0.0	All
agc1GainMeter	AGC 1 Gain Meter	-25.0	25.0	0.0	All
noiseGateMeters	Noise Gate Meters	3	3	0.0	All
handsFreeConnected	Bluetooth connection status	0	2	0	SCR-25
handsFreeMACAddr	MAC address of the Bluetooth	0	12	Unknown	SCR-25
handsFreeInputMeter	Bluetooth Input Meter	-100.0	0.0	0.0	SCR-25
handsFreeOutputMeter	Blueotooth Output Meter	-100.0	0.0	0.0	SCR-25
hdmiInputConnected	Front panel HDMI input connected	0	1	false	SCR-20 SCR-25
hdmiOutput1Connected	HDMI output 1 connected	0	1	false	SCR-20 SCR-25
hdmiOutput2Connected	HDMI output 2 connected	0	1	false	SCR-

					20 SCR-25
hdmiInputMeter	HDMI Input Meter	-100.0	0.0	0.0	SCR-20 SCR-25
hdmiOutputMeter	HDMI Output Meter	-100.0	0.0	0.0	SCR-20 SCR-25

The following DTP attributes are Read/Write:

DTP Attribute	DTP Attribute	Value Min	Value Max	Default	Model
password	Password	1	50	devio	All
deviceName	Device Name	1	50	DevioXXXXXXXX	All
enableDHCP	Enable DHCP	0	1	true	All
sshPort	Specify Listen Port for SSH	1	65535	22	All
plainTextDTP	Enable Plaintext DTP	0	1	true	All
enableWebServer	Enable Web Interface	0	1	true	All
enableHttps	Enable Secure Web Interface	0	1	false	All
sslCertificate	Overwrite SSL Certification	0	1	false	All
gateway	Gateway	0	0	0.0.0.0	All
ipAddress	IP Address	0	0	192.168.1.1	All
netmask	Netmask	0	0	255.255.255.0	All
systemTime	System Date and Time	19	20	2011-11-11 11:11:11	All
location	Device Location	1	50	Unknown	All

enableSNMP	Enable SNMP Interface	0	1	true	All
trapDestination	SNMP Trap Destination	0	0	0.0.0.0	All
trapPort	SNMP Trap Port	1	65535	162	All
trapCommunity	SNMP Trap Community	1	50	Devio	All
snmpROCommunity	SNMP Read-Only Community	1	50	DevioRO	All
snmpRWCommunity	SNMP Read-Write Community	1	50	Devio	All
micTrackingEnableCh1	Mic. Tracking Enabled Ch1	0	1	true	All
micTrackingEnableCh2	Mic. Tracking Enabled Ch2	0	1	true	All
micHeightCh1	Mic. Height Ch1	1.2	5.5	2.5	SCR-20 SCR-25
micHeightCh2	Mic. Height Ch2	1.2	5.5	2.5	SCR-20 SCR-25
micLocationCh1	Microphone Location Ch1	0	1	0	All
micLocationCh2	Microphone Location Ch2	0	1	0	All
micLowCutEq	Microphone Low Cut EQ	0	3	2	All
micMidBoostEq	Microphone Mid Boost EQ	0	3	2	All
bfSmoothingTime	Beam Former Smoothing Time	1.0	5000.0	500.0	All
micOffsetLevel	Mic Dynamic Range Offset Level	0.0	50.0	28.0	All
overrideAutoSetupEq	Override AutoSetup Eq	0	1	false	All
autoSetupBassEq	Override AutoSetup Bass Reduction	0	3	2	All
autoSetupMidEq	Override AutoSetup Mid Boost	0	3	2	All
autoSetupTrebleEq	Override AutoSetup Treble Boost	0	3	2	All

autoMixerOpenMics	AutoMixer Open Mic Limit	1	2	2	All
autoMixerOffAtten	AutoMixer Off Attenuation	-80.0	-10.0	-40.0	All
autoMixerGateHold	AutoMixer Gate Hold Time	0.0	6000.0	1000.0	All
agcTargetLevel	AGC Target Level	-40.0	-10.0	-24.0	All
agcMinThreshold	AGC Minimum Threshold	-80.0	20.0	-42.0	All
agcHoldTime	AGC Hold Time	0.0	240.0	240.0	All
agcMaxGain	AGC Maximum Gain	0.0	30.0	10.0	All
agcMaxAttenuation	AGC Max Attenuation	0.0	40.0	30.0	All
agcGainAdjustRate	AGC Max Gain Adjustment Rate	0.0	15.0	3.0	All
agcSpeechMode	AGC Speech Mode	0	1	true	All
agcMinSNR	AGC Minimum SNR	10.0	50.0	20.0	All
agcLimiterThreshold	AGC Limiter Threshold	-10.0	0.0	-0.25	All
signalPresentThresh	Signal Present Threshold	-100.0	10.0	-50.0	All
initiateAutoSetup	Initiate Auto Setup	0	1	false	All
bypassAGC	Bypass AGC	0	1	false	All
bypassAEC	Bypass AEC	0	1	false	All
aecNoiseReduction	AEC Noise Reduction Level	0	3	1	All
aecEchoSuppression	AEC Echo Suppression Level	0	3	2	All
softCodecInputGain	Soft CODEC Input Gain	-20.0	20.0	0.0	All
headsetInputGain	Headset Input Gain	-20.0	20.0	0.0	SCR-25 CR-1
overrideRCALevel	Override Line Output Level	0	1	false	All
balancedRCAOuts	Enable RCA Balanced Mode	0	1	false	All

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lineOutputLevel	Line Output Level	-20.0	20.0	-8.0	All
overrideAmpLevel	Override Amplifier Level	0	1	false	All
ampOutputLevel	Amplifier Output Level	-20.0	20.0	-8.0	All
persistOverride	Persist Manual Override	0	1	false	All
ampLoadImpedance	Amplifier Load Impedance	4	8	8	All
masterMicMute	Master Microphone Mute	0	1	false	All
micLedMode	Microphone LED Mode	0	1	0	All
disableMicMuteSwitch	Disable Mic Mute Button	0	1	false	All
enableUsbVideo	Enable USB Video	0	1	false	All
enableHeadset	Enable Headset Interface	0	1	false	SCR-25 CR-1
bypassHeadsetAGC	Bypass Headset AGC	0	1	false	SCR-25 CR-1
bypassSoftCodecAGC	Bypass Soft Codec	0	1	false	
bypassNoiseGate	Bypass Headset Noise Gate	0	1	true	SCR-25 CR-1
noiseGateAttack	Noise Gate attack Time (ms)	0.1	2000.0	0.5	All
noiseGateRelease	Noise Gate Release Time (ms)	0.1	40000.0	100.0	All
noiseGateThreshold	Noise Gate Threshold (dB)	-80.0	0.0	-80.0	All
initiateLEDTest	Initiate LED Test	0	1	false	All
enableHandsFree	Enable Bluetooth function	0	1	false	SCR-25
resetHandsFreeConnection	Clear connections to Bluetooth	0	1	true	SCR-25

handsFreeName	User friendly name for Bluetooth	1	32	Unknown	SCR-25
handsFreeConnectTimeout	Timeout Bluetooth connection	0	99999	0	SCR-25
enableHandsFreeConnectTone	Enable tone on Bluetooth connect	0	1	true	SCR-25
handsFreeInputGain	Bluetooth Input Gain	-20.0	20.0	0.0	SCR-25
handsFreeDiscoverable	Make Bluetooth discoverable	0	1	true	SCR-25
videoInputSelect	Prioritise HDMI or USB video input	1	2	1	SCR-20 SCR-25
hdmiAudioOutput	Route audio to HDMI output	0	2	0	SCR-20 SCR-25
hdmiOutput1MaxResolution	Maximum Resolution for HDMI Output 1	1	2	1	SCR-20 SCR-25
headsetPinoutSelect	Select desired headset pinout	1	6	1	SCR-25
rebootDevice	Reboot Device	0	1	false	All
overrideHDMILevel	Override HDMI Audio Level	0	1	false	SCR-20 SCR-25
hdmiAudioLevel	HDMI Audio Output Level	-20.0	20.0	-8.0	SCR-20 SCR-25
hdmiInputGain	HDMI Audio Input Gain	-20.0	20.0	0.0	SCR-20

					SCR-25

Response strings

Devio Text Protocol will provide feedback if a command is incorrect. The response will vary depending on the command. The error responses for the most common types of external programming errors include:

- can't forward a request to a device that's not on the network
- if an invalid address is used
- if an invalid attribute or service for a block type (it might be valid for a different object)
- the request doesn't make sense given the current state of the device
- case-and-spelling errors of various kinds

Message	Resolution
+OK	The command was understood and completed successfully
-ERR <*Fault Description*>	-ERR will always precede a fault description. Please confirm the command was formatted correctly