

Configuring CyberData Devices for use with a Zycoo CooVox U20 V2 IP PBX



This is a sampling of CyberData devices please see our website for a full listing.

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Version 1

9/26/17

Hardware Information

PBX	
Device	Firmware Version
Zycoo CooVox U20 V2	2.1.5
Zycoo CooVox U50 V2	2.1.5
Zycoo CooVox U60 V2	2.1.5
Zycoo CooVox U80	2.1.5
Zycoo CooVox U100 V2	2.1.5

CyberData Devices	
Device	Firmware Version
CyberData Video Intercom	1.1.1
CyberData Keypad Intercom	11.8.0
CyberData Speaker	11.6.9
CyberData Paging Server	12.0.3
CyberData Paging Adapter	11.7.2
CyberData Paging Amplifier	11.6.4
CyberData RBG Strobe	11.8.0

Summary of Testing Results ~ Video Intercom

#	Test	Result
1	Incorrect Username	Pass
2	Incorrect Password	Pass
3	Minimum Expiry	Pass
4	Maximum Expiry	Pass
5	Default Expiry	Pass
6	Incorrect Username	Pass
7	Incorrect Password	Pass
8	Minimum Expiry	Pass
9	Maximum Expiry	Pass
10	Default Expiry	Pass
11	Simultaneous Registration	Pass
12	DUT to Single Phone Extension - DUT Cancels Before Answer	Pass
13	DUT to Single Phone Extension - DUT Terminates After Answer	Pass
14	DUT to Single Phone Extension - Phone Terminates After Answer	Pass
15	DUT to Single Phone Extension - Mute/Unmute Audio	Pass
16	DUT to Single Phone Extension - Session Refresh	Not Supported
17	Fault Detection - DUT to Single Phone Extension - DUT Cancels Before Answer	Pass
18	Fault Detection - DUT to Single Phone Extension - DUT Terminates After Answer	Pass
19	Fault Detection - DUT to Single Phone Extension - Phone Terminates After Answer	Pass
20	IP-PBX to DUT - Phone Terminates Before Answer	Pass
21	IP-PBX to DUT - Phone Terminates After Answer	Pass
22	IP-PBX to DUT - DUT Terminates After Answer	Pass
23	IP-PBX to DUT - Mute/Unmute Audio	Pass
24	IP-PBX to DUT - Session Refresh	Not Supported
25	Attempt Intercom Call While Intercom Call Is in Progress	Fail*
26	Attempt Nightringer Call While Intercom Call Is in Progress	Fail*
27	Nightringer Rings During Inbound Call Attempt	Pass
28	DUT to Group Extension - DUT Cancels Before Answer	Pass
29	DUT to Group Extension - DUT Terminates After Answer	Pass
30	DUT to Group Extension - Phone Terminates After Answer	Pass
31	Fault Detection - DUT to Group Extension - DUT Cancels Before Answer	Pass
32	Fault Detection - DUT to Group Extension - DUT Terminates After Answer	Pass
33	Fault Detection - DUT to Group Extension - Phone Terminates After Answer	Pass
34	Phone to Group Extension with DUT Membership - Live Page	Pass
35	Phone to Group Extension with DUT Membership - Live Page - Mute/Unmute Audio	Pass
36	Phone to Group Extension with DUT Membership - Live Page - Session Refresh	Pass
37	Simultaneous Ring with Phone - Call Cancelled Before Answer	Pass
38	Simultaneous Ring with Phone - Call Answered by Phone	Pass
39	Receive RFC2833 DTMF for Relay Activation	Pass
40	Send RFC2833 DTMF	Pass

* - See Testing Notes for explanation.

Summary of Testing Results ~ Paging Server, Paging Adapter, Speaker, Intercom and Paging Amp.

#	Test	Result
1	Incorrect Username	Pass
2	Incorrect Password	Pass
3	Minimum Expiry	Pass
4	Maximum Expiry	Pass
5	Default Expiry	Pass
6	Incorrect Username	Pass
7	Incorrect Password	Pass
8	Minimum Expiry	Pass
9	Maximum Expiry	Pass
10	Default Expiry	Pass
11	Simultaneous Registration	Pass
12	DUT to Single Phone Extension - DUT Cancels Before Answer	Pass
13	DUT to Single Phone Extension - DUT Terminates After Answer	Pass
14	DUT to Single Phone Extension - Phone Terminates After Answer	Pass
15	DUT to Single Phone Extension - Mute/Unmute Audio	Pass
16	DUT to Single Phone Extension - Session Refresh	Not Supported
17	Fault Detection - DUT to Single Phone Extension - DUT Cancels Before Answer	Pass
18	Fault Detection - DUT to Single Phone Extension - DUT Terminates After Answer	Pass
19	Fault Detection - DUT to Single Phone Extension - Phone Terminates After Answer	Pass
20	IP-PBX to DUT - Phone Terminates Before Answer	Pass
21	IP-PBX to DUT - Phone Terminates After Answer	Pass
22	IP-PBX to DUT - DUT Terminates After Answer	Pass
23	IP-PBX to DUT - Mute/Unmute Audio	Pass
24	IP-PBX to DUT - Session Refresh	Not Supported
25	Attempt Intercom Call While Intercom Call Is in Progress	Pass
26	Attempt Nightringer Call While Intercom Call Is in Progress	Pass
27	Nightringer Rings During Inbound Call Attempt	Pass
28	DUT to Group Extension - DUT Cancels Before Answer	Pass
29	DUT to Group Extension - DUT Terminates After Answer	Pass
30	DUT to Group Extension - Phone Terminates After Answer	Pass
31	Fault Detection - DUT to Group Extension - DUT Cancels Before Answer	Pass
32	Fault Detection - DUT to Group Extension - DUT Terminates After Answer	Pass
33	Fault Detection - DUT to Group Extension - Phone Terminates After Answer	Pass
34	Phone to Group Extension with DUT Membership - Live Page	Pass
35	Phone to Group Extension with DUT Membership - Live Page - Mute/Unmute Audio	Pass
36	Phone to Group Extension with DUT Membership - Live Page - Session Refresh	Pass
37	Simultaneous Ring with Phone - Call Cancelled Before Answer	Pass
38	Simultaneous Ring with Phone - Call Answered by Phone	Pass
39	Receive RFC2833 DTMF for Relay Activation	Pass
40	Send RFC2833 DTMF	Pass

Testing Notes:

CyberData Devices work well with the Zycoo CooVox U 20 IP PBX. The PBX is very well rounded with many features to complement the functionality of CyberData Devices. The CooVox U 20 does not support a Session Refresh Timer so it may be worthwhile to use the 'Delay Termination' feature of the CyberData device to prevent it from hanging on a call. There was a bug found with the CyberData video Intercom and Video Intercom with Keypad, when the feature Nightringer is being used. If a call is made to the Nightringer while the device is already in a call; the device will ring instead of sending a busy message. At the time of this guide there is no workaround for this issue.

Configuring the PBX

The Zycoo CooVox U2 is a very versatile PBX that is ready to be used with CyberData Devices out of the box. There are some settings that can be changed to make creation of extensions for CyberData Devices simple. Please use the following steps:

1. After logging into the PBX, please select *Advanced* from the side toolbar.
2. Then *Options* from the Advanced subsection.
3. Check the box for the G.722 audio codec in the section *Default Settings* for New User.
4. Uncheck the box for the G.729 audio codec as it is not used by CyberData Devices.

Figure 1: Creating an Extension

Zycoo
WE FOCUS.WE DELIVER

Logout

- Home
- Operator
- Basic
- Inbound Control
- Advanced**
 - Options**
 - Virtual Fax
 - Voicemail
 - SMTP Settings
 - Conferences
 - Music Settings
 - DISA
 - Follow Me
 - Call Forward
 - One Number Stations
 - Paging and Intercom
 - Web Extensions
 - PIN Sets
 - Call Recording
 - Smart DID
 - Callback
 - Phone Book
 - LDAP Server
 - Feature Codes
 - Phone Provisioning
 - EX-Box provisioning
- Network Settings
- Security
- Report
- System

General

General | Analog Settings | SIP Settings | IAX2 Settings

Local Extension Settings

Operator Extension: <None> ▾
 Global Ring Time Set(sec): 30
 Enable Transfer:
 Enable Outbound Transfer:
 Enable Attended Transfer Caller ID:
 Enable Music On Ringback:
 Auto-Answer: Fax Detect Time: 1 ▾
 Web Dial Auto-Answer:
 Record Format: GSM ▾
 Call Forward CID:
 P-Preferred-Identity:

Default Settings for New User

SIP: IAX2: Web Manager: Call Waiting:
 Agent: Voicemail: Delete VMail: VM Password: 1234
 NAT: Transport: UDP ▾ SRTP:

Audio Codecs

ulaw alaw G.722 G.729 G.726 GSM Speex Opus

Extension Preferences

User Extensions 800	-	899
Conference Extensions 900	-	909
IVR Extensions 610	-	629
Queue Extensions 630	-	639
Ring Group Extensions 640	-	659
Paging Group Extensions 660	-	679
Web Extensions 680	-	699

Reset

Save Cancel

Move the mouse over a field to see tooltips

5. Save the changes.

6. Activate the changes.

Figure 2: Activate Changes

The screenshot displays the Zycoo configuration interface. At the top, a blue banner contains the Zycoo logo and the slogan "WE FOCUS.WE DELIVER". A notification bar in the top right corner states "Configuration Saved!" and "Settings changed! Please Click on Activate Changes to make modifications effective!". The "Activate Changes" button is highlighted with a green border. Below the banner, a left sidebar lists navigation options: Home, Operator, Basic, Inbound Control, and Advanced (with sub-items like Options, Virtual Fax, Voicemail, etc.). The main content area is titled "General" and includes tabs for "General", "Analog Settings", "SIP Settings", and "IAX2 Settings". The "General" tab is active, showing sections for "Local Extension Settings", "Default Settings for New User", and "Extension Preferences". The "Local Extension Settings" section includes fields for Operator Extension, Global Ring Time, and various enable/disable checkboxes. The "Default Settings for New User" section includes checkboxes for SIP, IAX2, Web Manager, Call Waiting, Agent, Voicemail, Delete VMail, VM Password, NAT, Transport, and SRTP. The "Extension Preferences" section shows a list of extension ranges and their corresponding numbers. At the bottom of the main content area, there are "Save" and "Cancel" buttons, and a "Reset" button is located below the "Extension Preferences" section.

Creating an Extension

1. Please navigate to the section *Basic* from the side toolbar.
2. Then please go to the sub section *Extensions*.
3. Select **New User**.
4. Please give a name to the new extension to help identify it.
5. Set a password for the extension or use the randomly generated password. This password is used during registration.

Note Password is obscured from screenshot for security purposes.

6. Uncheck the Enable box for **Voicemail**.
7. Uncheck the box for **Call waiting**.
8. Save the settings.

Figure 3: Create a new user

The screenshot displays the Zycoo configuration interface for creating a new extension. The interface includes a sidebar with navigation options like Home, Operator, Basic, Extensions, Trunks, Outbound Routes, Inbound Control, Advanced, Network Settings, Security, Report, and System. The main content area shows the 'New' extension configuration form. The form is organized into several sections:

- General:** Includes fields for SIP (checked), Name (CyberData Paging Ser), Password (obscured), Extension (813), Outbound CID, and Analog Phone (None).
- Voicemail:** Includes an 'Enable' checkbox (unchecked), Password (1234), and Email (Fax/Voicemail) field.
- Other Options:** Includes checkboxes for Web Manager, Allow Being Spied, Mobility Extension, Agent, Pickup Group (1), and Call Waiting (unchecked).
- VoIP Settings:** Includes NAT, Qualify (checked), DTMF Mode (RFC2833), Transfer Protocol (UDP), SRTP, Remote Extension, and Permit IP.
- Video Options:** Includes a 'Call' checkbox and video codec options (H.261, H.263, H.263+, H.264).
- Audio Codecs:** Shows a list of disallowed codecs (g726, gsm, speex, g729) and allowed codecs (alaw, ulaw, g722).

At the bottom of the form, there are 'Save' and 'Cancel' buttons. The 'Save' button is highlighted with a green box.

9. Apply the changes.

Figure 4: Save the new user

The screenshot shows the Zycoo configuration interface. At the top, a blue banner displays the Zycoo logo and the slogan "WE FOCUS.WE DELIVER". A notification bar indicates "Configuration Saved!" and "Settings changed! Please Click on Activate Changes to make modifications effective!". The "Activate Changes" button is highlighted with a green box. The left sidebar contains a navigation menu with categories like Home, Operator, Basic, Inbound Control, Advanced, Network Settings, Security, Report, and System. The main content area is titled "Extensions" and features a search bar, a "New User" button, and a table of existing extensions. The table has columns for Name, Extension, Port, Protocol, DialPlan, Outbound CID, and Options. The last row in the table is for "CyberData Pa" with extension 813.

	Name	Extension	Port	Protocol	DialPlan	Outbound CID	Options
<input type="checkbox"/>	1 800	800	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	2 801	801	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	3 802	802	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	4 803	803	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	5 804	804	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	6 805	805	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	7 806	806	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	8 807	807	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	9 808	808	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	10 809	809	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	11 810	810	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	12 811	811	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	13 812	812	--	SIP	DialPlan1		Edit
<input type="checkbox"/>	14 CyberData Pa	813	--	SIP	DialPlan1		Edit

Creating an Extension: Video Intercom

Adding support for CyberData's line of video endpoints is just as easy as creating a regular SIP extension. Please use the following steps to setup an extension for the CyberData Video Intercom.

1. Press the button **New User**.
2. Give a name to the extension.
3. Set a password for the extension OR use the randomly generated password.
4. Uncheck the Enable box for **Voicemail**.
5. Uncheck the box for **Call waiting**.
6. Enable **Video Calls** and enable support for the **H.264 video codec**.
7. Save the extension.
8. Activate the changes.

Figure 5: Creating a Video extension

The screenshot shows the 'New' user configuration window with the following settings:

- General:** SIP: ; Name: Video Intercom; Extension: 814; DialPlan: DialPlan1; IAX2: ; Outbound CID: ; Analog Phone: None
- Voicemail:** Enable: ; Password: 1234; Delete VMail: ; Email(Fax/Voicemail):
- Other Options:** Web Manager: ; Agent: ; Call Waiting: ; Allow Being Spied: ; Pickup Group: 1; Mobility Extension: ; Mobility Extension Number:
- VoIP Settings:** NAT: ; Transport: UDP; SRTP: ; Qualify: ; Remote Extension: ; DTMF Mode: RFC2833; Permit IP:
- Video Options:** Video Call: ; H.261: ; H.263: ; H.263+: ; H.264: ; VP8:
- Audio Codecs:** Disallowed: g726, gsm, speex, opus; Allowed: alaw, ulaw, g722

The 'Save' button is highlighted with a green box.

Configuring the CyberData Device

CyberData products are ready to register with the Zycoo PBX out of the box and will simply need to be pointed to the server. To setup your CyberData device please use the following steps:

1. Navigate to the IP address of your CyberData device.
2. Login to the device using the default login info; username: **admin** and password: **admin**.
3. Once logged in please navigate to the SIP Tab.
4. Please set the IP address of the Zycoo PBX as the **Primary SIP Server**.
5. Please set the **Primary SIP User ID** and **Primary SIP Auth. Id** to the extension number.
6. Set the **Primary SIP Auth. Password** as the password that was set during extension creation.
7. Finally **Save** and then **Reboot** the device.

Figure 6: SIP Page Configuration

The screenshot displays the 'SIP' configuration page for the CyberData v3.1 Paging Server. The page is divided into several sections:

- SIP Settings:** Includes checkboxes for 'Enable SIP operation', 'Register with a SIP Server', and 'Use Cisco SRST'. Text input fields are provided for 'Primary SIP Server' (10.10.0.164), 'Primary SIP User ID' (813), 'Primary SIP Auth ID' (813), and 'Primary SIP Auth Password' (*****). Backup settings for two servers are also present.
- Nighthringer Settings:** Includes a checkbox for 'Enable Nighthringer'. Text input fields are provided for 'SIP Server' (10.0.0.253), 'Remote SIP Port' (5060), 'Local SIP Port' (5061), 'Outbound Proxy', 'Outbound Proxy Port' (0), 'User ID' (241), 'Authenticate ID' (241), 'Authenticate Password' (*****), 'Re-registration Interval (in seconds)' (360), 'Relay rings to multicast', 'Multicast Address' (224.1.2.32), and 'Multicast Port' (2020).
- Call Disconnection:** Includes a text input field for 'Terminate Call after delay' (0).
- Codec Selection:** Includes a checkbox for 'Force Selected Codec' and a dropdown menu for 'Codec' (PCMU (G.711, u-law)).
- RTP Settings:** Includes text input fields for 'RTP Port (even)' (10500) and 'Jitter Buffer' (50).

At the bottom of the page, there are three buttons: 'Save', 'Reboot', and 'Toggle Help'.

Resources

CyberData Website

<http://www.cyberdata.net/>

CyberData VoIP Discovery tool

<http://www.cyberdata.net/assets/common/discovery.zip>

Zycoo Website

<http://zycoo.com/>

Contact CyberData Corporation

CyberData
The IP Endpoint Company

Technical Support

The fastest way to get technical support for your VoIP product is to submit a VoIP Technical Support form at the following website:

<http://support.cyberdata.net/>

Phone: (831) 373-2601, Ext. 333

Email: support@cyberdata.net

Fax: (831) 373-4193

Company and product information is at www.cyberdata.net