

## iBox

The purpose of the project is to develop a low cost hardware platform for VoIP and multimedia to replace complex and high-cost personal computers for home and office. The device has been positioned as "ready-to-use", i.e. it can be purchased by a non-technical person, switch it on and everything will be working with no need for a technical specialist assistance.

The device provides for:

- Connecting of any stationary telephone via FXS-port and make calls as via VoIP so as via a common telephone line;
- Setting up voice mail to record messages;
- Setting up calls forwarding to another VoIP telephone;
- Listening to mp3, wma, ogg files from connected USB flash;
- Listening to internet radio. Selection of a required program can be done with the help of telephone commands or via the Program Manager;
- Managing domestic utilities (VCR, DVD player, TV set etc) through IR commands. For example, a VCR can be remotely turned on to record a football game.
- Sending faxes via internet using T.38 protocol.

When necessary the user can change some settings in the device using the following methods: Web Control Panel, Phone commands, Program Manager. Program Manager is a separate cross-platform utility for Desktop PC written in Java.

### Technologies used:

Windows CE 5.0 operational system. SIP 2.0 protocol was used for VoIP. To compress voice G.711, G.723, G.729A, GSM codecs were used. Compression is made by firmware using DSP. All necessary drivers, applications and management programs were developed in C/C++.

The device has no analogs in the world. Any similar products usually have a limited set of functionality as for example only VoIP or mp3 playback.

Technical specifications:

- ARM 200MHz processor
- Fast Ethernet 100Mbps + IEEE802.3
- Power consumption 8 Watts.
- Power supply 12 Volts.
- Dimensions 200\*30\*130 (mm)
- Commercial price \$150.

Customer: **Global Network Systems**

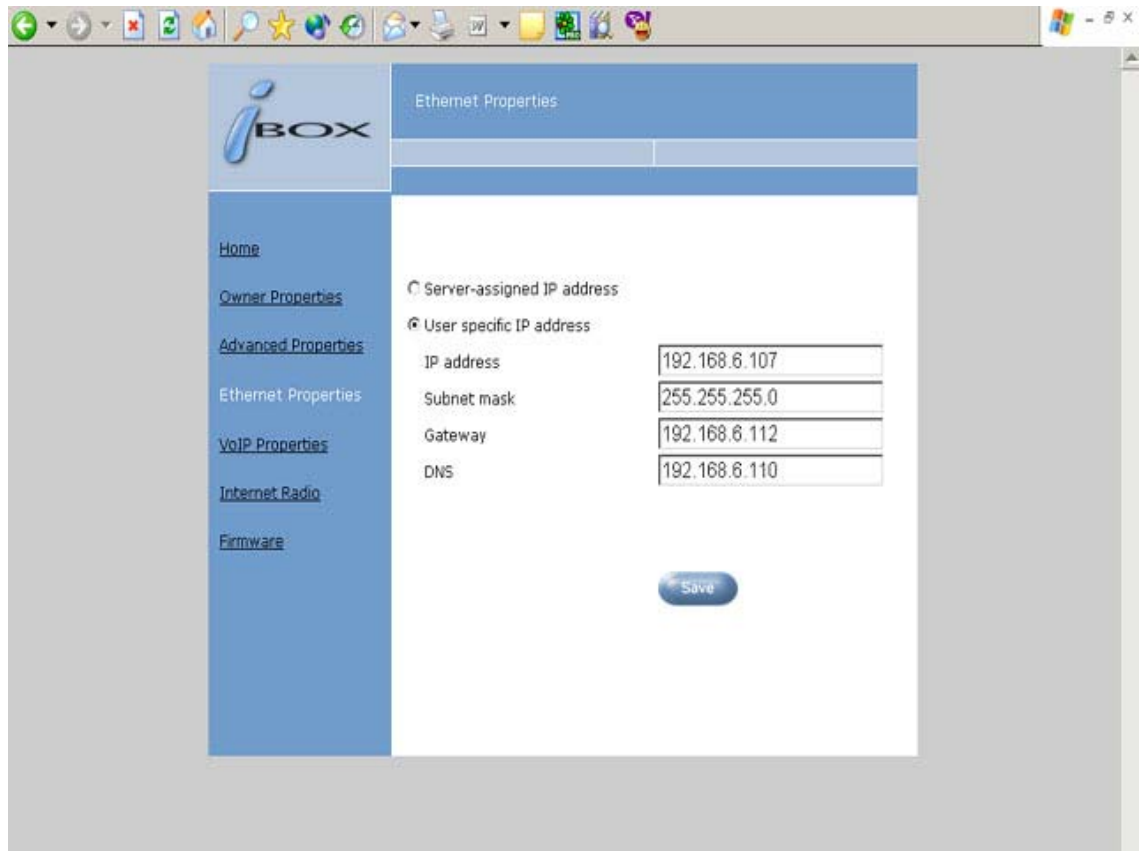
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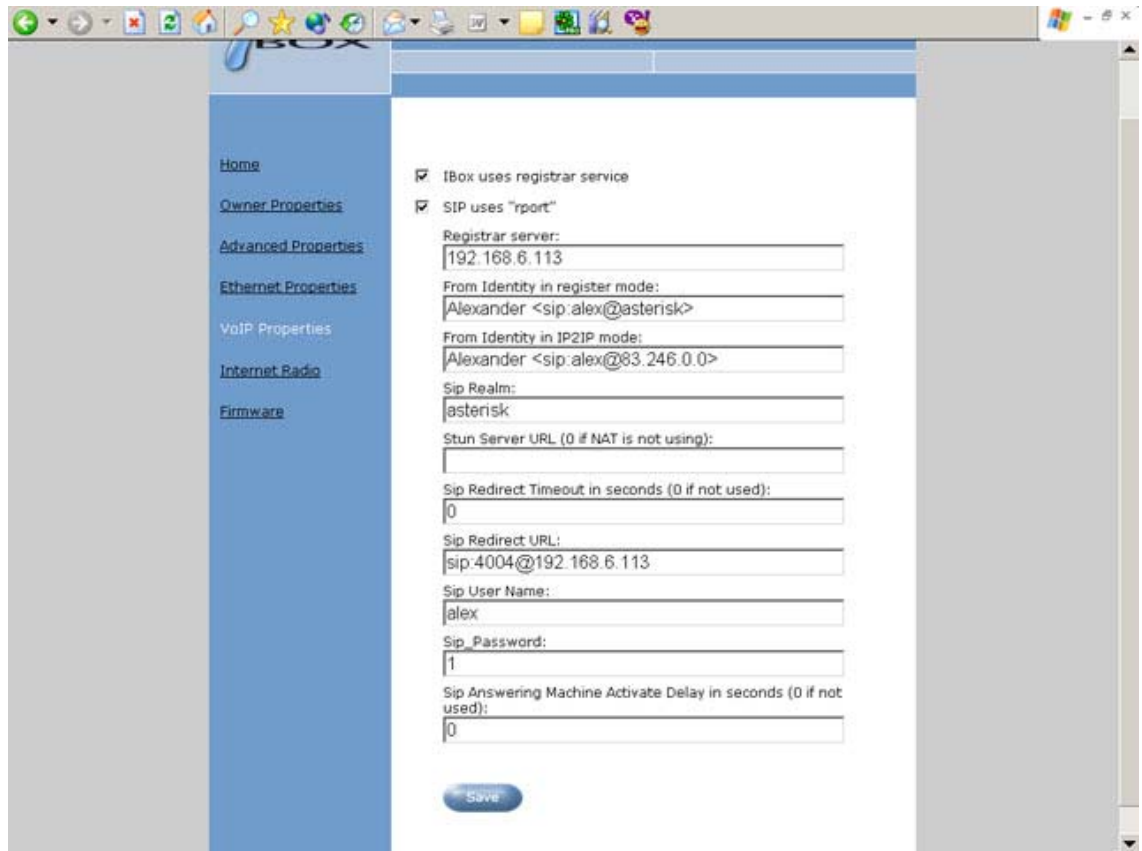
## Screenshots



iBox Program Manager



**iBox Web Control Panel 1**



## iBox Web Control Panel 2