



Detailed Technical Specifications

OBi202 VoIP Telephone Adapter with 2-Phone Ports, Router & USB

With Support for SIP, Google Voice™, OBiTALK VoIP Services

With the OBi202, you are in control of your digital & analog communications life. Via the OBi202's two (2) on-board phone connections as well as via the Internet to other OBi endpoints via Obihai's free OBiTALK network or up to four (4) available VoIP services like Google's free* Google Voice communications service or a multitude of SIP Internet phone services, you have the power make and receive phone calls and faxes as well as bridge mobile, fixed line and Internet telephone services. The OBi202 supports the T.38 fax standard for reliable facsimile calls over the Internet.

The OBi202 is equipped with a 2-port router/bridge with support for integrated quality of service (QoS). The OBi202 may be installed in a variety of environments that either do not have an available Ethernet port and/or locations where upstream voice traffic needs to be prioritized above other types of traffic like web surfing and uploading pictures and movies. The OBi202 USB port serves multiple purposes. Using the OBiWiFi Wireless Adapter, the OBi202 can be placed anywhere within range of an 802.11b/g/n access point. Or, the USB port can be connected to a storage device to enable local and remote access of stored files over the Internet by authorized users.



The OBi202 is a dedicated device, built with a high-performance system-on-a-chip platform to ensure high quality voice conversations. The OBi202 has high availability and reliability because it is always-on to make or receive a call. With the OBi202, a computer is not required and a computer does not need to be on to talk to people. To get started, all you need is a phone, power and a connection to the Internet.

The OBi202 is Complemented by Other OBi Products & Services

OBiTALK: A web portal for device management and service configuration. OBiTALK also allows its members to add people and associated OBi endpoints to "circles of trust" such that additional functionality can be shared amongst authorized users. The OBiTALK portal is also where members can download the OBiON applications for smart phones and Internet connected devices like the iPhone, iPad, iPod touch & Android.

OBiON iPhone, iPad, iPod touch & Android Devices: An application for iPhone, iPad, iPod touch and Android devices which makes possible placing and receiving calls to/from other OBi endpoints.

OBiON PC: A middleware application for a PC that facilitates placing and receiving calls to/from other OBi endpoints.

Key Features of the OBi202 VoIP Telephone Adapter:

Google Voice Support for Up to Four (4) Google Accounts

SIP Service Provider Support for Up to Four (4) SIP Accounts

Any Available Service Can be Accessed from Each Phone Port Independently

Aggregation / Bridging of Four (4) SIP and/or Google Voice Services and One (1) OBiTALK Service

Automatic Attendant for Simplified Call Routing (AA)

Call Back Service – Automatic Call Back to Connect User to the AA to Make a New Call or Ring the Attached Phone

OBI TALK Web Portal Integration

- Configuration and Management of OBi Endpoints
- Download OBi Client Applications for Smart Phones, Internet Devices & PCs
- Creating & Joining Circles of Trust So You Can Share Your OBi
- Setting Up Your OBi Endpoint Speed Dial Directory

Configurable to Work with Any SIP Compliant Internet Telephone Service

Analog Phone Impedance Agnostic

Robust Telephony Features:

- Caller ID – Name & Number
- Call Waiting
- Message Waiting Indication - Visual and Tone Based
- Speed Dialing of 99 OBi Endpoints or Numbers
- Three Way Conference Calling with Local Mixing
- Hook Flash Event Signaling
- Call Forward - Unconditional
- Call Forward on Busy
- Call Forward on No Answer
- Call Transfer
- Anonymous Call
- Block Anonymous Call
- Do Not Disturb
- Call Return
- Repeat Dialing
- Caller ID Pass-Thru

Powerful Call Routing & Voice Service Features:

- SIP Support for Voice and Fax Over IP (T.38 and G.711 pass-thru) from Internet Telephony Service Providers
- OBI TALK Managed VoIP Network for OBi Endpoint Devices & Applications
- High Quality Voice Encoding Using G.711, G.726, G.729, iLBC Algorithms
- Recursive Digit Maps & Associated Call Routing (Outbound, Inbound)

General

| | |
|-------------------|---|
| Brand | Obihai Browse Obihai Devices |
| Manufacturer | Obihai |
| Hardware Designer | Obihai Technology, Inc. |
| Model Name | OBI202 |
| Release Date | April 2012 |

Microprocessor

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|-----------------------|--------|
| Width of Machine Word | 32 bit |
| Instruction Set | ARM |

FXS SLIC (Subscriber Line Integrated Circuit): Phone 1 / Phone 2

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| Ringer Specifications | Ring Frequency: 14Hz – 68Hz Ring Waveform: Trapezoidal, Sinusoidal Ring Voltage: 55v – 85v |
| Maximum Ring Load | 5 REN (Ringer Equivalence Number) |
| FXS (PHONE Port) Configuration Settings | Recursive Digit Map & Associated Outbound Call Routing On-Hook Tip Ring Voltage: 30v – 52v Off-Hook Current Max: 15mA – 45mA |

Impedance: 12 Independent Settings
 DTMF Playback Level: -90 dBm – 3dBm
 Caller ID Method: Bellcore, ETSI (FSK or DTMF)
 Caller ID Trigger (Before / After First Ring, Polarity Reversal)
 Channel Tx Gain: -12dB to 6 dB at 1 dB Resolution
 Channel Rx Gain: 12dB to 6 dB at 1 dB Resolution
 Silence Detect Sensitivity
 Hook Flash Time Max
 Hook Flash Time Min
 CPC Delay Time
 CPC Duration
 Idle Polarity
 Connect Polarity

Management – Configuration

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|-----------------------------------|--|
| Local Access Interface | IVR, Web Page – Password Protected (Admin & User Level Log-in) |
| Remote Access Interface | Syslog (Multi-Level Granularity), Invokable via SIP Notify, Web, Provisioning |
| Device Web Page Standard | HTTP v1.1, XML v1.0 |
| Remote Provisioning | XML via TFTP or HTTP, TR069 / TR104 |
| Secure Remote Provisioning | SSL via HTTPS , Encrypted XML via HTTP or TFTP – Dedicated User Name & Password |
| Secure Remote Firmware Update | Encrypted Binary File via TFTP or HTTP + Dedicated User Name & Password |
| Customization | OBI-ZT: Obihai Zero-Touch Automatic Customization & Configuration ** |
| Call History (CDRs) | Call Detail Records on OBI Web Page, Export to XML |
| LED Indications | Power, Device Status, Upgrade Progress Status, Ethernet Activity, PHONE Status |
| RTP Statistics | RTP Transport Type Audio Codec Type (Tx/Rx) RTP Packetization - ms (Tx/Rx) RTP Packet Count (Tx/Rx) RTP Byte Count (Tx/Rx) Peer Clock Differential Rate - PPM Packets In Jitter Buffer Packets Out-Of-Order Packets Interpolated Packets Late (Dropped) Packets Lost Packet Loss Rate % Packet Drop Rate % Jitter Buffer Length - ms Received Interarrival Jitter - ms DTMF Digits Received Jitter Buffer Underruns Jitter Buffer Overruns Sequence Number Discontinuities Skew Compensation - ms |
| Session Information | SIP Session Status OBITALK Status Phone Port Status (Phone 1 and Phone 2) |
| Primary SIP Service Set-Up Wizard | Dedicated Device Web Page for Quick ITSP Account Set-Up |
| System Settings Back-Up / Restore | Save & Restore Configuration via XML file to / from a Local Folder |

Security

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| Local Access Interface | IVR Password |
| Remote Access Interface | User Name & Password Access via HTTP, TFTP – HTTPS |
| Device Web Page Standard | HTTP v1.1, XMLv1.0 |
| Secure Remote Provisioning | TFTP, HTTP, HTTPS |

Network – Application Details

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| Data Networking | <p>MAC Address (IEEE 802.3) UDP (RFC 768) TCP (RFC 793) IP version 4 (RFC 791) – Static IP and DHCP Support ICMP (RFC 792) ARP - Address Resolution Protocol Domain Name System (DNS) A Records (RFC 1706) & SRV Records (RFC 2782) RTP (RFC 1889, 1890) RTCP (RFC 1889) DHCP Client (RFC 2131) LAN (Computer) Port May be Configured as a Router or Bridge DHCP Server (RFC 2131) DHCP Client Reservation PPPoE (Point-to-Point Protocol over Ethernet) client (RFC 2516) MAC Address Cloning Port Forwarding DiffServ (RFC 2475) – Independently Configured: Service, SIP & Media ToS (RFC 791, 1349) – Independently Configured: Service, SIP & Media VLAN Tagging (802.1p) – Independently Configured: Service, SIP & Media SNTP (RFC 2030) – Primary & Secondary NTP Servers Firewall with: - DRDOS Attack Protection - VPN Pass Through - NAT Redirection DMZ Mode QoS Features - Upstream Data Rate Allocation - Highest Priority (Voice) Bandwidth Allocation - Priority Class Assignments (4) for Bandwidth Allocation - DiffServ Code Point (DSCP) to Priority Class Mapping VPN Pass-Thru - IPsec ESP (IP Security encapsulating security payload) - PPTP (Point-to-Point Tunneling Protocol) - L2TP (Layer 2 Tunneling Protocol)</p> |
| VoIP | <p>Four (4) Service Provider Configuration Profile Assignments (ITSP 1-4) Four (4) Service /Trunk Subscription Profile Assignments (SP 1-4) SIPv2 (RFC 3261, 3262, 3263, 3264) SIP over UDP SIP over TCP SIP over TCP with TLS 4 SIP Service Provider Service Sessions – Concurrent Operation 4 XMPP (Google Voice) Sessions 2 OBiTALK Service Session SIP Proxy Redundancy – Local or DNS Based SVR, Primary & Secondary Fallback List Restrict Source IP Address Maximum Number of Sessions – Independent per Service Trunk Groups (4) Voice Gateway – Direct Dialing (8) G.711 A-Law (64 kbps) G.711 μ-Law (64 kbps) G.726 (32 kbps) G.729ab (8 kbps) iLBC (13.3, 15.2 kbps) Codec Pre-selection Code Voice Processing per SIP Service – TX/RX Audio Gain, Echo Cancellation Adjustable Audio Frames per Packet Codec Name Assignment Codec Profile per SIP SP (2) & OBiTALK Service Dynamic Audio Payload</p> |

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| VoIP cont. | <ul style="list-style-type: none"> Packet Loss Concealment Jitter Buffer (Adaptive) STUN ICE SUBSCRIBE / NOTIFY Framework (RFC 3265) NOTIFY Dialog, Line Status SUBSCRIBE Message Summary VoIP NAT Interworking DATE Header Support Remote-Party-ID (RPID) P-Asserted-Identity (PAID) RTP Statistics in BYE Message Media Loopback Support |
| Telephony | <ul style="list-style-type: none"> Configurable Contact List (Inbound Call Routing) Automatic Attendant (English) with Configurable Answer Delay PIN Access Control to AA (Up to 4 PINs) Recursive Digit Map for Call Routing (AA, Phone, Voice Gateways, Trunk Groups) AA Configurable Outbound Call Routing Rule SIP Service Configurable Inbound Call Routing Rule (2) Direct / Single-Stage Dialing (Route to Voice Gateway) Fax Pass Through (G.711) T.38 Fax Relay for Real-Time Fax over IP Modem Pass Through (G.711) In-Band DTMF (G.711) Out of Voice Band DTMF (RFC 2833) Out of Voice Band DTMF (INFO Method) Call Progress Tone Generation Tone Profile per SIP SP and OBiTALK service Ring Profile per SIP SP and OBiTALK service Star Code Profile per SIP SP and OBiTALK service Full Duplex Audio G.165, 168 Echo Cancelation VAD – Voice Activity Detection Silence Suppression Comfort Noise Generation Three Way Conference Calling with Local Mixing Hook Flash Event Signaling Flash Hook Timer Caller ID – Name & Number per Bellcore, ETSI and DTMF MWI – Message Waiting Indicator Visual Message Waiting Indication (VMWI) Daylight Savings Time Support – North & South Hemispheres Caller ID Enable /Disable Caller ID Number Caller ID Name (Alphanumeric) Caller ID Spoofing Call Waiting Maximum Session Control Call Forward - Unconditional Call Forward on Busy Call Forward on No Answer (Ring Count Configurable) Call Transfer Enable / Disable Anonymous Call Block Anonymous Call Do Not Disturb Call Return Repeat Dialing |
| Call Progress Tones | <ul style="list-style-type: none"> Configurable Call Progress Tone Call Progress Tone Profiles (2) Dial Tone Busy Tone |

Call Progress Tones cont.

- Ringback Tone
- Reorder Tone
- Confirmation Tone
- Holding Tone
- Second Dial Tone
- Stutter Tone
- Howling Tone
- Prompt Tone
- Call Forwarded Tone
- Conference Tone
- SIT Tones (1-4)
- Ringing & Call Waiting Tone Configuration
- Ring Patterns (10) - Configurable
- Call Waiting Tone Patterns (10) - Configurable
- Call Waiting Tone Pattern Profiles (2)

Star Code Configuration

- Configurable Start Codes
- Star Code Profiles (2)
- Redial
- Call Return
- Activate Block Caller ID
- Deactivate Block Caller ID
- Block Caller ID Once
- Unblock Caller ID Once
- Activate Call Forwarding (All Calls)
- Deactivate Call Forwarding (All Calls)
- Activate Call Forward on Busy
- Deactivate Call Forward on Busy
- Activate Call Forward on No Answer
- Deactivate Call Forward on No Answer
- Activate Block Anonymous Calls
- Deactivate Block Anonymous Calls
- Activate Call Waiting
- Deactivate Call Waiting
- Activate Do Not Disturb
- Deactivate Do Not Disturb
- Activate Repeat Dial
- Deactivate Repeat Dial

Interfaces & Indicator Lights

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|-----------------|--|
| Internet (WAN) | 1 x 10/100BaseT Ethernet Port (802.3) |
| LAN | 1 x 10/100BaseT Ethernet Port (802.3) |
| Phone (FXS) | 2 x RJ-11 FXS Analog Phone Port |
| USB | USB 2.0 |
| Reset Button | Yes – Located on Bottom of Case |
| LEDs | 5 – Power/Status, Ethernet Activity (WAN), Ethernet Activity (LAN), Phone 1, Phone 2 |
| LED Indications | Power On, Status, Upgrade in Progress Status, Packet RX/TX, Phone Port Status |

Certifications

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|-------------|---------------------|
| FCC Part 15 | Yes – Class B |
| A-Tick | Future |
| CE | Yes |
| ICES-003 | Yes |
| RoHS | Yes |
| WEEE | Yes |
| UL/cUL | Yes – Power Adapter |

Environmental

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|------------------------|--------------------------------|
| Operating Temperature | 0° to 45° C (32° to 113° F) |
| Storage Temperature | -25° to 85° C (-13° to 185° F) |
| Operating Humidity | 10% to 90% Non-condensing |
| Non-operating Humidity | 10% to 90% Non-condensing |

Physical Attributes

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|---|--|
| Dimensions: (width x depth x height) | 10.5 cm x 11.4 cm x 3.0 cm 4.1 in x 4.5 in x 1.2 in |
| Unit Weight: | 255 grams / 9 ounces |
| Shipping Weight | 390 grams / 14 ounces (Including Power Supply, Ethernet Cable and Packaging) |
| Mounting | Wall & Desktop Mountable |

Power Supply

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|--------------|---|
| Type | Universal Switching with Fixed US, EU, UK Style Plug Prongs (Model Dependent) |
| Input Power | AC Input: 100 to 240 Volts 0.3A 50-60Hz (26-34 VA) |
| Output Power | DC: +12V 1.0 Amp Max |

Carton Specifications

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|---------------------------------------|---|
| Units Per Carton | 20 Units |
| Carton Dimensions | 36.0 cm x 33.0 cm x 26.8 cm – 14.2 in x 13 in x 10.5 in |
| Carton Weight | 8.2 Kilograms / 18 pounds |
| Cartons Per Std. 20 / 40 ft Container | 896 / 1,848 Cartons – Non-palletized |

Miscellaneous

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|-------------------------------|---|
| Requirements | Active Internet Connection Analog Touch Tone Phone Access to Internet Via a Switched Ethernet Port on Home or Office Router (Optional) Active Internet Phone Service Subscription with All Required SIP Credentials to Make & Receive Calls |
| Documentation | Quick Start / Installation Guide User / Administrative Guide Implementation Guide for Service Providers ** |
| Package Contents | OBi202 Voice Service Bridge and Telephone Adapter Power Adapter 1 x RJ-45 Ethernet Cable (80 inches / 203 centimeters) Quick Start / Installation Guide |
| Warranty | 1-Year Hardware (Limited) |
| Engineering & Design Location | California, USA |
| HST Code | 8517.62.00 |
| Data Sheet State | All content subject to change. This data sheet is not a warranty. |
| Data Sheet Version | 100411.202.2 |

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* Google previously announced that calls inside the USA and Canada to the USA and Canada will be free thru 2012.

Do Not Use For Emergency Service Calls

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