OBi100

Detailed Technical Specifications

OBi100 VoIP Telephone Adapter & Voice Services Bridge
with Support for Two (2) SIP and OBiTALK VoIP Services

With the OBi100, you are in control of your digital & analog communications life. Via the OBi100's on-board connections as well as via the Internet to other OBi endpoints via Obihai's free OBiTALK network or up to two (2) available VoIP services, you have the power to bridge mobile, fixed line and Internet telephone services.
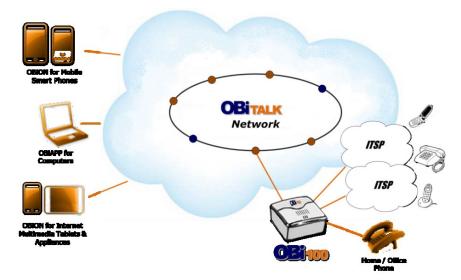
The OBi100 is a dedicated device, built with a high-performance system-on-a-chip platform to ensure high quality voice conversations. The OBi100 has high availability and reliability because it is always-on to make or receive a call. With the OBi100, a computer is not required and a computer does not 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 OBi100 is Complemented by Other OBi Products & Services

OBiTALK: A customer portal for device management allowing 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 OBiAPP and OBiON applications for PCs and the iPhone, iPad, iPod touch & Android devices, respectively.

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 OBi100 VoIP ATA & Voice Services Bridge:

Aggregation and Bridging of Two (2) SIP and One (1) OBiTALK Services

Automatic Attendant for Simplified Call Routing (AA)

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

OBiTALK 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:

- 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
- Caller ID – Name & Number
- Caller ID Spoofing
- Call Waiting
- 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

OBi100 & OBi110

Powerful Call Routing & Voice Service Features:

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

General

Brand	Obihai Browse Obihai Devices
Manufacturer	Obihai
Hardware Designer	Obihai Technology, Inc.
Model Name	OBi100
Release Date	March 2011

Microprocessor

Chip Vendor	Obihai SoC
Width of Machine Word	32 bit
Instruction Set	MIPS

FXS SLIC (Subscriber Line Integrated Circuit)

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 (FSK Bell202, FSK V.23, DTMF FI/SE/DK) Caller ID Trigger (Before / After First Ring, Polarity Reversal) Channel Tx Gain: -12dB – 12dB Channel Rx Gain: -12dB – 12dB Silence Detect Sensitivity Hook--Flash Time Max HookFlash Time Min CPC Delay Time CPC Duration Idle Polarity Connect Polarity

Management – Configuration

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 Parameter Naming Syntax)
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 Actvty, 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

RTP Statistics Cont…	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
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

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

Data Networking	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 RTP (RFC 1889, 1890) RTCP (RFC 1889) DHCP Client (RFC 2131) 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
VoIP	SIPv2 (RFC 3261, 3262, 3263, 3264) SIP over UDP SIP over TCP SIP over TCP with TLS 2 SIP Service Provider Service Sessions – Concurrent Operation 1 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 G.711 µ-Law G.726 (40/32/24/16) G.729a 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 Packet Loss Concealment Jitter Buffer (Adaptive) STUN ICE

VoIP Cont…	SUBSCRIBE / NOTIFY Framework (RFC 3265) NOTIFY Dialog, Line Status SUBSCRIBE Message Summary VoIP NAT Interworking DATE Header Support ALERT-INFO Header Support Remote-Party-ID (RPID) P-Asserted-Identity (PAID) RTP Statistics in BYE Message Media Loopback Support
Telephony	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) 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	Configurable Call Progress Tone Call Progress Tone Profiles (2) Dial Tone Busy Tone Ringback Tone Reorder Tone Confirmation Tone Holding Tone Second Dial Tone Stutter Tone

Call Progress Tones Cont...	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

Internet (WAN)	1 x 10/100BaseT Ethernet Port (802.3)
Phone (FXS)	1 x RJ-11 FXS Analog Phone Port
Reset Button	Yes – Located on Bottom of Case
LEDs	3 – Power + Status, Ethernet Activity, Phone
LED Indications	Power On, Device Status, Upgrade in Progress Status, Packet RX/TX, Phone Port Status

Certifications

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

Environmental

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

Physical Attributes

Dimensions: (width x depth x height)	6.5 x 9.0 x 2.2 centimetres 2.6 x 3.5 x 0.9 inches
Unit Weight:	200 grams / 7 ounces
Shipping Weight	312 grams / 12 ounces (Including Power Supply, Cable and Packaging)
Mounting	Desktop Mountable

Power Supply

Type	Universal Switching with Fixed US, EU, UK or AU 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

Units Per Carton	20 Units
Carton Dimensions (width x depth x height)	43.2 x 25.4 x 21.6 centimetres 17 x 10 x 8.5 inches
Carton Weight	6.4 Kilograms / 14 pounds
Cartons Per Std. 20 / 40 ft Container	1,170 / 2,430 Cartons – Non-palletized

Miscellaneous

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	OBi100 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	131217.100.2

** For Service Providers Only
∞ Available in Future with Firmware Update

OBIHAI
technology, inc.