

OBI110

Detailed Technical Specifications

OBI110 Voice Service Bridge and Telephone Adapter

with SIP, Google Voice™, OBiTALK, Telephone & Phone Line Interfaces

With the OBi110, you are in control of your digital & analog communications life. Via the OBi110'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.



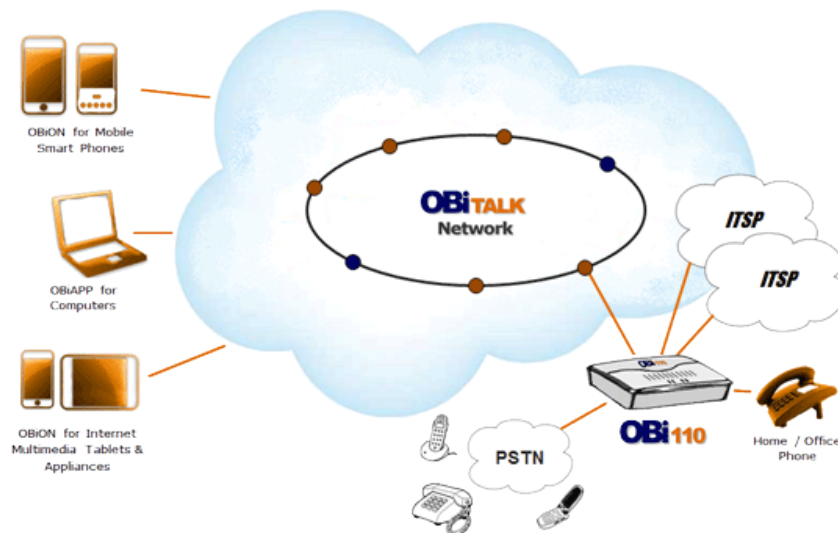
The OBi110 is a dedicated device, built with a high-performance system-on-a-chip platform to ensure high quality voice conversations. The OBi110 has high availability and reliability because it is always-on to make or receive a call. With the OBi110, a computer is not required and a computer does not 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 OBi110 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 OBi110 Voice Service Bridge and Telephone Adapter:

Aggregation and Bridging of Two (2) SIP and/or Google Voice, One (1) OBiTALK & One (1) Land Line (POTS) 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

Configurable to Work with Most Loop Start Analog Telephone Lines

Analog Phone & Telephone Line 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



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)
- Service Continuity in Case of Network Failure (Configurable)



General

Brand	Obihai Browse Obihai Devices
Manufacturer	Obihai
Hardware Designer	Obihai Technology, Inc.
Model Name	OBI110
Release Date	November 2010

Microprocessor

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

FXS SLIC (Subscriber Line Integrated Circuit) & FXO Subsystem

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
FXO (LINE Port) Configuration Settings	Recursive Digit Map & Associated Inbound Call Routing Ring Delay Detect CPC CPC Time Threshold Detect Polarity Reversal Detect Far End Long Silence Detect Near End Long Silence Silence Detect Sensitivity Silence Time Threshold Detect Disconnect Tone Disconnect Tone Pattern – Programmable AC Impedance: 16 Settings On-Hook Speed: 0.5ms, 3ms (ETSI), 26 (AU) Tip-Ring Voltage: 3.1v, 3.2v, 3.35v, 3.5v Min Operational Loop Current: 10mA, 12mA, 14mA, 16mA Current Limiting Enable Channel Tx Gain Channel Rx Gain Line In-Use Voltage Threshold Line In-Use Current Threshold Caller ID Detect Method: FSK (Bell 202), FSK (V.23), DTMF (FI, SE, DK) DTMF Playback Level

FXO (LINE Port) Ring Detection	Ring Detection Ring Frequency Min Ring Frequency Max Ring Threshold: 40.50-49.50 Vrms, 19.35-23.65 Vrms, 13.50-16.50 Vrms Ring Validation Time: 8 Settings Ring Indication Delay Time: 8 Settings Ring Timeout: 15 Settings Ringer Impedance: High, Synthesized
Logical FXS to FXO Relay	For Service Continuity in Case of VoIP Service Failure

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
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 in Progress Status, Ethernet Activity, PHONE Port Status, LINE Port 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 OBI-TALK Status Phone Port Status Line 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	<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 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</p>
VoIP	<p>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 2 XMPP (Google Voice) Sessions 1 OBiTALK Service Session SIP Proxy Redundancy – Local or DNS Based SVR, Primary & Secondary Fallback List Restrict Source IP Address Fail-over to FXO on Primary and/or Secondary SP Reg Failure - Selectable 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.729ab 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 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</p>
Telephony	<p>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, Line, 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)</p>

Network – Application Details / Telephony – Continued ...

	<ul style="list-style-type: none">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 GenerationTone Profile per SIP SP and OBiTALK serviceRing Profile per SIP SP and OBiTALK serviceStar Code Profile per SIP SP and OBiTALK serviceFull Duplex AudioG.165, 168 Echo CancellationVAD – Voice Activity DetectionSilence SuppressionComfort Noise GenerationThree Way Conference Calling with Local MixingHook Flash Event SignalingFlash Hook TimerCaller ID – Name & Number per Bellcore, ETSI and DTMFMWI – Message Waiting IndicatorVisual Message Waiting Indication (VMWI)Daylight Savings Time Support – North & South HemispheresCaller ID Enable /DisableCaller ID NumberCaller ID Name (Alphanumeric)Caller ID SpoofingCall WaitingMaximum Session ControlCall Forward - UnconditionalCall Forward on BusyCall Forward on No Answer (Ring Count Configurable)Call Transfer Enable / DisableAnonymous Call BlockAnonymous CallDo Not DisturbCall ReturnRepeat Dialing
Call Progress Tones	<ul style="list-style-type: none">Configurable Call Progress ToneCall Progress Tone Profiles (2)Dial ToneBusy ToneRingback ToneReorder ToneConfirmation ToneHolding ToneSecond Dial ToneStutter ToneHowling TonePrompt ToneCall Forwarded ToneConference ToneSIT Tones (1-4)Ringling & Call Waiting Tone ConfigurationRing Patterns (10) - ConfigurableCall Waiting Tone Patterns (10) - ConfigurableCall Waiting Tone Pattern Profiles (2)
Star Code Configuration	<ul style="list-style-type: none">Configurable Start CodesStar Code Profiles (2)RedialCall ReturnActivate Block Caller IDDeactivate Block Caller IDBlock Caller ID Once

Network – Application Details / Star Code Configuration – Continued ...

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
Line (FXO)	1 x RJ-11 FXO Analog Line Port
Reset Button	Yes – Located on Bottom of Case
LEDs	4 – Power + Status, Ethernet Activity, Phone, Line
LED Indications	Power On, Device Status, Upgrade in Progress Status, Packet RX/TX, Phone Port Status (Enabled, In-Use), Line Port Status (Enabled, In-Use)

Certifications

FCC Part 15	Yes – Class B
FCC Part 68	Yes – FCC ID: OBIITO.OBOBI110
A-Tick	Yes
CE	Yes
ICES-003	Yes
RoHS	Yes
WEEE	Yes
UL/cUL	Yes – Power Adapter

Environmental

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

Dimensions (width x depth x height)	11.5 x 11.0 x 3.0 centimetres 4.5 x 4.2 x 1.2 inches
Unit Weight	255 grams / 9 ounces
Shipping Weight	400 grams / 14 ounces (Including Power Supply, Cables and Packaging)
Mounting	Desktop or Wall 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)	48.0 x 29.0 x 29.0 centimetres 19.0 x 11.4 x 11.4 inches
Carton Weight	8.6 Kilograms / 19 pounds
Cartons Per Std. 20 / 40 ft Container	768 / 1,613 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) Access to an Analog Telephone (POTS) Line. (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	OBI110 Voice Service Bridge and Telephone Adapter Power Adapter 1 x RJ-45 Ethernet Cable (80 inches / 203 centimeters) 1 x RJ-11 Telephone Cable (45 inches / 113 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	140911.110.1

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

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