WARP Appliance for Asterisk

PIKA TECHNOLOGIES INC.

A cost-effective development and deployment platform for Asterisk-based applications

Datasheet

WARP Appliance for Asterisk is ideal for telephony developers of all kinds looking for a small, low-cost, integrated and reliable computer replacement to deploy telephony applications in the Small Office/Home Office (SOHO) and Small/Medium Enterprises (SME) markets. Completely customizable, it is compatible with VoIP phones as well as analog sets. Unlike your typical computer or appliance, PIKA has covered all your customer's traditional telephony requirements. Music on hold (MOH) and paging can be cumbersome to add to a data centric solution as is power failure transfer (PFT), but all are included in the WARP Appliance for Asterisk. The configuration of the appliance is modular and can include up to 2 additional modules in a combination of FXO / FXS / BRI / GSM plus VoIP stations and trunks. The appliance is designed to address businesses with up to 100 users.

Features & Benefits

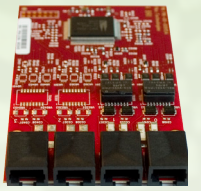
- AMCC Power PC 440EP Embedded 533 MHz Processor
  - 1200 mips
  - supports floating point and MMU (memory management unit)
- Internal flash 256 MB NAND plus 4 MB NOR memory
- Internal RAM 256 MB
- Additional DSP-based processing
  - provides G.729 and hardware-based echo cancellation
- Externally accessible SD memory card slot (SD memory card not included)
  - no hard drive improves reliability
- 10/100BT Ethernet port
- One USB host port (v1.1)
- One FXS port with every unit
- Optional Expansion Modules (max 2): 4-port FXS station, 4-port FXO trunk, 2-port / 4-channel and 4-port / 8-channel BRI modules and 2-port GSM
- Each 4-port analog module also contains a power failure transfer jack (RJ-11)
- Audio in, Audio out jacks for music-on-hold and paging functions
- 40 character (2 x 20) LCD backlit display with scroll button
- Power LED
- Real-time clock
- Reset function remotely controlled
- External brick-format universal power supply with country variant cords
- Surface standalone/stackable or wall mountable to accommodate any space requirements
- Customizable look so you can promote your brand
- Dynamic thermal management (fan)
- Internal RS232 programming port

GSM Modules

Number of Quad Band GSM channels per module	2
SIM cards	4 total 2 externally accessible and hot swappable 3V, 1.8V supported
External power supply required	No
Echo cancellation	Yes
External antennas	2
Supported protocols	Voice (2G) SMS
Accessibility	Through Asterisk
Power Consumption per module (average)	1 W

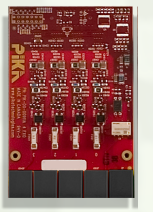
BRI Modules

Number of BRI channels	*4 or 8*
Physical Interfaces	S/T
Cable Connection	auto detection of cross cable or straight cable
Signaling	Euro-ISDN
TE/NT mode support	Software selectable on a per span basis
Point to Point and Point to Multipoint Support	Software selectable on a per span basis
100 ohm termination support	Software selectable on a per span basis
Power Consumption	.096 watts per module



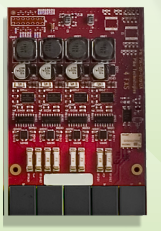
FXO Modules

Number of FXO ports	4	
FXO AC Impedance (in audio band)	Off-Hook	programmable
	On-Hook Metallic (Tip to Ring)	>300 k ohms
	Return Loss	>26.8 dB
FXO DC Current	Loop Current Range	13 - 110 mA
FXO DC Resistance	Longitudinal (tip to ground, ring to ground)	>9.8 M ohms
	On-Hook Metallic (Tip to Ring)	>6.5 M ohms
	Off-Hook Metallic (Tip to Ring)	310 ohms @ 20 mA 117 ohms @ 100 mA



FXS Modules

Number of FXS ports	4	
FXS AC Impedance (in audio band)	Off-Hook	600 ohms or TBR21 complex impedance
	Return Loss	>30 dB
FXS DC Feed	Open Loop Voltage	48V
	Constant Loop Current	20 mA
	Max Loop Length	4kft
FXS Ringer Equivalence Number Supported	REN	1



Development

PIKA has assembled a PC-like development environment on the WARP Appliance that is simple to use while remaining flexible enough for you to add value. WARP's Linux-based OS (Debian) provides for an active and vast open source community to leverage. Tools, utilities and applications are all openly available in a binary format to aid in delivering your overall solution. WARP's Package Management System (PMS) will make the installation, upgrade, and removal of these packages simple, both during your development process as well as after deployment. A pre-installed set of components is included to avoid interoperability issues. A fail-safe mode has been added for reliability. Further easing the development exercise is the PIKA provided DAHDI interface to the telephony modules. This DAHDI interface will provide for a smooth integration with Asterisk and serves to maintain your development investment on other DAHDI based platforms. Finally, you can look to PIKA to provide popular 3rd party binary packages such as Asterisk and FreePBX as building blocks of your solution.

Software

Pre-loaded with Linux OS, drivers and tools	Debian-based
Package Management	Yes
SSH (remote access)	Yes (openssh)
Database	Yes (MySQL)
Webserver	Yes (Httpd)
Common Tools	Yes (PHP, NTP, DHCP, TFTP, VLAN, DNS, and more)
Asterisk	Yes (Asterisk 1.8)
FreePBX	Yes
Additional software packages available	PIKA repository and Debian repository

Technical Specifications

Physical Properties

Dimensions (Metric)	234mm W x 169mm D x 55mm H
Dimensions (Imperial)	9.25" W x 6.65" D x 2.18"H

Power Requirements

Input Voltage	AC 110V-240V (50-60 Hz)
Max Input Power	25W

Environment Requirements

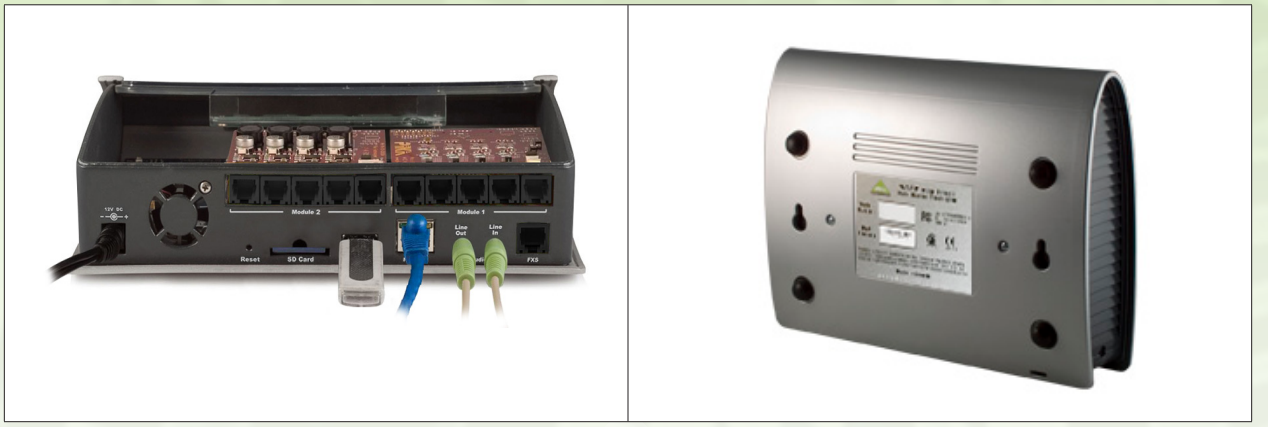
Operating Temperature	0 °C to +40 °C
Storage Temperature	-20 °C to +85 °C
Humidity, Non-condensing	5% to 95%
Mean Time Between Failure (MTBF)	Base board with no modules = 30.6 years Base board with 2 modules (FXO/FXS) = 19.1 years Power Supply = 20.44 years

Telephony Interfaces

Standard station ports	1 FXS
Expansion Modules	2
Expansion Module Types	4 FXS / station (+PFT), 4 FXO / trunk (+PFT), 2-port / 4-channel BRI, 4-port / 8-channel BRI, 2-port GSM

Regulatory Approvals

North American telecoms and safety	FCC/DOC/UL/CSA
European Union	CE
RoHS Compliant	RoHS 6 Compliant
Others upon request	



About PIKA Technologies Inc.

Since 1987, PIKA Technologies has created, sold and supported products that enable global telephony, fax and communications solutions. PIKA's comprehensive range of offerings includes media gateways, hosted applications, end-user applications, appliances, software, board-level products and SDKs.

With expertise in both IT and voice, PIKA creates solutions that are chosen by leading developers, system integrators and businesses worldwide. PIKA products support legacy and emerging telephony models and help to bridge the path from TDM to VoIP and services in the cloud.

PIKA maintains its renowned customer service by selling and supporting its products directly to customers as well as through a network of trusted distributors. PIKA is also responsive to fulfilling non-standard customer requirements and frequently integrates customer feedback into its standard products.

The company has maintained a solid financial foundation for more than two decades. With customers in more than 35 countries, PIKA is headquartered in Ottawa, Canada, and has ranked in the Branham300 – an authoritative ranking of successful Canadian high-tech firms – for 10 consecutive years.

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February 2012

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