

μWARP

Open Source



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Does your application need wire speed network processing to handle a lot of data quickly? Do you need to deliver this in a cost-effective device with a small dongle-like form factor?

PIKA has developed the μWARP™ Open Source, a proprietary custom development platform for packet-based solutions.

PIKA is currently utilizing this platform for their μFirewall and μIPBX solutions but there are unlimited custom and OEM opportunities. μWARP™ Open Source, is a complete platform including a power supply and extensive approvals. It is based on a versatile network processor with 2 ethernet ports. The development framework is based on Open Wrt Linux distribution including PIKA custom defined templates to jumpstart your development.

The following development templates are available, however, talk to PIKA about other custom applications:

- SIP Proxy
- SIP to SIP TLS Proxy
- Generic Data Proxy
- Smart Redirect (SIP)
- Open VPN
- QoS Traffic Shaper
- Generic Asterisk
- Content Filtering
- Data Firewall
- SLA Reporter
- Gateway to TOR Network
- Smart Access Point with VPN



Hardware Specifications

- Integrated MIPS 24K 32-bit processor operating at 400 MHz
- 32MB of DDR memory supporting up to 400 Mbps transfers
- Integrated Ethernet switch with one 10/100 Ethernet LAN port and one WAN port
- One USB Host Port
- Ethernet LEDs and status LEDs
- Reset button
- Unit dimensions: 98mm x 38mm x 27mm (~3.8" x 1.5" x 1.1")
- Box dimensions: 250mm x 170mm x 60mm (~9.75" x 6.75" x 2.4")
- External power supply with USB type A plug (AC 110-240V, 50-60Hz)
- Power consumption: 4W
- Operating temperature: 0°C to +45°C
- Storage temperature: -20°C to +85°C
- Humidity, non-condensing: 5% - 95%

Development Environment

- Virtual Machine based – no need to customize your development system and includes support for MacOS, Linux, and Windows (VMWare required)
- Based on OpenWrt “Barrier Breaker” or later
- Custom templates to jump-start your development
- USB/network flashing with safe recovery – no need for JTAG, no fear of “bricked box” problem

COMPETITIVE COMPARISON - APPLICATIONS

FEATURE	μWARP	RASPBERRY PI “B”
VoIP Firewall	✓	✗
Home/SOHO Firewall	✓	✗
VPN/Encryption Gateway	✓	✗
Asterisk Server	✓	✓
Content Filtering Device	✓	✗
Media Server	✗	✓
Mini Session Border Controller (SBC)	✓	✗
SLA Measuring Device	✓	✗
Transparent SIP Redundancy Device	✓	✗
SIP Proxy Server	✓	✗
Generic Routing/Bridging Device	✓	✗
QoS Device	✓	✗

COMPETITIVE COMPARISON - HARDWARE

FEATURE	μWARP	RASPBERRY PI “B”
CPU ARCHITECTURE	MIPS 24K 32-bit	ARM
CPU SPEED	400MHz	700MHz
MMU	Yes	Yes
DATA CACHE	32k	32k
INSTRUCTION CACHE	64k	64k
RAM	32MB (optionally up to 64MB)	512MB
BOOT MEDIA	8MB Internal Flash (16MB optional)	SD (not Included)
ETHERNET	2 x 10/100Mbps	1 x 10/100Mbps
miniCPi	Custom Design	Not Available
HDMI	Not Available	1 x HDMI 1.4
AUDIO OUT	Optional	3.5 mm jack, HDMI, I ² S audio
UART	1 x High Speed UART	1 x High Speed UART
VLAN HARDWARE SUPPORT	Yes	Not Available
DEDICATED NETWORK PROCESSOR	Yes	Not Available
PROGRAMMABLE LEDS (GPIO)	Yes	Optional
WATCHDOG	Yes	Yes
POWER SUPPLY	5V Included	Optional
CASE	Included	Optional
APPROVALS	Full Set of Approvals	PCB Only
SUPPORT	PIKA Support	Internet Community
OPERATING SYSTEM	uClinux (true embedded OS)	Debian GNU/Linux, Raspbian OS, Fedora, Arch Linux ARM, RISC OS, FreeBSD, Plan 9
DEVELOPMENT ENVIRONMENT	OpenWrt	Not Applicable
BOOT LOADER	U-Boot	U-Boot