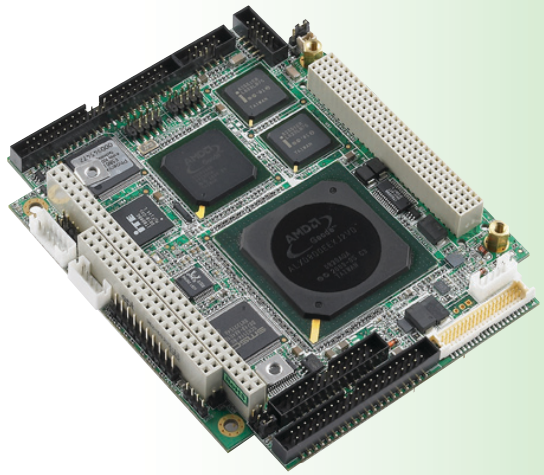
XipLink

XS-Specialty Product



XA - Appliances

XO - Options

XS - Specialty Product

XE - Embedded XipOS

XS-104
Single Board Computer

Optimizer on a Single Board Computer
Fast hardware integration in modular systems

The XS-104 is a full function wireless optimizer on a single board computer (SBC) based on the PC-104 hardware form-factor. It comes pre-loaded with the latest XipLink Optimization Software (XipOS) for rapid integration of wireless optimization into modular communication systems.

The XS-104 allows system integrators to quickly add CPU and memory with the features of XipOS to any modular communication system. Delivering 8 Mbps of optimized capacity, typical users gain 2X to 10X the existing bandwidth for all TCP applications.

Some examples of XS-104 integration include:

- Man-portable systems for secure and un-secure users
- Aviation modems eliminates recertification
- Voice / Data optimization systems
- Base Station Radio subsystems

In terrestrial networks, the XS-104 can be quickly integrated in-line between base station radios and back-haul radios, delivering increased capacity across these critical links.

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XipOS Features

SCPS-TP Protocol Acceleration
- Native SCPS-TP
- Interoperable PEP (I-PEP) Compliant
- SNACK / Ack Frequency Reduction

Advanced Data Compression
- XipOS streaming data compression

Internet Web Optimization
- Object Pre-Fetching / TCP Fast-Start

XipLink Transport Controls (XTC)
- Fixed Rate Control
- Dynamic Rate Control
- Programmable Rate Control
- Basic Rate Control

Operates over any Wireless Network
- MSS / Star / Hub and Spoke / Mesh
- Point to Point and Point-to-Multipoint

On-Board IPSec Encryption option
- AES 128 / 256 bit and SHA 256

Hardware Specifications

- *Length - 96 mm x 115 mm*
  3.78"'x 4.5"
- *Weight - 162 Grams / 57 Ozs.*
- *Operating Temperature*
  -40c to +85c / -40f to +185f
- *8 Mbps and 2000 Sessions*

XipLink™ Maximum Capacity

www.xiplink.com

XS-104 Single Board Computer

XipLink Optimization Software (XipOS)

Man-Portable Tactical Communications Kits

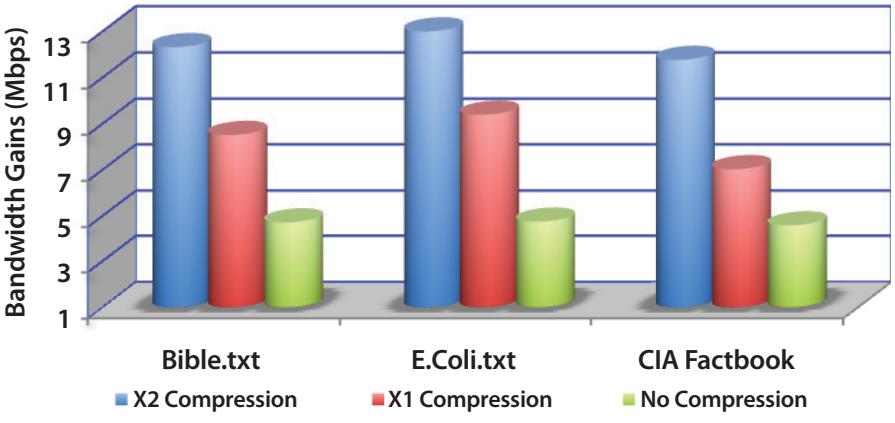
Mobile Routers of all types
Aviation
Maritime
Vehicular

XipLink Optimization Software (XipOS) delivers maximum bandwidth across wireless communication links using protocol acceleration, streaming data compression and Internet optimizations packaged on a pre-loaded PC-104 single board computer for rapid hardware integration.

XipOS is based on extensions to the industry standard Space Communications Protocol Specification (SCPS), a set of recommendations that accommodate proprietary vendor techniques for increasing link capacity while ensuring interoperability and transparent optimization for all TCP applications.

Remote user sessions are transparently split, or proxied, with new sessions opened across the link using protocol acceleration and streaming data compression to overcome common wireless issues:

Varying latency (delay) because of long links and users roaming
High bit error rates because of constantly changing RF link conditions
Link asymmetry because of smaller, lower power remote radios



Bandwidth Gain Results - VSAT-TDMA Network
Download File Transfer - 5.0 Mbps Downlink / 2.5 Mbps Uplink

XipLink Optimization Software (XipOS)

Easy to Deploy and Manage

- Completely transparent to users
- Layer 2 - Bridge installation (typical remote)
- Layer 3 IP Router installation (typical hub site)
  - RIP / OSPF/ BGP routing protocols

Optimize any Wireless Network

- MSS Networks - Swift and BGAN
- VSAT - Star Topologies
- Mesh networks of any size
- Dedicated SCPC links
- Terrestrial Point to Point links
- Terrestrial Point to Multi-Point links

SCPS-TP TCP Protocol Acceleration

- Fast-Start algorithms
- Acknowledgment Frequency Reduction
- Selective Negative Acknowledgement

Advanced Data Compression

- Proprietary streaming data compression
  - X1 and X2 Modes for efficiency
  - Dynamic Active Resource Management

Internet Optimization

- Web Object Pre-Fetching and TCP Fast Start

XipLink Transport Controls (XTC)

- Fixed Rate Control
- Dynamic Rate Control
- Programmable Rate Control
- Basic Rate Control

Flexibilie Deployment Options

- XA-Appliances - Scalable and Redundant
- XS-Specialty Products
  - XipStick Portable Optimizer
  - XS-104 Single Board Computer
- XE-Embedded XipOS
  - BSD, Linux, Windows devices

XipLink™
Maximum Capacity

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