

VxWorks Board Support Package (BSP) for UEI Platforms

KEY FEATURES & CAPABILITIES

- **Full VxWorks RTOS Support**
Enables deterministic, real-time application development using Wind River VxWorks
- **Comprehensive Peripheral Support**
Includes drivers for:
 - Ethernet ports
 - USB ports
 - Serial console
 - Local storage (eMMC, SSD, M.2)
- **PowerDNA™ I/O Compatibility**
 - Supports all PowerDNA/DNR I/O modules
 - Access via standard **PowerDNA C API**, common across VxWorks, Linux, and Windows, for rapid application development
- **Time-Sensitive Networking (TSN) Support**
 - gPTP and TSN supported on Zynq-based systems with TSN hardware enabled
 - Ideal for synchronized, distributed real-time applications



GENERAL DESCRIPTION

OVERVIEW

The UEI VxWorks Board Support Package (BSP) enables seamless deployment of the Wind River® VxWorks real-time operating system (RTOS) across UEI embedded hardware platforms. Designed for high-reliability, real-time data acquisition and control applications, the BSP provides comprehensive hardware abstraction and integration with UEI's PowerDNA™ architecture.

PLATFORM SUPPORT

Zynq-Based Systems (VxWorks 7 BSP)

- Supported interfaces:
 - Ethernet, USB, Serial console
- Supported storage
 - eMMC and M.2
- Supports all PowerDNA/DNR I/O cards
- Supports all 4 A53 cores in the Zynq CPU
- TSN and gPTP support (hardware dependent)
- **Note:** DisplayPort is not supported

MPC8347-Based Systems (VxWorks 6.9 BSP)

- Supported interfaces:
 - Ethernet, USB, Serial console
 - SSD storage
- Supports all PowerDNA/DNR I/O cards
- Includes Ethernet teaming/bonding for network redundancy

DEVELOPMENT ENVIRONMENT

- Requires **Wind River VxWorks developer license**
- Includes:
 - VxWorks kernel and libraries
 - Build system and toolchain
 - Wind River Workbench IDE
- Development options:
 - **Graphical (Workbench IDE)**
 - **Command-line toolchain**

BSP integration:

- UEI BSP installs into Workbench
- Automatically available during project creation

SYSTEM INTEGRATION NOTES

- UEI systems **do not ship with VxWorks pre-installed**
- BSP installation and OS deployment are performed by the user
- Designed for flexible integration into custom embedded environments

ORDERING INFORMATION

Part Number	Description
UEIPAC VxW BSP	UEIPAC VxWorks board support package (BSP)