Windows 11 Compatibility and Performance Testing Across VersaLogic Unsupported SBCs
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Overview of Windows 11 System Requirements

According to Microsoft's official documentation ([source](#)), Windows 11 requires:

- 1GHz or faster CPU/SoC with 2 or more cores (64-bit only)
- 4GB or more of RAM
- 64GB or more of storage
- UEFI-based BIOS with Secure Boot capability
- TPM 2.0
- Internet connection

Microsoft publishes a list of supported processors, stating that unsupported processors may not receive updates. Despite this, VersaLogic has successfully tested Windows 11 installation on multiple of these unsupported single board computers (SBCs), provided they meet the processor speed, core requirements and RAM.

Driver Support Notes

- Most boards pick up basic drivers through Windows Update.
- Intel TXE driver frequently needs manual installation ([driver package v3.0.0 from VersaLogic's website](#)).
- Generic video drivers sometimes lead to poor graphics performance; newer UEFI-compatible firmware and dedicated drivers improved results.
- Some devices (e.g., PWM controllers) required manual driver installation.

Performance Testing Tools Used

- BurnIn Test (PassMark): Used to verify CPU, RAM, and 2D/3D graphics stability.
- Performance Test: Used for system benchmarking and error detection.

Windows 11 Compatibility – Table

Product	Platform	Win11 Installed	TPM	CPU Cores	RAM	Install Notes Summary	Recommended
BayCat EPM-31-EBP	Baytrail	✅	🔵 TPM 1.2	Dual	4GB	Installed, but performance was slow. Windows Updates functioned, though also slow. Final system entered reset loop.	❌
BayCat EPM-31-ECP	Baytrail	✅	🔵 TPM 1.2	Quad	4GB	Installed successfully. A few drivers missing initially; resolved using VersaLogic driver package v3.0.0.	✅
Lion EPMe-42-ECP	Kaby Lake	✅	✅ TPM 2.0	Dual	4GB	Installed Successfully	✅
Sandcat EPM-39EBK	Baytrail	❌	❌ No	Dual	4GB	Installation blocked: TPM not detected. Likely due to TPM 1.2 or lack of support.	❌
Bengal EPMe-30EBP	Baytrail	⚠️ Error	🔵 TPM 1.2	Dual	4GB	Unknown driver prompt appeared during install. Possibly missing critical driver; installation unsuccessful.	❌
Bengal EPMe-30ECP	Baytrail	✅	🔵 TPM 1.2	Quad	4GB	Installed Successfully	✅
Liger EPM-43-ECP	Kaby Lake	✅	✅ TPM 2.0	Dual	4GB	Installed Successfully	✅
Grizzly ESU-5070	Denverton	✅	✅ TPM 2.0	8–16	128GB	Installed Successfully	✅
Harrier EPU-4011-EDP	Apollo Lake	✅	✅ TPM 2.0	2–4	8GB	Installed Successfully	✅
Owl EPU-4012-EDP	Apollo Lake	✅	✅ TPM 2.0	2–4	8GB	Installed Successfully	✅
Condor EPU-4460-ECP	Skylake	✅	✅ TPM 2.0	Dual	32GB	Installed Successfully	✅
Blackbird EPU-4562	Skylake	✅	✅ TPM 2.0	2–4	32GB	Installed Successfully (System performed well after updates.)	✅
Viper EBX-38-EBP	Baytrail	✅	🔵 TPM 1.2	Dual	4GB	Installed successfully. A few drivers missing initially; resolved using VersaLogic driver package v3.0.0.	✅
Viper EBX-38-ECP	Baytrail	✅	🔵 TPM 1.2	Quad	16GB	Installed Successfully	✅

This table provides a visual table summary of VersaLogic SBCs tested with Windows 11. Color coding helps quickly identify compatibility and success:

- ✅ Green: Fully compatible and successful
- ⚠️ Yellow: Partially successful or error encountered
- ❌ Red: Not compatible or failed installation
- 🔵 Blue: TPM 1.2 recognized as compliant by installer

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Conclusions

Windows unsupported CPU's can run Windows 11 when the system meets the OS's minimum requirements, particularly in terms of RAM, processor architecture, and UEFI+TPM support. While not officially supported by Microsoft, several boards performed adequately with minor adjustments.

For the most stable results, it is recommended to:

- Use UEFI BIOS with Secure Boot enabled.
- Ensure TPM 2.0 is available and enabled.
- Use the recommended 4GB+ RAM and compatible storage.
- Refer to VersaLogic's Windows 10 driver packages online at www.versalogic.com/all-products/ for your specific board for any missing device support.