Industrial IoT Vulnerability Audit Report

1. Executive Summary

This report provides an overview of the vulnerabilities identified during the Industrial IoT (IIoT) audit conducted at [Facility Name]. The findings highlight security gaps, their potential impact, and recommended remediation steps.

2. Scope

- **Location:** [Facility Address]
- **Assessment Period:** [Start Date] â€“ [End Date]
- **Environment:** Factory Floor Devices, Network Gateways, PLCs, Human-Machine Interfaces

3. Summary of Findings

#	Vulnerability	Risk Level	Affected Systems	Status
1	Outdated Firmware	High	IoT Sensor Nodes	Unresolved
2	Default Credentials	Critical	Gateway Devices	In Progress
3	Unencrypted Communication	Medium	PLCs, HMIs	Unresolved
4	Lack of Network Segmentation	High	OT Network	Unresolved

4. Detailed Observations

4.1 Outdated Firmware

- Devices were running firmware versions with known vulnerabilities (e.g., CVE-XXXX-YYYY).
- No automated update mechanism in place.

4.2 Default Credentials

- Multiple gateway devices detected using factory-set default usernames and passwords.
- Potential for unauthorized access and lateral movement inside the network.

4.3 Unencrypted Communication

- Several devices communicate over unencrypted channels (Modbus TCP, HTTP).
- Risk of data interception and manipulation.

4.4 Lack of Network Segmentation

- All devices on the same flat network, increasing attack surface.
- No logical segmentation between IT and OT environments.

5. Recommendations

- Establish a patch and firmware management policy for IIoT devices.
- Change all default credentials and enforce password management practices.
- Enable encrypted protocols for all device communications.
- Implement network segmentation between IT, OT, and IIoT device networks.
- Perform regular vulnerability assessments and monitoring.

6. Conclusion

Addressing the above vulnerabilities will reduce risks to the facilityâ€™s IIoT infrastructure and improve overall

cybersecurity posture.

7. Appendix

- Test Cases and Tools Used
- Full Vulnerability List
- References

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