

ER: 01 pre-lab checklist for CCTV and IP cameras

Before you book an STQC recognised lab. Item numbers follow STQC's procedure for CCTV testing; the lab and STQC make the final call.

- ☐ Freeze the firmware version and record its hash; each version you ship is tested as its own series.
- ☐ Serial debug interfaces such as USB and UART disabled, or protected by a complex password (1.1).
- ☐ Keys and certificates unique to each device (1.2).
- ☐ JTAG and SWD disabled or locked (1.3).
- ☐ A TEE, secure element or TPM, with keys and sensitive data in secure storage (1.4, 1.5).
- ☐ Tamper resistance or detection, and the chip vendor's IP protection turned on (1.6, 1.7).
- ☐ The boot image signature checked before loading (1.8).
- ☐ A cryptographically secure random number generator (1.9).
- ☐ ASLR and DEP enabled (2.1).
- ☐ TLS for data in transit, with server certificates validated and pinned (2.2, 2.3, 2.7).
- ☐ Banned C functions replaced (2.4).
- ☐ An SBOM of third-party components, their versions and published vulnerabilities (2.5).
- ☐ All code, third-party binaries included, reviewed for hard-coded credentials and backdoors (2.6).
- ☐ Verbose debug symbols removed (2.8).
- ☐ Updates safe from time-of-check to time-of-use attacks, signed, with no downgrade, and automatic on a schedule (2.9 to 2.12).
- ☐ Wireless links mutually authenticated and encrypted (3.1, 3.2).
- ☐ Components from trusted sources, with supply chain risk managed (3.3, 3.4, 4.2, 4.4).
- ☐ No proprietary network protocols (3.5).
- ☐ Design detail down to the PCBA and SoC, and up-to-date malware detection in code acceptance (4.1, 4.3).
- ☐ A statement of compliance signed by a director with a DIN, and samples or engineering boards with access probes ready for the lab.

Sources

- STQC, IoTSCS P01 Procedure for CCTV Testing, Evaluation and Certification:
<https://www.stqc.gov.in/sites/default/files/2024-05/IoTSCS-P01-Procedure-for-CCTV-Testing-Evaluation-and-Certification.pdf>
- BIS, Guidelines for implementation of Essential Requirement(s) for Security of CCTV:
https://www.crsbis.in/BIS/app_srv/tdc/gl/docs/CCTV_Implementation_guidelines.pdf

A guide to where the evidence is, not legal advice or certification. Your lab, notified body or regulator makes the final call.
magdox.io/blog/india-device-security-rules-map/