

Rev	ECO #	Date	Revision Description
A	0040060922	16 Nov 2022	Initial release

APPLE SMART FACTORY LINE QUALIFICATION METHODOLOGY

080-04267

1. Purpose	3
2. Scope	3
3. Responsibilities	3
4. References	3
5. Methodology	4

1. Purpose

The purpose of this documentation is to document the methodology for Apple FPC and FPCA SMART Factory line qualification.

This is aligned to the latest revision of Apple SMART Factory process requirements 080-03843 and Apple SMART Factory Roadmap.

The SMART Factory line qualification is a additional requirement to Apple FPC line qualification (080-02647) and FPCA line qualification requirements (080-03672), this is to enable flex supplier on the track for digitalization transition which is the future of SMART manufacturing.

2. Scope

This document should apply for FPC and FPCA SMART Factory line qualification.

3. Responsibilities

Flex vendor is responsible to make sure selected APN's NPI lines of Apple products are qualified & approved prior to ramp up.

Flex vendor is responsible to perform pre-audit to ensure SMART Factory requirements are in place before official line qualification.

Apple DRI is responsible to approve the lines per Apple SMART Factory process requirements 080-03843.

4. References

080-03843 Apple SMART Factory Process Requirements

080-03809 Apple FPC & FPCA Smart Factory Overall Requirements

5. Methodology

Physical line audit and system audit both are recommended for SMART Factory line qualification. Refer to 080-03843 for detailed requirements.

5.1 Line audit

The physical line audit is to focus on hardware/equipment in production floor, including followings but not limited to,

- Automation
- Traceability system : barcode scanning system
- Machine connection and IOT (Internet Of Things)

5.2 System audit

1)The system audit is to focus on different software/platform being used in flex vendor factory to manage following 6 SMART Factory features . Flex vendor should open software/platform directly to prove followings can be done properly item by item,

- Traceability
- MES(Manufacturing Execution System)
- Tooling & Fixture control
- Machine management
- Quality Intelligence
- Visualization

2)Randomly check. Apple DRI will pickup followings from the latest build to check if the system works well for above 6 features.

- minimum 20x flex S/N
- minimum 5x different fixture S/N,
- minimum 5x different machines
- minimum 5x particular processes (35 items of each process per 080-0383)

3)The system audit can be done virtually if Apple DRI is not able to participate onsite.

4)Flex vendor should NOT use any prepared reports / snapshots as evidence of SMART Factory line qualification to Apple DRI.