



Christie Digital Systems Canada Inc.	Page 14 of 21	
Supplier Quality Standard	SOP No: 010-101164-01	Rev: 09
	Department: Global Supplier Quality	

- b. An Acceptance Test Procedure (ATP) shall be provided to and approved by Christie prior to production launch.
- c. Evidence that the product meets all requirements in the Module Specification shall be provided prior to production approval.

Christie Digital Systems Canada Inc.	Page 15 of 21	
Supplier Quality Standard	SOP No: 010-101164-01	Rev: 09
	Department: Global Supplier Quality	

3.6.3 Measurement / Inspection Requirements for Mechanical Parts (not applicable to OTS (off-the-shelf) parts)

	FAI requirements		
	Prototyping and Engineering approval (EPR)	Production (PPR)	Supporting documents
<u>Dimensional including drawing notes</u>	Minimum (1) part measured as per drawing	Minimum (1) part measured as per drawing	Marked-up drawing Dimensional inspection report with tolerances and pass and fail or reject/accept result including Notes
<u>Material and functional</u>	As requested	<u>To be submitted with FAI</u>	Raw Material Certification or CofC (Certificate of Compliance), at the discretion of GSQ.ROHS & REACH Certificate If applicable, functional testing records with pass and fail results. Secondary processes to be reported on FAI (coatings, painting etc.) Note: Certifications and quality reports provided to CDS may vary in content and complexity. Acceptance will be at the discretion of GSQ.
<u>Appearance (where specified)</u>	As requested	Colour samples/ chips on the same substrate as the part shall be provided by supplier for appearance / colour match approval when requested	Paint material data sheet Samples shall be individually labeled with: Supplier name; Paint code and paint manufacturer; Paint colour, Paint Texture, Project name; Approved by Christie _____
<u>Process control</u>	As requested	Process Control Requirement shall be agreed with GSQ prior	Process flow chart , or process control plan, or job traveler , and testing plan

Christie Digital Systems Canada Inc.	Page 16 of 21	
Supplier Quality Standard	SOP No: 010-101164-01	Rev: 09
	Department: Global Supplier Quality	

		to first production run for critical features	
<u>Safety Critical Part</u>	as requested	Certificate of compliance /UL file	Part/ packaging label Certificate of compliance

3.6.4 Measurement / Inspection Requirements for Electrical / Electronic Parts

1. Designed by Christie- Typically PCB assemblies, harnesses;
2. Supplier Custom Design for Christie- Typically power supplies, ballasts, board assemblies;
3. OTS (Off the Shelf)- Typically PCB assemblies, harnesses, electronic components, power supplies, motors, fans, fluid movers (e.g. compressors, pumps)

	REQUIREMENT	1- Designed by Christie	2- Supplier Custom Design for Christie	3- OTS
GENERAL	All Christie assemblies shall be built and repaired according to IPC-7711, IPC-7721, IPC/WHMA-A-620, IPC-A-610 CLASS 2 FOR HIGH PERFORMANCE ELECTRONIC PRODUCTS (MOST RECENT ISSUE) guidelines unless otherwise specified in the assembly/module spec.	X	X	IPC Class 2 min.
Pre-prototype Reviews and planning to be done between Christie and Supplier as required	Design review DFM and DFT Performance and reliability test scope planning Safety critical items review	X	X	

Christie Digital Systems Canada Inc.	Page 17 of 21	
Supplier Quality Standard	SOP No: 010-101164-01	Rev: 09
	Department: Global Supplier Quality	

PROTOTYPING AND ENGINEERING APPROVAL – The following data information to be provided as required	Visual inspection		X	X	
	DFM/DFT review for manufacturability and testability and reporting problems		X	X	
	Design validation test results			X	
	CRD (Comprehensive RoHs Declaration), REACH, WEEE		X	X	X
	Harness continuity/short, Signal Integrity crimp height, Hi-pot, dimensional measurement, pull test results		X	X	Tested to assure compliance
	Special handling procedures if required		X	X	X
PRODUCTION 1ST ARTICLE The following data to be provided as required	ICT and functional test plan and coverage data		X	X	
	Harnesses: continuity/short, Signal Integrity crimp height, Hi-pot, dimensional measurement, pull test results		X	X	
	Regulatory Agency Approval Data (such as UL, CB, etc. reports and certificates) as required			X	X
ONGOING PRODUCTION- The following data to be available as required.	Boards, Ballasts, Power Supplies	- Production process yield data - ATP: Special instructions as agreed	X	X	
		FP, ICT & FCT test results based on agreement between Christie and supplier	X	X	
	Harness	Continuity/short, Signal Integrity, Hi-pot Sampling: Pull test; crimp height; strip ATP: Special instructions as agreed	X	X	
RMA	Supplier to have repair analysis database of all rejected material and provide feedback upon request		X	X	When Requested

Christie Digital Systems Canada Inc.	Page 18 of 21	
Supplier Quality Standard	SOP No: 010-101164-01	Rev: 09
	Department: Global Supplier Quality	

3.7 Packaging

- a. Packaging to assure product integrity, and cleanliness during transportation.
- b. Packaging shall be sufficient to meet the ASTM D4169-16 “Standard Practice for Performance Testing of Shipping Containers and Systems”. It also should meet the similar ISTA “International Safe Transit Association” standard for shipping containers. The containers must be able to meet the specified drop tests and vibration requirements. It is recommended but not mandatory to test all packages to this standard however if there is any damage during shipping, this standard will be used to determine if the packaging was sufficient.
- c. All goods, wrappers, and containers shall be packed, marked and labeled as required by federal, provincial and municipal laws and regulations for the protection and safety of persons and property.
- d. Supplier should follow the requirements outlined in spec 010-101136-01, CDS Guideline For Packaging for packaging design/marketing and material selection. As a general rule, material used for packaging should be chosen from environmental friendly recycling materials and supplier should avoid any excess packaging if not mandated.
- e. Goods must be boxed, packed or crated so as to qualify for lowest freight or transportation rates, and to prevent damage to the goods during transit.
- f. ESD-sensitive material to be packaged in ESD safe protective material/containers.
- g. Large PCB’s to be delivered in slotted shipping containers/trays. Smaller boards can be bulk packed provided they are adequately protected.
- h. Special packaging for custom parts/assemblies specified on drawings is subject to Christie’s approval.

3.8 Christie’s property including intellectual property at supplier

- a. Supplier shall have a documented procedure to identify, verify, protect and safeguard Christie property for use or incorporation into the product.
- b. Christie owned tooling (includes: molds, fixtures, gauges, testing equipment) or other property (including intellectual property) shall be under supplier’s control.

Christie Digital Systems Canada Inc.	Page 19 of 21	
Supplier Quality Standard	SOP No: 010-101164-01	Rev: 09
	Department: Global Supplier Quality	

- c. Any modifications or improvements to Christie owned tooling must be approved by Christie GSQ prior to changes.
- d. Any damage or defect on Christie owned tooling or other property shall be communicated to Christie within 24h after preliminary investigation and provide interim action plan associated.

3.9 Control of monitoring and measuring devices

- a. A Calibration Control Program and Preventative maintenance must be in place for control of monitoring on measuring devices/gauges/ testing equipment/fixtures. Measuring equipment calibration shall be traceable to national or international standards. Any Christie designed test equipment shall be on supplier's Calibration Control Program.
- b. Calibration, inspection and maintenance records shall be maintained. Calibration status shall be defined on gauges, fixtures and /or instruments.

3.10 Nonconforming Product Control

- a. Supplier shall have an established system of non-conformance control to prevent defective product from being shipped to Christie. If suspect or non-conforming parts have been shipped, GSQ shall be notified immediately.
- b. Any request to use non-conforming material or material deviating from current officially released drawing must be through a completed Supplier Deviation and Change form. Form can be provided by GSQ. Approval from Christie in writing is required before shipping.
- c. Rework/sort activities include:
 - i. Local third party may be hired by Christie Supply Coordinator on behalf of supplier for urgent containment action on nonconforming products received from supplier in Christie stock.
 - ii. Supplier will be notified prior to rework /containment action, and material disposition after sort, and costs to be agreed.
- d. Returned parts:
 - i. Supplier shall maintain records of parts returned from Christie. Records shall include quantity of parts returned, reference to RMA or some other means of tracking return, serial/lot/batch number (if applicable), reason for return, disposition of parts and details on any rework/repair completed on the parts. Records shall be available for supply to Christie upon request.

Christie Digital Systems Canada Inc.	Page 20 of 21	
Supplier Quality Standard	SOP No: 010-101164-01	Rev: 09
	Department: Global Supplier Quality	

- ii. Any rework or repair done to a part must be completed in accordance with documented and approved instructions. Approved instructions shall be available for supply to Christie upon request.
- iii. Any processing on a returned part which is done outside of approved processes, or does not bring the part into compliance with specifications will require approval from Christie prior to shipping the parts to Christie.

3.11 Supplier Corrective Action Requests (SCARs)

- a. Non-conformances conveyed by Christie via Supplier Corrective Action Request (SCAR) require :
 - i. Interim action plan for containment and effective date (e.g. replacement timing/rework/ sort at supplier);
 - ii. Root cause analysis shall be provided as per SCAR form;
 - iii. Final solution plan shall include preventive action plan to prevent causes from recurrence and implementation date. Corrective action shall address the actual root cause(s);
 - iv. Verification plan shall include method of verification that the actions taken were effective (E.g. FAI/ dimensional measurement/inspection record/ capability study etc.).
- b. Supplier shall provide supporting documents with the SCAR response.
- c. Records of the SCARs and supportive documents shall be archived as specified by this standard.

3.12 Christie Scorecards

- a. Suppliers may be selected to receive a periodic scorecard. Scorecards are used to convey feedback on the supplier's performance and should be used as a tool for continual improvement.



Christie Digital Systems Canada Inc.	Page 21 of 21	
Supplier Quality Standard	SOP No: 010-101164-01	Rev: 09
	Department: Global Supplier Quality	

3.13 SUPPLIER ACKNOWLEDGEMENT SHEET

(To be returned to Christie Global Supplier Quality)

The undersigned certifies on behalf of _____ (the "Supplier") that the Supplier acknowledges, understands and will comply with the Quality Requirements set forth on Christie's Supplier Quality Standards Document 00-101164-01.

Supplier Name _____

Name (Please Print) _____

Signed _____

Title _____
(Quality Manager or Authorized Signing Officer)

Date _____

Request for deviation to the above document- to be listed below and please attach details if required:

-
-
-
-

Christie Agreement (Name Print and Signature, Title and Date):
