

St-12 Lift ICT Standard

Version 2021.1.0 - Approved



Please Read

IMPORTANT COMPLIANCE REQUIREMENTS

Note: The following instruction applies to all documents in this library.

1. This is a controlled document and is reviewed every two years. The last review was carried out in March 2021. If you are viewing this document after March 2023, you will need to contact the sender to confirm you are working from the latest revision.
2. It is the responsibility of the contractor/vendor to read and adhere to the procedures, processes and guidelines set out in the following document when quoting for or carrying out work for the ACT Public Health System Sites.
3. If you have questions or require clarification of any of the procedures, processes or guidelines in the following document please contact the sender of the document in writing with your questions so that a formal response can be provided. If any specific requirement is unclear, it is expected that clarification will be sought from the ACT Public Health System's Digital Solutions Division (DSD) Critical Systems Infrastructure (CSI) Hub - Information Communications and Technology (ICT) architect(s), rather than a decision made and a design implemented and based on unclarified assumptions.
4. These standards are applicable to ALL ACT Public Health System Sites or any work funded by ACT Health Directorate (ACTHD) (e.g. Calvary, ACTHD provided NGO sites) unless specifically exempt.
5. All Greenfield ACT Public Health System Sites are expected to be fully compliant with all appropriate standards.
6. Brownfield ACT Public Health System Sites undergoing refurbishment should be fully compliant unless an exemption is provided by DSD's CSI Hub.
7. In the event of any design non-compliance issues, a Departures document must be completed and submitted to DSD's CSI Hub. These issues should be resolved, in consultation with DSD's CSI Hub, as soon as possible within the project process and explicitly prior to site handover.
8. While some test cases have been cited within these documents as examples, the list is not exhaustive, and all appropriate test procedures shall be formulated, approved prior to testing and testing shall be performed by the client system administrators before full acceptance can be signed off by the Senior Director CSI Hub.

IMPORTANT:

Any departure from the standard, whether intentional or in error shall require a completed Departures Document to be submitted to DSD's CSI Hub for approval. Any non-compliant designs without a pre-approved Departures Document by completion of the project or a nominated milestone or gateway, will require remediation by the Head Contractor at the Head Contractors cost.

Document Control

Version	Summary of Changes	Author	Date
2019.0.1	Initial Draft	Raj Mohan	22/01/19
2019.0.2	edits	David Richards	09/04/19
2019.1.0	Approved for release	David Richards	09/04/19
2020.1.0	Updated release	David Richards	20/03/20
2019.1.0	Review and approve for release as 1.0	Mark Moerman	23/03/20
2020.1.1	Updated Figure 1, text and removed security cabling specs	Raj Mohan	20/08/20
2020.1.2	Priority call functionality update	Raj Mohan	23/10/20
2020.1.3	Review make doc consistent with PO's Comments	Alkesh Hemrajani	16/12/20
2021.0.1	Updated security cable and images	Raj Mohan	19/03/21
2021.0.1	Updated terminology	Mitchell Jamieson-Curran	30/03/21
2021.1.0	Rechecked document prior to CIO final review and approval by Technology Steering Committee for release	Alkesh Hemrajani & Mark Moerman	31/03/21
2021.1.0	Rechecked document prior to approval by Technology Steering Committee for release	Alkesh Hemrajani & Mark Moerman	07/04/21

Document Default Review Cycle

Date	Version	Comments
September 2019	2020.1.0	Original release date
March 2021	2021.1.0	Next review March 2023

Document Owner

Name	Location
Senior Director, CSI Hub	CSI Hub, Technology Operations DSD ACTHD

Document References

Document	Version	Location
ICT Bible	1.0	J:\Specifications and Standards\10. ICT Bible

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1. Introduction

This document is a SPECIFICATION, and as such gives details on specific requirements to be used for Installation of ICT in Lifts. It forms part of a broader range of the ACT Public Health System's ICT specifications and standards.

This forms part of a suite of documents that describe ICT specifications for the various ACT Public Health System's Business and Infrastructure support systems. It provides the applicable requirements and specifications for implementing ICT Infrastructure (Security access, Closed Circuit Television (CCTV) monitoring, Wireless coverage and more sophisticated operational capabilities) in green-field and refurbished brown-field sites Lifts.

2. Disclaimer

The following document provides ONLY ICT specifications and requirements for the Lift, and is by no means intended to cover all the comprehensive business requirements for the entire Lift system. Additional business and user requirements will be presented in project specific documentation such as Business Requirements, Solution and Detailed designs.

3. Vendor Requirements

The head contractors, vendors or their representatives must review these specifications and provide a "Departures document" for any non-compliance with these specifications. The Departures document must be provided prior to commencing any work including design, implementation, configuration, and testing. Vendor must provide a high-level vendor design (HLVD) as a return brief of requirements to establish that all scope is adequately covered.

4. Executive Summary

Lifts are now digitally addressable, controlled and operated by dedicated computers with software interfaces.

These capabilities can be further enhanced by the inclusion and integration of general swipe access cards for priority requests. Additional security and pervasive access to the wireless Local Area Network (LAN) and telephony or TRN (Territory Radio Network) DAS (Distributed Antenna System) completes the provisions. Providing these technologies, allows these and future enhancements to integrate with other existing workflow systems and be capable of future expansion.

5. Infrastructure Requirements

5.1. Lift Car

This infrastructure is required to connect the lift car with Ethernet cables to facilitate Internet Protocol (IP) services, CCTV, Wireless Access Point (WAP), Distributed Antenna System (DAS) and provide redundancy service. The standard flex cable will carry services for the emergency system for Mobile Communications (GSM) phone, and an ID Card scanner. See Figure 1 for architecture of the cabling If the Consolidation Point (CP) is not used.

- 5.1.1. All lift cars shall be serviced by two (2) Cat7 Shielded Twisted Pair UTP Siemens travelling flex lift cable.
- 5.1.2. Each travelling flex lift cable shall contain four (4) Cat7 cables.
- 5.1.3. Each Cat7 cable shall terminate on a shielded Cat7 data port in an area of the lift car roof which is accessible and serviceable in the future.
- 5.1.4. Termination outlet mechanisms shall always be fitted to a purpose manufactured RJ45 face plate or box-type housing.
- 5.1.5. All travelling flex cables shall be terminated to a Cat7 Consolidation Point (CP) located on the floor where the structured cabling exits the lift shaft.
- 5.1.6. Structured cabling from the Lift Consolidation Point to the nearest communications room shall match the incumbent structured cabling solution, unless specified otherwise by the CSI Solutions Architect.
- 5.1.7. In accordance with Australian standards, the structured cabling distance between the communications room and the CP shall be no less than 15 metres.

5.2. Landing Call Station

An in-car card reader is connected to an iStar (to be installed in a secure room closest to the Lift control room and connected directly (i.e., not patched)). The iStar is in turn connected to Lift controller via multiple pair cable, comprising of:

- 5.2.1. The number of control pairs required is a calculation related to the number of lifts and floors. E.g., Cable pairs required = Number of lifts x number of floors+10% contingency.
- 5.2.2. These control pairs shall enable interaction of the access control system with the lift car controllers via switching of dry contacts.
- 5.2.3. The iStar location shall be in the vicinity of the lift motor room due to the quantity of “dry contact” style connections that are required.
- 5.2.4. The iStar shall be located within the nearest communications room.
- 5.2.5. Priority calling stations shall be provided as card readers on each floor. The card readers shall be terminated to the iStar mentioned above using shielded 6 core security cable connections.

5.3. Priority Calling Functionality

Priority calling stations are provided as card readers on each floor. The card readers are then terminated back to the iStar mentioned above using shielded 6 core security cable connections.

- 5.3.1. Specific, identified staff shall be able to call lift cars using the standard **staff ID** pass.
- 5.3.2. Calling a lift car using a **Staff ID** pass shall allocate a lift on priority and shall **cancel** any current calls pending for the chosen lift.
- 5.3.3. The lift controller shall call the designated lift to the level the **staff ID** was placed.
- 5.3.4. A designated lift shall be the nearest lift that is on a priority request.
- 5.3.5. Once a request is placed a display shall appear on all floors for that lift displaying a “Code blue” alarm on a programable display panel visible within the lift car and above the lift doors on all floors.
- 5.3.6. An audio message shall be played within the designated lift car to inform patients/public that this lift is on priority calling e.g. For code blue the message shall be be “**This lift is on Emergency Service, please exit the lift at the next floor**”.
- 5.3.7. The lift shall arrive at the requesting landing and lock doors open and in place for 45 seconds to evacuate the car.
- 5.3.8. The internal car operating panel buttons shall be locked out during an emergency call.
- 5.3.9. The designated car shall not be called again until a **staff ID** on the card reader installed inside the car operating panel has been made. **No swipe, no access.**
- 5.3.10. Once a staff ID has been presented to the reader within the designated lift car, a call shall be permitted, the lift doors shall close, and travel shall commence.
- 5.3.11. Upon arrival at the requested floor the team departs the lift, and it shall return to normal service.

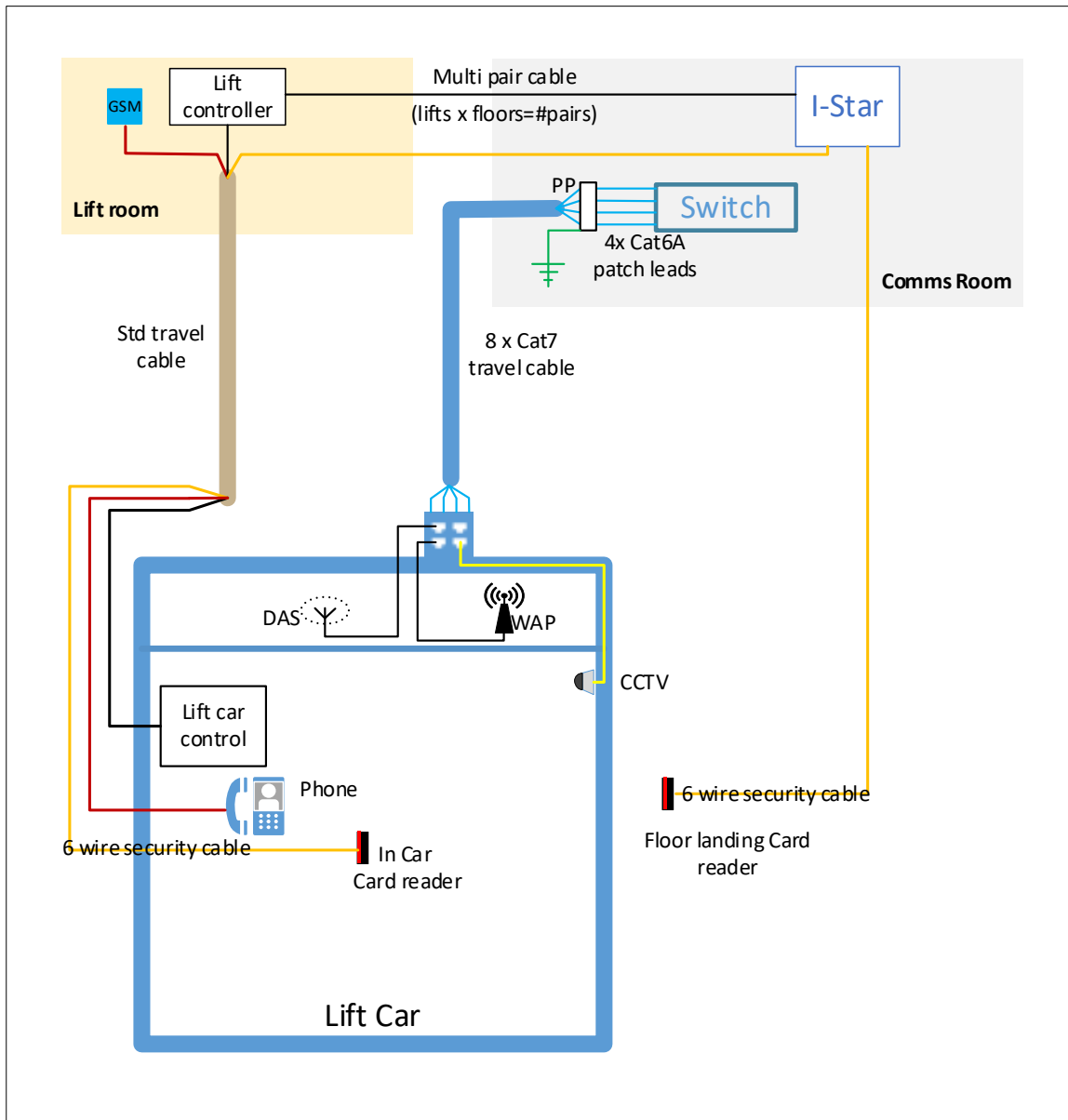


Figure 1 Generic Cable Layout for lift ICT

The above figure illustrates the overview of all connections required per lift as outlined in this document.

6. Structured Cabling Specification

6.1. Traveling Flex Data Cable

Siemens Part Number	106188332	
Cable	DCS16	
Suspension Device	FCSD-3 100205441	

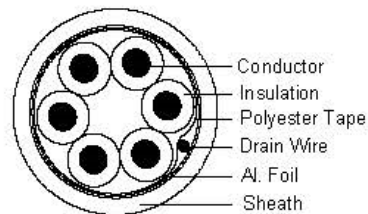
Figure 2 Travelling flex containing 4 x Cat 7 cables

6.2. Standard Security Cable

Cable Construction Drawing



Cable Construction Relative Parts



Cable Description					
Conductor	AWG	Standing	Area(mm ²)	Diameter(mm)	Material
	24	7/0.2mm	0.22	0.6	TACW
Insulation	Cores :	6			
	Material :	PVC			
	Colour :	White, Blue, Red, Black, Yellow, Green			
	Nominal Thickness (mm) :	0.28			
	Nominal OD (mm) :	1.2			

Figure 2 Security cable

Appendix A - Document Details

A.1.1. Abbreviated Terms and Definitions

Abbreviation	Name	Description
ACTHD	ACT Health Directorate	An agency of the ACT Government
BD	Building Distributor	When the term room is absent, refers to the building switch linking the FD's to CN's. A "BD room" will refer to the room housing the BD and this room will by default also be a FD room.
CP	Consolidation Point	Inline joining point for Cat6A cabling.
Comms room	Comms room	Generic name used for CD, BD, FD or DC rooms
CSI	Critical Systems Infrastructure	A section of Digital Solution Division
DSD	Digital Solutions Division	A division of ACT Health Directorate
GSM	Globe System for Mobile Communications	
ICT	Information Communication Technology	Information Communication Technology
IP	Internet Protocol	
FD	Floor Distributor	When the term room is absent, refers to the floor copper access switch linking the FD's to the BD('s). A "FD room" will refer to the room housing the FD
HA	High Availability	Usually provided by redundant physical components or pathways.
LAN	Local Area Network	Provides network connectivity within a building
UTP	Unshielded Twisted Pair	
WAP	Wireless Access Point	
iStar	iStar	Security Access Controller

Table 1 - Abbreviated terms and definitions

A.1.2. Amendment History

Version	Summary of Changes	Author	Date
2019.0.1	Document creation	Raj Mohan	05/03/2020
2019.0.2	Edits for release	David Richards	20/03/2020
2019.1.0	Review and approve for release as 1.0	Mark Moerman	23/03/2020
2021.0.1	Updated security cable and images	Raj Mohan	19/03/21
2021.0.1	Updated terminology	Mitchell Jamieson-Curran	30/03/21
2021.0.1	Refine infrastructure requirements	Mitchell Jamieson-Curran	30/03/2021

Appendix B-Details of Changes

Version	Last Modified date	Author Name	Summary of changes	Section No.	Section Details	Page No.	Revision/Changes Made
2020.1.2	23/10/2020	Raj Mohan	Update		For Approval		Updated VESDA Isolation switch details
2020.1.3	16/12/2020	Alkesh Hemrajani	Reviewed as per PO		Review		Reviewed the docs per PO's comments
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments		Main Page with picture	1	Removed page footer words
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments		Blank page removed	2	Blank page has been removed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments		Please Read	3 & 4	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments		Document Control	5	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments		Document Next Review	5	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments		Document Approval	5	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments		Document Owner	5	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments		Document References	5	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	1.1	Introduction	8	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	1.2	Assumed Knowledge	8	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	1.3	Key Stakeholders	8	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	1.4	Disclaimer	9	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	1.5	Vendor Requirements	9	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	2	Executive Summary	9	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	3	General	10	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	4.1	Lift Car	10	Cable pairs requirement calculation has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	4.2	Landing Call Station	11	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	4.3	Priority Calling Functionality		Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	5	Cable Device Usage	13	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments	6	Document Details	14	Non-Technical words and Font formats has been changed
2020.1.3	16/12/2020	Alkesh Hemrajani	PO's Comments		Amendment History	15	Non-Technical words and Font formats has been changed
2021.0.1	19/03/2021	Raj Mohan	Technical Update				Updated security cable and images
2021.0.1	30/03/2021	Mitchell Jamieson-Curran	Technical Update	5.3	Priority Calling Functionality	7	Additional diagram (Generic Cable Layout for lift ICT) Added
2021.0.1	30/03/2021	Mitchell Jamieson-Curran	Technical Update	6.1	Structure cabling spec	9	Cable Device Usage removed, added to section 6.2 Structured Cabling Specification
2021.0.1	30/03/2021	Mitchell Jamieson-Curran	Technical Update	6.2	Standard Security Cable	9	Added new item Standard security cable and description to be use by the vendor