



BSI Standards Publication

LCD multi-screen display terminals

Part 1: Conceptual model

National foreword

This Published Document is the UK implementation of IEC TS 63181-1:2019.

The UK participation in its preparation was entrusted to Technical Committee EPL/100, Audio-visual equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2020
Published by BSI Standards Limited 2020

ISBN 978 0 580 99779 2

ICS 31.120

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 January 2020.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------



IEC TS 63181-1

Edition 1.0 2019-12

TECHNICAL SPECIFICATION



LCD multi-screen display terminals – Part 1: Conceptual model

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 31.120

ISBN 978-2-8322-7720-1

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Basic features	6
4.1 LCD multi-screen display terminals' basic frame	6
4.2 Components and functions of LCD multi-screen display terminals	7
4.2.1 Components	7
4.2.2 Functions of components	7
5 Typical application	7
5.1 Application scenarios	7
5.1.1 General	7
5.1.2 Transport information display	7
5.1.3 Financial and security information display	8
5.1.4 Commercial, media advertising, product display	8
5.1.5 Fire protection, weather, maritime, traffic control system	8
5.1.6 Mining, energy and safety monitoring system	8
5.1.7 Education training and multimedia conference system	8
5.2 Application modes	8
5.2.1 Full-screen display	8
5.2.2 Single-screen display	8
5.2.3 Combined-screen display	9
5.2.4 Roaming display	10
6 Key index	10
Figure 1 – LCD multi-screen display terminals' basic frame	6
Figure 2 – Full-screen display	8
Figure 3 – Single-screen display	9
Figure 4 – Combined-screen display	9
Figure 5 – Roam display	10

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LCD MULTI-SCREEN DISPLAY TERMINALS –**Part 1: Conceptual model****FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical specification when

- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 63181-1, which is a technical specification, has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
100/3243/DTS	100/3295/RVDTS

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 63181 series, published under the general title *LCD multi-screen display terminals*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

LCD MULTI-SCREEN DISPLAY TERMINALS –

Part 1: Conceptual model

1 Scope

This part of IEC 63181 specifies a conceptual model for LCD multi-screen display terminals. This document defines typical functional components to compose LCD multi-screen display terminals and describes the terminals' structure and signal flow. The document also clarifies signal processing in the terminals to create multi-screen sub-signals from a single video signal input.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

LCD unit

LCD device that can display input signals independently

3.2

optical gap

gap between the boundaries of two adjacent active area units in the LCD multi-screen display terminals

Note 1 to entry: Unit: mm.

3.3

physical gap

gap between the sides of two adjacent screen units sides in the LCD multi-screen display terminals

Note 1 to entry: Unit: mm.

3.4

splicing processors

signal processing unit to break up original input signal into sub-signals, and assigning those sub-signals to LCD splicing screens according to the customer's requirement(s)

3.5

LCD splicing screen

screen composed of a single/multiple/many LCD unit(s) to form the m-by-n LCD unit matrix