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Fibre optic active components and devices – Package and interface standards – Part 6: ATM-PON transceivers

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FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES – PACKAGE AND INTERFACE STANDARDS –

Part 6: ATM-PON transceivers

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International Standard IEC 62148-6 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2003, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) inconsistency of types in Clause 4 has been resolved;

b) part and titles list in the Foreword has been deleted;

c) references have been updated.

The text of this International Standard is based on the following documents:

CDV	Report on voting
86C/1590/CDV	86C/1613/RVC

Full information on the voting for the approval of this International Standard 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 62148 series, published under the general title *Fibre optic active components and devices – Package and interface standards*, 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

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INTRODUCTION

Fibre optic transceivers are used to convert electrical signals into optical signals and vice versa. This document covers the physical interface for transceivers for ATM-PON systems. This transceiver is designed as a 24-pin package for use with through holes on the printed circuit board.

FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES – PACKAGE AND INTERFACE STANDARDS –

Part 6: ATM-PON transceivers

1 Scope

This part of IEC 62148 covers the physical interface specification of optical transceivers for asynchronous transfer mode-passive optical network (ATM-PON) systems recommended by the International Telecommunication Union (ITU) as ITU Recommendation G.983.1.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

~~IEC 60793: all parts, *Optical fibres*~~

IEC 60793-2 (all parts), *Optical fibres – Part 2: Product specifications*

IEC 60874 (all parts), *Fibre optic interconnecting devices and passive components – Connectors for optical fibres and cables*

IEC 61754 (all parts), *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces*

IEC 62148-1, *Fibre optic active components and devices – Package and interface standards – Part 1: General and guidance*

ITU-T Recommendation G.652, *Characteristics of a single-mode optical fibre and cable*

ITU-T Recommendation G.657, *Characteristics of a bending-loss insensitive single-mode optical fibre and cable*

ITU-T Recommendation G.983.1, *Broadband optical access systems based on Passive Optical Networks (PON)*

IEC 62148-6

Edition 2.0 2020-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Fibre optic active components and devices – Package and interface standards – Part 6: ATM-PON transceivers

Composants et dispositifs actifs fibroniques – Normes de boîtier et d'interface – Partie 6: Emetteurs-récepteurs ATM-PON



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Part 6: ATM-PON transceivers

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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COMPOSANTS ET DISPOSITIFS ACTIFS FIBRONIQUES – NORMES DE BOÎTIER ET D'INTERFACE –

Partie 6: Emetteurs-récepteurs ATM-PON

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Cette deuxième édition annule et remplace la première édition parue en 2003, dont elle constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) l'incohérence des types à l'Article 4 a été résolue;
b) la liste des parties et des titres a été retirée de l'Avant-propos;
c) les références ont été mises à jour.

Le texte de cette Norme internationale est issu des documents suivants:

CDV	Rapport de vote
86C/1590/CDV	86C/1613/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette Norme internationale.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 62148, publiées sous le titre général *Composants et dispositifs actifs fibroniques – Normes de boîtier et d'interface*, peut être consultée sur site web de l'IEC.

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INTRODUCTION

Les émetteurs-récepteurs fibroniques sont utilisés pour convertir les signaux électriques en signaux optiques et vice versa. Le présent document couvre l'interface physique pour les émetteurs-récepteurs des systèmes ATM-PON. Ces émetteurs-récepteurs sont conçus comme des boîtiers à 24 broches, prévus pour être utilisés avec des trous traversants sur des cartes de circuits imprimées.

COMPOSANTS ET DISPOSITIFS ACTIFS FIBRONIQUES – NORMES DE BOÎTIER ET D'INTERFACE –

Partie 6: Emetteurs-récepteurs ATM-PON

1 Domaine d'application

La présente partie de l'IEC 62148 couvre les spécifications d'interface physique des émetteurs-récepteurs optiques pour les systèmes de réseaux optiques passifs en mode de transfert asynchrone (ATM-PON: *asynchronous transfer mode-passive optical network*) qui suivent les recommandations données par l'Union Internationale des Télécommunications (UIT) dans la Recommandation G.983.1.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60793-2 (toutes les parties), *Fibres optiques – Partie 2: Spécifications de produits*

IEC 60874 (toutes les parties), *Dispositifs d'interconnexion et composants passifs à fibres optiques – Connecteurs pour fibres et câbles optiques*

IEC 61754 (toutes les parties), *Dispositifs d'interconnexion et composants passifs fibroniques – Interfaces de connecteurs à fibres optiques*

IEC 62148-1, *Composants et dispositifs actifs fibroniques – Normes de boîtier et d'interface – Partie 1: Généralités et recommandations*

Recommandation UIT-T G.652, *Caractéristiques des câbles et fibres optiques monomodes*

Recommandation UIT-T G.657, *Caractéristiques des câbles et fibres optiques monomodes insensibles aux pertes par courbure*

Recommandation UIT-T G.983.1, *Systèmes d'accès optique à large bande basés sur les réseaux optiques passifs*