



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 19520.19-2020

**Mechanical structure of electronic equipment 482.6 mm (19 in)
series mechanical structure size - Part 3-107: Dimensions of
miniaturized plug-in boxes and plug-ins**

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Foreword

GB/T 19520 "Electronic Equipment Mechanical Structure 482.6mm (19in) Series Mechanical Structure Dimensions" is divided into the following 8 parts.

- Part 3-100.Basic dimensions of panels, sub-boxes, chassis, racks and cabinets;
- Part 3-101.Subbox and its plug-ins;
- Part 3-102.Plug handle;
- Part 3-103.coding keys and positioning pins;
- Part 3-104.Interface size of plug-in box and plug-in based on connector;
- Part 3-105.Dimensions and design requirements for 1U height chassis;
- Part 3-106.Applicable to IEC 60917-2-1 metric cabinets or racks in line with the adapter box and chassis size;
- Part 3-107.Miniaturization 1) The size of the plug-in box and plug-in.

This part is part 3-107 of GB/T 19520.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this part is equivalent to the IEC 60297-3-107.2012 "Electronic Equipment Mechanical Structure 482.6mm (19in) Series Machine

Mechanical structure dimensions Part 3-107.Dimensions of miniaturized plug-in boxes and plug-ins".

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

---GB/T 19520.16-2015 Electronic equipment mechanical structure 482.6mm (19in) series mechanical structure size No. 3-100

Part. Basic dimensions of panel, subrack, chassis, rack and cabinet (IEC 60297-3-100.2008, IDT)

This part is proposed and managed by the National Technical Committee for Comprehensive Standardization of Electrical and Electronic Equipment Structure (SAC/TC34).

Drafting organizations of this section. Beijing Sifang Relay Automation Co., Ltd., Jiangsu Hewangyuan Electric Co., Ltd., China Coal Electric Co., Ltd.

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Introduction

This part of GB/T 19520 provides the dimensions of miniaturized plug-in boxes and plug-ins, as well as the specified optional/miniaturized plug-ins.

New technologies that require the use of miniaturized plug-ins in 19in equipment are rapidly gaining acceptance.

Recognizing this development trend, common interface standards will obviously benefit the industry.

This part is based on the PCI Industrial Computer Manufacturers Organization (PICMG) developed by AMC.0 and MicroTCA.

The specifications of the pieces are coordinated.

Through the feasible key interface size and allow the use of the industry's optional

connectors (other than AMC.0 and MicroTCA), a variety of

Product solutions can use this technology to increase overall market acceptance, increase availability, and cut costs.

In order to meet the requirements of miniaturized plug-ins in the subrack, this section specifies these miniaturized interface sizes.

The miniaturized universal size is based on and coordinated with AMC.0 and MicroTCA.

Since the AMC.0 and MicroTCA specifications only specify a limited range of connectors, this section shows the use of other applicable connectors

Possibility.

Mechanical structure of electronic equipment

482.6mm (19in) series mechanical structure size

Part 3-107.Dimensions of miniaturized plug-in boxes and plug-ins

1 Scope

This part of GB/T 19520 specifies the use of PICMG MicroTCA.0 (fixed board, see Figure 7) and IEC 61076-4-116 (two pieces)

Type, see Figure 12) The size of the interface between the plug-in box and the plug-in connector of the connector and other two-piece connectors (see Figure 15).

Refer to IEC 61587-1 for mechanical and climatic tests.

The electromagnetic shielding performance test refers to IEC 61587-3.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

IEC 60297-3-100 Mechanical Structure of Electronic Equipment 482.6mm (19in) Series Mechanical Structure Dimensions Part 3-100.Surface

The basic dimensions of boards, sub-boxes, chassis, racks and cabinets
(Mechanical structures for electronic equipment-Dimensions

of mechanical structures of the 482.6mm (19in) series-Part

3-100.Basic dimensions of front panels,

subracks, chassis, racks and cabinets)

IEC 61076-4-116 Electronic Equipment Connector Product Requirements Part 4-116.High-speed integrated shielding function of printed board connector

Detailed specifications for two-piece connectors

(Connectorsforelectronicequipment-Productrequirements-Part 4-116.

Printedboardconnectors-Detailsspecificationforahigh-speedtwo-partconnectorwithintegrated shieldingfunction)

PICMGAMC.0 Advanced mezzanine card specification

(Advancedmezzaninecardspecification)

PICMGMicroTCA.0 Microtelecommunications computing architecture

(Microtelecommunications computing architecture)

PICMGMicroTCA.1 Aircooledrugged MicroTCA specification

(AircooledruggedMicroTCAspecification)

3 layout overview

An overview of the 4U layout is shown in Figure 1.