

Optical modules used in Huawei micro base stations



Overview

In the AI era, Huawei provides a full range of GE to 800GE optical modules, featuring three major capabilities: Spanning (ultra-long transmission), Stable (ultra-high reliability), and Secure (ultra-solid security). Together, they ensure resilient data center interconnectivity and empower. Huawei's Sub-THz optical module for 6G base stations—unveiled at ISCAS 2026—delivers 1.2 Tb/s/mm² bandwidth & 37% lower power. CEI-112G-compliant, pre-commercial rollout starts 2027. Huawei Optical Module is manufactured by Huawei Technologies Co. is a telecommunications network solutions provider. Huawei's main business scope is switching. As an important part of fiber-optic communication, an optical module is a photoelectric converter which converts electrical signals into optical signals and vice versa. An optical module works at the physical layer of the OSI model and is one of the core components in the fiber communication. Versatile Configurations: The BBU5900 chassis is equipped with a series of multi-antenna RF modules, supporting configurations such as 4T4R, 8T8R, and 64T64R. This provides a strong guarantee for ultra-fast service experiences in the 4G/5G era. Improved Coverage and Capacity: The multi-antenna.



Article Content

Optical Modules in General-Purpose Computing Scenarios

Huawei offers a comprehensive portfolio of pluggable StarryLink optical modules for data center networks, with various models providing flexible plug-and-play solutions tailored to diverse interface

Optical Modules in Intelligent Computing Scenarios

Huawei provides a full series of pluggable optical modules. A wide variety of modules give you flexible plug-and-play options for all types of interfaces.

Huawei Sub-THz Optical Module for 6G Base Stations | ISCAS 2026

The module employs a logic-folding architecture and Hi-ONE near-package optical I/O technology, achieving a bandwidth density of 1.2 Tb/s/mm² and a 37% reduction in power consumption compared

Huawei Optical Module Common Models

Optical modules are important devices in fiber optic communication systems. Huawei Optical Module is manufactured by Huawei Technologies Co. and originated in Shenzhen.

WHAT IS AN OPTICAL MODULE AND ITS FAQS (V200)

As an important part of fiber-optic communication, an optical module is a photoelectric converter which converts electrical signals into optical signals and vice versa. An optical module works at the physical

HUAWEI BBU5900 (3GPP) 5G DBS5900 Distributed Base Stations

Versatile Configurations: The BBU5900 chassis is equipped with a series of multi-antenna RF modules, supporting configurations such as 4T4R, 8T8R, and 64T64R. This provides a strong guarantee for

3900 Series Base Station Product Description.pdf

The document describes the 3900 Series Base Station, including: - It uses a modular design with basic modules including the BBU3900 baseband unit and radio frequency units (RFUs) or remote radio

Huawei BTS 3900 Hardware Structure | PDF

The document describes the hardware structure and components of the Huawei BTS3900 base station system. The key points are: - The BTS3900 system consists of the BBU3900 baseband processing

HUAWEI DBS3900 Dual-Mode Base Station Hardware Structure

The DBS3900 consists of two basic modules: BBU3900 (baseband processing unit) and RRU3929/3806 (outdoor remote radio unit). Flexible combinations of the two basic modules and auxiliary devices

DBS3900 & DBS5900 LampSite Configuration Guide

Technical guide for configuring Huawei DBS3900 & DBS5900 LampSite systems. Covers networking, BBU, DCU, and board configurations.

5G Antenna White Paper New 5G, New Antenna

PS information of the three base stations. In 5G, base stations determine the distances d_1 , d_2 , and d_3 from the UE to base stations 1, 2, and 3, respectively. Antennas use beamforming technology to

Base Station Backhaul Microwave Solution | Huawei

More than 60% of the world's wireless base stations use microwave backhaul. Based on leading wireless, transmission, and datacom technologies, Huawei

HISILICON Optical Modules in the field of communication base stations ...

In addition, the optical module in the base station can also be used to achieve fiber backhaul connection, the base station signal back to the data center or the operator's core network,

Do you know how optical modules are used in base stations?-ETU

The transmission carriers connecting BBU and RRU devices are optical modules and optical fibers. In 2/3/4G networks, 10Gbps optical modules are generally enough for CPRI interfaces. In 5G networks,

Understanding Optical Modules

Therefore, optical modules are also classified into single-mode and multimode modules to support different optical fibers. Single-mode optical modules are used with single-mode fibers.

Base stations require optical chips and optical modules

Conclusion Optical chips and optical modules are indispensable components in base station optical communication systems. Optical chips provide the core high-speed optical signal

Which Optical Modules Are Commonly Used In 4G Base Stations?

In this blog, ETU-LINK will talk about 4G base stations and common types of optical modules. The base station can be divided into two modules: the RRU for transmitting signals and the BBU for processing

What Is an Optical Module and Its FAQs (V200)

Describes what an optical module is and FAQs, including the fundamentals, appearance and structure, key performance counters, common types, and naming conventions of optical modules, causes of

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

