

Optical modules used in AAU



Summary of Content

AAUs in 5G networks use optical modules, including colored 25G modules and industrial-grade modules, to transmit optical signals between AAUs and DUs, supporting high-speed, multi-wavelength fronthaul connections.

Function and Role

Optical modules in AAUs are responsible for transmitting optical signals between the AAU and fiber optic cables, enabling high-speed communication with Distributed Units (DUs) or Baseband Units (BBUs) in 5G networks . They allow multiplexing of RX and TX signals, supporting the same antenna path and enabling beamforming and signal filtering . In pre-transmission applications, colored optical modules implement passive Wavelength Division Multiplexing (WDM), allowing multiple AAUs to share a single fiber without interference .

Types of Optical Modules

- Colored 25G Optical Modules
- Used in 5G pre-transmission and fronthaul applications.
- Support single-rate 25G or dual-rate 10G/25G operation.
- Cover a 6-wavelength range (1270–1370 nm), enabling multi-wavelength transmission over a single fiber .
- Typical deployment: ordinary 5G base stations use six modules (three bidirectional transceivers for three sectors), while high-bandwidth stations may require 12 modules .

Article Content

HUAWEI AAU3902 HARDWARE DESCRIPTION Pdf Download

This section describes engineering specifications of an AAU, including input power and equipment specifications. 2.7 Optical

Technical Specifications

Its content derives from the sections "AAU5811 Technical Specifications" and "Power Configuration Rules for RF Modules" in AAU

Huawei AAU Solution Ushering in an Era of Massive Deployment

Huawei announces the deployment of its innovative Active Antenna Unit (AAU) Solution on 100 commercial networks

What is ACTIVE ANTENNA UNIT and what are its benefits from 5G user ...

What is ACTIVE ANTENNA UNIT and what are its benefits from 5G user experience perspective ? An active antenna is an antenna

HUAWEI AAU3940 HARDWARE MAINTENANCE MANUAL Pdf

It also describes how to replace the AAU, modules in it, and optical modules. Product Version The following table lists the product

AAU5613 Hardware Description (01) (PDF)-EN

Overview This document provides reference for planning and deploying an active antenna unit 5613 (AAU5613, which is referred to

AAU5613 Hardware Description

Contact Huawei engineers when an AAU power cable longer than 100 m (328.08 ft) is required. 1.3.4 CPRI Fiber Optic Cable Fiber

Description

3.2 AAU Functions An AAU integrates the antenna and RF unit. Its main function modules include the antenna unit (AU), radio unit

AAU AAU3940 Hardware Maintenance Guide | Manualzz

This Hardware Maintenance Guide is for AAU AAU3940. It provides instructions for routine maintenance, powering on and off,

AAU3940 Installation Guide

AAU3940 Installation Guide: Detailed instructions for installing the AAU, cables, and auxiliary hardware. Includes checklists for

AAU AAU3940 Hardware Maintenance Guide | Manualzz

This guide provides instructions for routine maintenance of the AAU3940, including powering on and off, replacing the AAU, and

AAU5613 Hardware Description

Its main function modules include the antenna unit (AU), radio unit (RU), power module, and L1 (physical layer) processing unit.

Connecting the RRU AAU Optical Cable

The field optical cable is a kind of metal-free optical cable specially designed for rapid wiring or repeated retractable

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics

Understand AAU, RRU, BBU in one article

Moreover, there is no need to use expensive AAU for some areas that do not require high system capacity, such as rural

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,

AAU5972 Hardware Description | Huawei Active Antenna Unit Manual

NOTE | An AAU contains built-in remote control units (RCUs). | An RCU is a driving motor used for the phase shifter in the RET

Huawei AAU Guide: How to Choose the Right 5G Active

About Huawei AAU: Definition and Typical Use Cases A Huawei AAU—Active Antenna

AAU5631 Hardware Overview | PDF | Analog To Digital Converter

Optical modules to be installed must match the rates of their corresponding ports. Only Huawei-certified optical modules meeting the

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

BBU, RRU, AAU: Roles and Connectivity in Telecom

The differences between AAU, RRU, and BBU, along with their roles and connectivity in a telecom network.. * BBU (Baseband Unit) -

BBU, RRU, AAU: Telecom Network Components Explained

Understanding BBU, RRU, and AAU in a Telecom Network □□ BBU (Baseband Unit) Acts as the core processing unit of a base station.

AAU5336 Hardware Description (Draft I) (PDF)

unit 5336 (AAU5336, which is referred to as AAU in this document). It describes. optical modules, and cables of the

Everything You Need to Know About Optical Modules

Optical modules are electronic devices used in communication systems to transmit optical

Understanding 5G Active Antenna Units | PDF | MIMO

In 5G, AAU stands for Active Antenna Unit, which integrates the antenna and radio unit into a single device, enhancing capabilities

Contact Us

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