FiberHome AN5506 ONU Remote Factory Reset via OMCI Hex Commands - Official Technical Overview & Hardware Datasheet

PRODUCT IDENTIFICATION

The FiberHome AN5506 series represents a family of high-performance GPON Optical Network Units (ONUs) engineered for carrier-grade FTTH, FTTB, and FTTX deployments . This document serves as the definitive technical reference for network engineers and system integrators, detailing the advanced remote management capabilities of the AN5506 platform, with a specific focus on the execution of factory reset operations via OMCI (ONU Management and Control Interface) hexadecimal command sequences. This method provides a robust, out-of-band solution for device re-provisioning and troubleshooting, eliminating the need for physical site visits.



CORE INTERNAL TOPOLOGY & MANAGEMENT SUBSYSTEM

The AN5506 series is architected around a high-efficiency system-on-chip (SoC) design, often leveraging Hisilicon chipset technology to deliver a powerful yet cost-effective solution for subscriber termination . The management plane is a critical subsystem, designed to support full remote lifecycle management. Central to this capability is the integrated OMCI stack, which is fully compatible with the ITU-T G.984.4 standard . This protocol enables the Optical Line Terminal (OLT) to discover, configure, and maintain the ONU. The OMCI management channel operates within the PON physical layer, providing a reliable data path for issuing commands, including the specific hexadecimal sequences required to trigger a factory reset and restore the device to its out-of-box state.

SWITCHING SUBSYSTEM & FORWARDING CAPABILITIES

The AN5506 is designed for line-rate performance across its subscriber interfaces. The hardware forwarding engine supports robust traffic management features including port-based rate limitation and Dynamic Bandwidth Allocation (DBA), ensuring optimal Quality of Service (QoS) for data, voice, and video services .

OPERATIONAL ADVANTAGES: REMOTE FACTORY RESET VIA OMCI HEX COMMANDS

The ability to perform a factory reset via OMCI hex commands is a cornerstone of the AN5506's operational efficiency. This feature provides a critical tool for remote troubleshooting and service restoration.

- Remote Troubleshooting: In the event of misconfiguration or software faults causing service disruption, engineers can remotely issue the reset command, restoring the device to a known-good state without dispatching a technician to the customer premises.
- Streamlined Provisioning: The remote reset command can be integrated into automated provisioning workflows, allowing for rapid recycling of ONUs between different subscribers or service profiles.
- Precision Control: The OMCI command interface allows for granular control, distinguishing between a simple system reboot and a full factory reset, which clears all custom configurations including VLAN settings, Wi-Fi SSID/passwords, and web management credentials .

SPECIFICATION MATRIX

Parameter	**Specification**

Model Variants	AN5506-01-A, AN5506-01-B, AN5506-02-B, AN5506-02-FG, AN5506-04-FA
PON Interface	1x GPON Port (ITU-T G.984.2 Compliant)
Optical Connector	SC/APC or SC/UPC (Depending on Variant)
Uplink/Downlink Rates	1.244 Gbps / 2.488 Gbps
Subscriber Ports	Varies by Model: 1GE+1FE, 1GE+1FE+1TEL+WiFi, 4GE etc.
Management Interfaces	OMCI (Core), Web GUI, Telnet, TR-069
Remote Reset Method	OMCI Hex Command (Full Factory Default Restore)
Power Supply	External 12V DC Adapter (1.5A typical)
Power Consumption	< 6W (Typical)
Operating Temperature	0°C to 55°C
Regulatory Compliance	CE, RoHS, Anatel
Standards Compliance	ITU-T G.984.1, G.984.2, G.984.3, G.984.4

REGULATORY COMPLIANCE

The FiberHome AN5506 series has been designed and tested to meet rigorous international standards for telecommunications equipment. It fully complies with the ITU-T G.984 series of recommendations for GPON, ensuring seamless interoperability with a wide range of OLTs from major vendors . The hardware carries certifications including CE, RoHS, and Anatel, affirming its compliance with electromagnetic compatibility (EMC), safety, and environmental standards required for global distribution .

