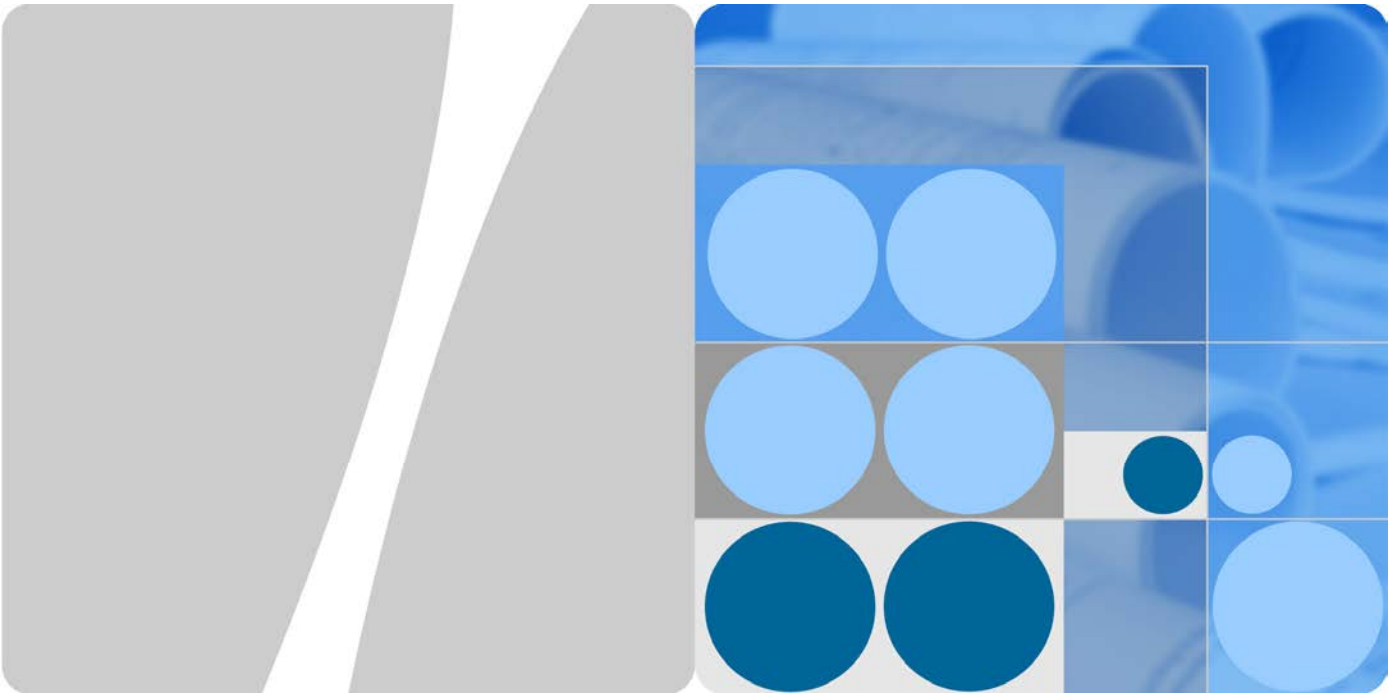
Part Number: 108046



HUAWEI MT130U Cable Modem

Product Description

Issue 02

Date 2010-11-03

HUAWEI TECHNOLOGIES CO., LTD.

Trademarks and Permissions


and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd. All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the commercial contract made between Huawei and the customer. All or partial products, services and features described in this document may not be within the purchased scope or the usage scope. Unless otherwise agreed by the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute the warranty of any kind, express or implied.

Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base
Bantian, Longgang
Shenzhen 518129
People's Republic of China

Website: http://www.huawei.com

Email: terminal@huawei.com

Contents

1 Overview

1.1 Introduction to the MT130U

HUAWEI MT130U is a DOCSIS 3.0 channel bonding cable modem. MT130U comes with latest channel bonding technology; it bonds up eight downstream channels and four upstream channels. MT130U can deliver download speed over 100Mbit/s. MT130U is designed to work with existing DOCSIS 3.0 CMTS. MT130U is also compatible with existing DOCSIS 1.0/1.1/2.0/3.0 compliant system.

Figure 1-1 shows the appearance of the MT130U.

Figure 1-1 Appearance of the MT130U

1.2 Hardware Features

1.2.1 Interfaces and Buttons

Figure 1-2 shows the interfaces and buttons on the MT130U.

Figure 1-2 Interfaces and buttons on the MT130U

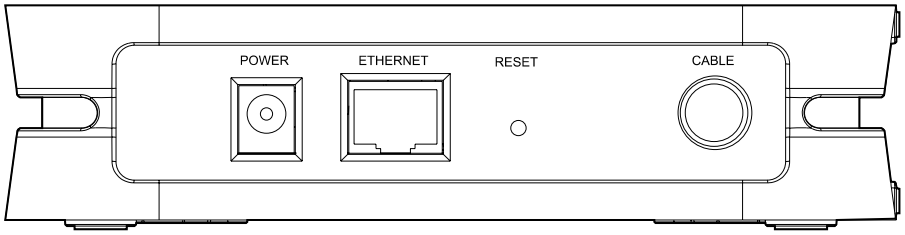


Table 1-1 describes the interfaces and buttons on the MT130U.

Table 1-1 Interfaces and buttons on the MT130U

Interface/Button	Description
POWER	Power interface, which is used to connect the MT130U to the power adapter.
ETHERNET	RJ-45 Ethernet interface, which is used to connect the MT130U to the Ethernet interface on the computer.
RESET	RESET button. • Used to restart the MT130U (press and hold for 3s). • Used to restore the factory settings of the MT130U (press and hold for 6s).
CABLE	F-Connector cable interface, which is used to connect the MT130U to the cable television (CATV) interface on the wall.

1.2.2 Indicators

Figure 1-3 shows the indicators on the MT130U.

Figure 1-3 Indicators on the MT130U

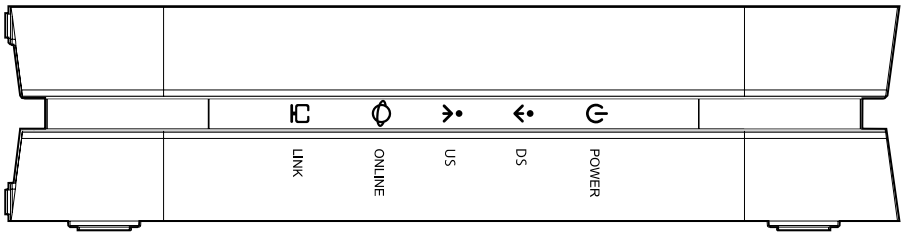


Table 1-2 describes the indicators on the MT130U.

Table 1-2 Indicators on the MT130U

Indicator	Description
POWER	Power indicator, which indicates the power condition of the MT130U.
DS	Downstream channel indicator, which indicates the status of the downstream channel.
US	Upstream channel indicator, which indicates the status of the upstream channel.
ONLINE	Internet indicator, which indicates the status of Internet connection.
LINK	Ethernet indicator, which indicates the status of the Ethernet connection between the MT130U and the PC.

2 Features

2.1 General Features

- DOCSIS 1.0/1.1/2.0/3.0 compliant.
- Standard RJ-45 connector for 10/100/1000 Base-T Ethernet with auto-negotiation and MDIX functions.
- Support 8 downstream channels and 4 upstream channels.
- 96 MHz tuner fully compliant with DOCSIS 3.0.
- Maximum data rate upstream up to 131 Mbit/s (Theoretical) and downstream up to 340 Mbit/s (Theoretical).
- Transparent bridging for IP traffic.
- RSA, 56 bit DES and 128 bit AES data encryption security.
- SNMP network management support.
- Remote operating firmware downloading.
- Support Web pages and private DHCP server for status monitoring.

2.2 Software Features

- Support for software download.
- Support for multiple clients (32).
- Support for 16 SIDs Class of Services (CoS).
- Support for Ethernet filtering.
- Support for IP filtering.
- Support for V2,V3 SNMP management.
- Support for BPI+ security.
- Support for HTTP server (CM status).

2.3 Standard Compliance

2.3.1 Functional

- DOCSIS 1.0/1.1/2.0/3.0
- Ethernet/IEEE 802.3/u/z

2.3.2 Network Management

- RFC1907 (System group and SNMP MIB)
- RFC2233 (Interface group)
- RFC2011 (ICMP group and IP group)
- RFC2013 (UDP group)
- RFC2665 (Ethernet MIB)
- RFC1493 (Bridge MIB)
- RFC2670 (RF MIB)
- RFC2669 (Cable Device MIB)
- RFC3083 (BPI-MIB)
- RFC2012 (TCP-MIB)

3 Technical Specifications

3.1 General Specifications

- RF Connector: 1 × 75 Ohm F-Connector
- Giga Ethernet: 1 × RJ-45 10/100/1000 Base-T auto detect
- Button: Reset
- LEDs: POWER, DS, US, ONLINE, LINK

3.2 RF Specifications

Table 3-1 List the RF specifications of the MT130U

Items	Downstream	Upstream
Frequency Range	108-1002 MHz	5-42 MHz
Number of Downstream	8	4
Channel Bandwidth	48 MHz	0.2, 0.4, 0.8, 1.6, 3.2 and 6.4 MHz
Maximum data rate	340 Mbit/s (Theoretical) (42.88 Mbit/s × 8 channels)	131 Mbit/s (Theoretical) (32.78 Mbit/s × 4 channels)
Frequency Selection	Auto Scanning	-
Modulation Type	64QAM/256QAM	QPSK, 8/16/32/64/128QAM
Modulation Rate	5.056941/5.360537 Ksym/sec	• A-TDMA: 160/320/640/1280/2560/5120 Ksym/sec • S-CDMA: 1280/2560/5120 Ksym/sec
Input Impedance	75 Ohm	75 Ohm

Items	Downstream	Upstream
Signal Level Range	• 64QAM: -15 dBmV to +15 dBmV • 256QAM: -15 dBmV to +15 dBmV	refer to Table 3-2 list the signal level range of upstream
Forward Error Correction	RS (128,122)/Trellis	Reed Solomon
Signal to Noise Ratio	> 30	-
Return loss	> 6 dB, 108 MHz to 1002 MHz	-

Table 3-2 List the signal level range of upstream

Standard	1 × upstream	4 × upstream
TDMA	• 32QAM, 64QAM: Pmin to +57 dBmV • 8QAM, 16QAM: Pmin to +58 dBmV • QPSK: Pmin to +61 dBmV	• 32QAM, 64QAM: Pmin to +51 dBmV • 8QAM, 16QAM: Pmin to +52 dBmV • QPSK: Pmin to +55 dBmV
S-CDMA	all modulations Pmin to +56 dBmV • Pmin = +17 dBmV, 1280 kHz modulation rate • Pmin = +20 dBmV, 2560 kHz modulation rate • Pmin = +23 dBmV, 5120 kHz modulation rate	all modulations Pmin to +53 dBmV • Pmin = +17 dBmV, 1280 kHz modulation rate • Pmin = +20 dBmV, 2560 kHz modulation rate • Pmin = +23 dBmV, 5120 kHz modulation rate

3.3 Power Supply Specifications

- Input: 100 V to 240 V AC
- Output: 12 V DC, 1A

3.4 Physical Specifications

- Dimensions (L × W × H): 145 mm × 130 mm × 35 mm
- Weight: about 232 g

3.5 Environmental Specifications

- Ambient temperature for operation: 0°C to 40°C (32°F to 104°F)
- Ambient temperature for storage: -20°C to 70°C (-4°F to 158°F)
- Relative humidity for operation: 10% to 90%, non-condensing