

Ver. 1.0cs

DBS/MMDS optical transmitter & receiver •

HDBS-6100 Series

USER MANUAL

Hangzhou Huatai Optic Tech. CO., LTD

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1.0 Product summarize

Huatai HDBS-6100 series is a set of broadband optical transmitter and receiver. Its frequency bandwidth covers 47~860MHz and 950~2200MHz and it is applicable for CATV and SAT-IF transmission.

2.0 INSTALLATION

2.1 Unpacking

Inspect the shipping boxes for any obvious damages.

Unpack the unit from all packaging boxes.

Inspect the appearance of the unit for any shipping damages.

Document and inform the shipping company and your local representative, as seen in section 1.2, of the damages.

Save the shipping boxes and their inserts for any future reshipment for upgrade or repair.

NOTE: In the event of a reshipment back to the manufacturer, any additional damages caused by not using the original boxes will be considered responsibility of the customer.

2.2 Transmitter Mounting and Power Connection

1. Place the unit into a 19-inch wide rack or cabinet. Make sure to leave a 1.75-inch (about 4.5cm) space above and below the unit.

2. According to the design request, HDBS-6100 series CATV&DBS optical transmitter can work under 0°C~50°C (32°F~122°F) temperature range. We recommend 25°C (77°F) environment temperature.

Humidity not bigger than 95% (under non-coagulation condition). If necessary, the equipment should keep the suitable temperature & humidity in the restrained scope. We recommend to operating in the environment without dust.

3. Equipment powered by AC or steady voltage DC. In both of AC & DC, AC is the chief power supply.

Request of power supply:

AC input

94-245VAC, 50-60Hz

DC input	36-60VDC, floating
Power consumption	Maximum 50W

4. The DC power supply of the equipment must be the SELV supply stipulated as CAN/CSA C22.2 No.950-95 standard.
5. The machine should have good grounding, grounding resistance $< 4\Omega$.

According to the international standard, 220V plug in adopts tri-wire rule, the middle wire is the grounding wire.

Before connecting circuit, please use big spec (#20AWG and more) electric wire to connect the grounding screw on the bottom and the grounding frame. When use DC input power supply, the equipment chassis must be grounding.

2.3 RF connection

Connect the RF cable & the connector on TX rear panel. RF connector is F type plug. (F-Female/F-male Optional). The resistance is 75Ω .

2.4 Optic connection

1. Considering for protection & safety, all the fiber optic connector need protect cover in transportation.
2. In order to ensure the insertion loss & return loss, the end-face of fiber optic connector is polished extremely. Please don't dirt the pollute the connector. Even very micro dust will also affect the transmission quality. When off the fiber optic connector, please put on the protection cover.
3. Clean all fiber patch cords before connecting to the transmitter.

Cleaning Guidelines:

Fiber Patch cord connectors

- Remove the fiber connectors dust cap and wipe the fiber connector tip with a dry lint-free cloth (such as Kimwipes). Inspect for scratch's or debris on connector surface by using a microscopes (ie.100x or 200x).
- If no scratches or debris are found the connector is now clean and ready for connection. If debris or scratches are found then repeat the fiber patch cord connector cleaning guidelines.

Fiber Bulkhead connectors

- Compressed air may be used to clean fiber bulkhead connectors. Use compressed air with at least the following specifications:
 - Non-residue, inert gas for precision dust removal
 - Ultra-filtered to < 0.2 microns
 - Recommended for optical systems
 - Using compressed air as listed above, remove the bulkhead dust

cover and hold the can of compressed air about 6 inches from the connector. After spraying a few short bursts into the bulkhead the connector is clean and ready for connection.

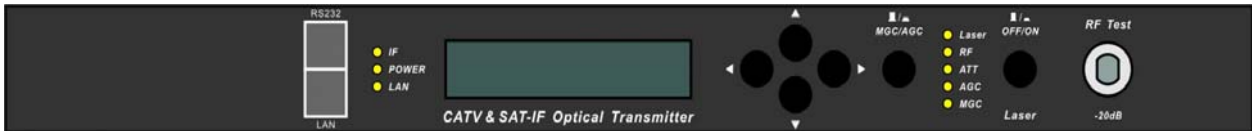
- If compressed air is not available, the transmitter fiber bulkhead connector may be cleaned by 2.5 mm cotton swap or connector plate may be removed to clean the internal fiber patch cords.

CAUTION: Use caution when handling fibers.
Do not exceed fiber manufacturers pulling tension or bend radius specifications when removing fiber bulkhead connector plate.

- To remove the transmitter optical connector plate, remove the screw on the far left of the optical plate and remove the screw on the far right of the optical plate. Do not remove the screws on the optical bulkhead connector.
 - Slowly remove the optical connector plate from the rear panel and disconnect each fiber connector from the bulkhead mounted on the plate.
 - Clean each fiber connector according to section A of the fiber cleaning guidelines.
4. Make sure the laser key switches on the front panel of the transmitter are in the OFF position.
 5. Connect a fiber patch cord from the output of the transmitter to an optical power meter.
 6. Turn the transmitter laser key switch to the ON position.
 7. Using the optical power meter verify the transmitter optical power is within specification.
 8. Turn the transmitter laser key switch to the OFF position.

3.0 Transmitter Controls, Indicators, and Alarms

This section of the manual will give an overview of the available menus in the HDBS-6100 series CATV&DBS optical transmitter and their descriptions. All instructions in Section 3.0 refer to the representation of the front panel shown in the diagram below. The user scrolls through the Tx menus using the push bottoms found on the front panel of the Tx, these are located just to the right of the LCD screen.



3.1 The operation of the panel

3.1.1 Open menu

- A. Plug in 110V city power supply
- B. Turn on power switch in the rear panel
Front panel display " KEY OFF"
Laser Status lamp Red
RF Status lamp Red
MGC Status lamp Green

- C. Press laser start-up keyswitch
Front panel shows "KEY ON...", Laser status lamp turns green from red, machine enters self-checking, after checking it enters working status, display " Descriptor".

3.1.2 Start-up main menu

Press ◀ \ ▶ button will display below menu in sequence.

Menu #1 - Model

Read-only menu, tells the model of this equipment

Menu #2 - Serial Number

Read only list

Menu #3 - Date Code

Read only list

Menu #4 - CATV Laser Current

Read only list

Menu #5 - CATV Laser Temp

Read only list

Menu #6 - CATV Tec Cooling

Read only list

Menu #7 - CATV Output Power

Read only list

Menu #8 - RF Mode

Read only list

Menu #9 - CATV RF Level

Read only list

Menu #10 - IF1 Level

Read only list

Menu #11 - LNB Power Supply

Read only list

Menu #12 - +5V Monitor

Read only list, display the voltage +5V

Menu #13 - -5V Monitor

Read only list, display the voltage -5V

Menu #14 - +24V Monitor

Read only list, display the voltage +24V

Menu #15 - IP

Adjustable list, display the IP address of SNMP

Menu #16 - Sub

Adjustable list, display the address of net mask

Menu #17 - GW

Adjustable list, display the gateway address of SNMP

Menu #18 - TR1

Adjustable list, display the TRAP1 address of SNMP

Menu #19 - TR2

Adjustable list, display the TRAP2 address of SNMP

3.1.3 Menu assistant manual

Press ◀▶ key to choose the menu that needs to be amended. Press ▼ key to enter amendment and press ◀▶ key to change the current value. And then press ▼ key to save the result and exit.

4.0 Guarantee and repair items

1. Each unit is packaged with <Products Qualification>, with the series number provide one-year's guarantee.
2. Micro-processor software, with the function of monitoring laser status, digital display, trouble alarm, network management etc. pump laser will not be damaged only by man-induced factor. In case of Red lamp sparking (Alarm). Please return for repairing. User should not open the top cover for repair, otherwise, even within guarantee period, maintain and material fee will be charged.
3. Lifelong maintain and upgrade is provided even guarantee period is expired.
4. If component is damaged by man-induced factor, material fee will be charged.

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