

Chapter 3 Part Replacement

3.1 General Replacement Procedure

3.1.1 Note

I. Influence on service

Upon replacement of ODU3601C parts, please monitor the influence this replacement brings to the BTS service (including the cascaded ODU3601C).

II. Alarm query

Prior to replacement, query the alarms from the remote maintenance console and make a record. After replacement, query the alarms again and check whether the corresponding alarm is cleared and whether a recovery alarm is generated.

III. Version check

Prior to replacement, please confirm the version of the new module, and make a record. After MTRM is replaced, please query the software version to check whether the version is correct.

IV. Tools required

A Phillips screwdriver and a socket spanner matching M4 bolts.

V. Anti-static requirement

Modules are sensitive to electrostatic. Therefore, your operation must be in strict compliance with the procedures: Wear anti-static gloves or wrist strap and make sure the part is properly grounded so as to avoid preventable damages to the module. .

3.1.2 Module Removal

I. Remove plastic shell

Unlock the anti-burglary lock on the cabinet bottom, screw off the two fixing bolts on the sides of the shell and then remove the shell.

II. Switch off power

Switch off the power of MAPM. To replace MAPM, please switch off the external power first.

III. Remove wire on the module bottom

Remove the water-resistant tape and the wire on the module bottom. Make sure not to damage the fiber or the fiber connector.

IV. Remove bolts on module top and those on module bottom

V. Remove module

Remove the module along the slot, put it into an antistatic bag, then into a damp-proof bag. Finally, put the wrapped module into a packing box with foam cushion.

MPAM is equipped with a set of thermal tube and heavy. Upon replacement, make sure to keep the module undamaged.

3.1.3 Module Installation

I. Check module

Prior to module installation, take out the module from the packing box, remove the anti-static bag and damp-proof bag, and then check whether the module is damaged.

II. Check board nameplate

Locate the slot for the board from the nameplate.

III. Insert module

Push the module along the slot with both hands until you feel the module engage the backplane connector. Make sure that the panel and subrack surface are on the same surface.

IV. Tighten bolts on module top and those on module bottom

V. Connect cables on module bottom

Please refer to the installation manual for details. Make sure to keep the module away from water.

VI. Switch on

Resume the power supply after replacement and check the relevant indicator (after opening the cover of the maintenance window) to judge whether the module is running normally.

If MAPM is replaced, switch on the external power first.

3.1.4 Replacement Completed

After replacement, check the result in the following three aspects:

- Check whether the relevant indicator status is normal. Please refer to Chapter 4 Module Maintenance Window.
- Check from the remote maintenance console of OMC whether the corresponding alarm has disappeared and whether any recovery alarm has been generated at the same time.
- Make calls with MS on the site to check whether the BTS is working normally.

3.2 Part Replacement

3.2.1 Module Replacement

This section contains the items for special attention during module replacement based on the Section 3.1 General Replacement Procedure

I. Replace MAPM.

Prior to replacement, switch off the 220V AC power.

If batteries are connected on the +24V battery interface of MAPM, disconnected the batteries (Make sure to avoid short circuit) and avoid short circuit to the power supply

II. Replace MTRM

After replacement, query the module version through the local maintenance console or the OMC maintenance console so as to check whether the version is correct.

III. Replace MFEM

MFEM is connected with MTRM, MPAM and the antenna feeder system through RF cable. After replacement, make sure to resume the connections, otherwise the RF index will be affected.

IV. Replace MPAM

MPAM is equipped with a set of thermal tube and thus heavy. Upon replacement, make sure to keep the module undamaged.

3.2.2 Optical Fiber Replacement

I. Check optical fiber

Prior to replacement, carefully check the new fiber.

Make clear marks for fiber correspondence to avoid any mis-operation.



Note:

The MTRM module of ODU3601C has two external optical interfaces, one used for connection with the cascaded ODU3601C while the other for connection with the upper-level BTS (If the upper-level BTS is BTS3612, it is connected with BRDM; If the upper-level BTS is BTS3601C or ODU3601C, it is connected with the corresponding MTRM).

II. Insert/remove fiber connector

This operation should be conducted very carefully. Make sure to avoid breaking the internal cores of the fiber connector.

Before inserting the connector, align the fiber connector (of MTRM) with the fiber interface and align its spacing arm with the fixing slot of the interface. Then carefully plug the connector into the fiber interface until you feel the connector well engage the interface. This indicates that the connector has been plugged in position. Then turn the spacing arm into the corresponding fixing slot and tighten the nut. Now the fiber connector is installed.

Prior to fiber replacement, make clear marks for fiber connection relation so that the proper fibers are plugged in.

III. Excessive optical fiber

Put the excessive optical fibers into bellow and store them in the specified place.