Features

The RTN 950 is the new-generation of IP radio transmission equipment developed by Huawei. The equipment, 2U high, supports a maximum of six RF directions. With various service interfaces, the RTN 950 can be configured flexibly and installed easily. The equipment can be applied not only in the 3G/WiMAX/LTE backhaul but also in the radio access of private network services and private line services for VIP customers.

IP Radio Transmission with AM
- Supports adaptive modulation (AM) and QoS, improving the efficiency of bandwidth usage and quality of services.
- Supports the pseudo wire emulation edge to edge (PWE3) technology, and adopts high-performance and unified pure packet switching.
- Provides a variety of OAM functions and fast fault-isolation methods, simplifying packet network maintenance.
- Supports end-to-end service configuration, improving the flexibility of radio network planning and reducing OPEX.

Robust IP Service-Processing Capability
- Provides 10 Gbit/s switching capacity, and supports the VLAN, flow control, and MPLS functions.
- Supports basic MPLS functions and service forwarding, and supports static LSPs.
- Adopts the LSP tunnel technology and the PWE3 technology to form an MPLS network where access of multiple services is allowed.
- The advanced header compression technology for Ethernet IPV-4 and IPV-6 achieves maximum capacity of 1 Gbps backhaul.
- Supports 8-class QoS, provides a wide range of services, and ensures the quality of services with high priorities.
- Supports MPLS OAM features, making management and maintenance in IP networks similar to those in SONET networks.

Excellent Protection Schemes
- Protection schemes for radio links
  - 1+1 HSB/SD/FD protection
  - LAG protection for Ethernet services
- Network-level protection schemes
  - Ethernet ring protection switching (ERPS)
  - MPLS tunnel 1:1 protection
  - PW 1:1 protection
- Equipment-level protection schemes
  - 1+1 hot backup for the input power supply
  - 1+1 hot backup for internal power modules
  - 1+1 hot backup for the control, switching, and timing board

ATPC
The automatic transmit power control (ATPC) technology enables the RTN 950 to automatically change the output power of the transmitter within the ATPC control range according to the received signal level. As a result, the interference to the neighboring system and the residual error rate are reduced.

XPIC
The RTN 950 supports Cross-Polarization Interference Cancellation (XPIC) technology, which helps to double the service capacity of a microwave channel at the same spectrum and bandwidth.

Easy Maintenance
- Supports different types of loopbacks at the service port and the IF port.
- Supports RMON performance events.
- Supports MPLS OAM, PW OAM, and Ethernet OAM functions.
- Provides a built-in test system to perform the pseudo-random binary sequence (PRBS) error test at the IF port.
- Supports remote data and software loading by using the NMS. Thus, the entire network can be upgraded rapidly.
- Supports in-service software upgrades.

Multiple Methods for Network Management
- Uses the iManager U2000 to manage the RTN devices and Huawei optical transport devices. Hence, quick fault isolation, quick service provisioning, and visual IP service management are achieved, and the OPEX is reduced.
- Uses the Web LCT to manage a single RTN NE or multiple RTN NEs in a centralized manner.
- Enables users to query alarms and performance events through the simple network management protocol (SNMP).
- Supports the inband DCN scheme. Hence, dedicated DCN channels are not required, and the network construction cost is reduced.

Clock and Synchronization
- Supports the radio link clock and synchronous Ethernet clock.
- Supports the sync status message (SSM) protocol.
Technical Specifications

RF Specifications

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Service Specifications

Traffic Interface

- FE electrical interface: 10/100BASE-T(X)
- GE optical interface: 1000Base-SX and 1000Base-LX
- GE electrical interface: 10/100/1000BASE-T(X)

Switching capacity

- 10 Gbps

Ethernet Function

- Ethertype II, IEEE 802.3, and IEEE 802.1q/p service frame formats
- E-Line and E-LAN Ethernet services
- Ethernet ring protection switching (ERPS)
- Adding, deletion, and exchange of IEEE 802.1q- or IEEE 802.1p-compliant VLAN tags
- Flow control that complies with IEEE 802.3x
- Link aggregation group (LAG)
- IETF RFC 2819-compliant RMON performance monitoring
- STP protocol and MSTP protocol (generating only the CIST, equivalent to RSTP)

MPLS/PWE3

- Function: Encapsulation of Ethernet services and transmission over an LSP tunnel to implement E-Line services
- Static tunnels and PWs
- MPLS tunnel 1:1 protection
- PW 1:1 protection

QoS

- DiffServ and standard 8-level PHB
- Traffic classification based on the Port, C-VLAN ID, S-VLAN ID, 802.1p priority of the C-VLAN/S-VLAN packet, or DSCP
- CAR and traffic policing
- Eight classes for queue scheduling over an Ethernet interface

System Parameters

Dimensions and Weight

- IDU: Dimensions (width x depth x height): 17.4 inch x 8.66 inch x 3.46 inch, (442 mm x 220 mm x 88 mm)
- Weight: < 17.6 lbs (8 kg)
- ODU: Dimensions (width x depth x height): < 11 inch x 3.62 inch x 1 inch, (280 mm x 92 mm x 280 mm)
- Weight: 9.9 lbs (4.5 kg)

Working Temperature

- IDU: Long-term: +23°F to +140°F (-5°C to +60°C)
- Short-term: -4°F to +149°F (-20°C to +65°C)
- ODU: Long-term: +23°F to +131°F (-5°C to +55°C)
- Short-term: -4°F to +140°F (-20°C to +60°C)

Power Supply

- 38.4 V to –72 V DC

Heat Dissipation

- Fan cooling

Relative Humidity

- IDU: 5% to 95%
- ODU: 5% to 100%