

ATN Router

The ATN Router is an essential component in constructing ATN-compliant communication networks. The Router embodies much of the functionality of ATN and is the element which ensures the world-wide, open, transparent connectivity characteristic of ATN.

The Airtel ATN Router supports the exchange of routing information for ground and air-ground systems. The ATN Router is described in the ATN Manual, issued by ICAO.

The Airtel ATN Router is compliant with the ICAO CNS/ATM Package-1 Internet SARPs.

Highlights

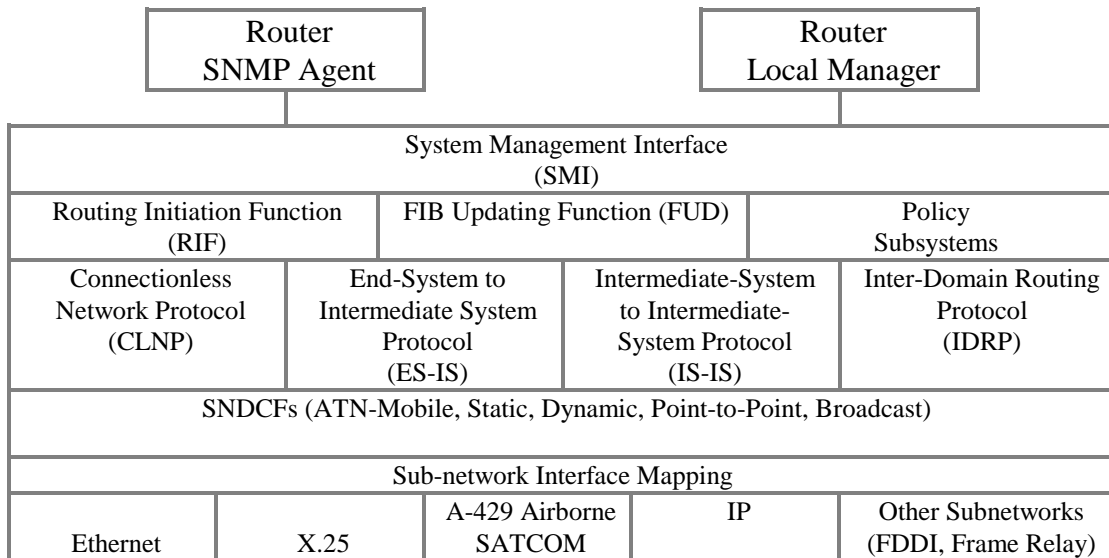
- Compliant with CNS/ATM Package 1 SARPs
- Compliant with EUROCAE ED-110A
- ATN Policy based Route Aggregation and Information Reduction supported
- Configurable as End Routing Domain or Transit Routing Domain
- Configurable Route Distribution Policy
- Configurable as a member of an ATN Backbone or ATN Home Routing Domain Confederation (RDC)
- Optional non-use of IDRPs over mobile sub-networks

Support

- Inter-domain routing protocol (IDRP), as defined in ISO/IEC 10747
- Levels 1 and 2 IS-IS intra-domain routing protocol, as defined in ISO/IEC 10589
- ES-IS routing exchange protocol, as defined in ISO/IEC 9542
- Sub-network priority mapping
- Mobile SNDCF
- Initiator/responder circuits for event-driven sub-networks
- Packet Layer Protocol for Data Terminal equipment as defined in ISO/IEC 8208
- Multiple X.25 cards
- Multiple LAN cards for both FDDI and Ethernet LANs
- Williamsburg File Transfer protocol, version 1 over ARINC 429
- IP SNDCF

Product Structure

The following figure shows the architectural layout of the product.



ATN Router Architecture

- **Router SNMP Agent:** Optional SNMP Agent is for remote management (under development).
- **Router Local Manager:** Local Management is provided by a CLI (Command Line Interface) based local manager
- **System Management Interface:** The system management interface (SMI) provides access to all management information maintained by the product.
- **Route Initiation Function:** The route initiation function (RIF) subsystem validates, initiates, and manages connections over mobile circuits.
- **FIB Updating Function:** The FIB updating function (FUD) obtains routing information from the IDRP and in turn updates the forwarding information base (FIB).
- **Policy Subsystem:** The policy subsystem allows operation as an end routing domain or transit routing domain. It allows ATN Policy based Route Aggregation and Information Reduction to be specified and implemented. It also allows control over distribution of routes.
- **Network Layer Subsystem:** The network subsystem implements the CLNP, ES-IS, IS-IS and IDRP protocols. It supports mobile, static, dynamic, point-to-point and broadcast SNDCF.
- **Sub-network Interfaces:** These are the various sub-network interfaces supported by the router. The modular design of the router along with well-defined sub-network interfaces permits the addition of new sub-networks.

Product Information

The Airtel ATN Router is available in both binary and portable C source code formats. Both airborne and ground versions of the ATN Router are available. Airtel's software can be provided on all major platforms including PC based systems.

The Airtel ATN Router incorporates software components licenced from EUROCONTROL.