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(57) Abstract :
The invention discloses a circuit (100) for automated load balancing in communication networks, comprising a traffic sensing module (101), load balancing controller (102), switching matrix (103), redundancy unit (104), and power optimization module (105). The circuit provides real-time traffic monitoring, adaptive load distribution, dynamic rerouting, and energy optimization. It reduces latency, prevents congestion, and ensures uninterrupted communication, thereby enabling efficient and scalable deployment across heterogeneous networks such as IoT, 5G, and satellite communication systems.

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