MESSIR-COMM

Message Switching System

Ensuring the reliable, secure, and timely exchange of critical meteorological and aeronautical information, enabling safe and efficient air navigation worldwide.

- For Meteorological Centers, fulfilling its operational and strategic objectives:
  - ◦ Collect observational data from across the country in real time.
  - ◦ Ingest and integrate information from multiple sources, including remote sensing systems and legacy infrastructures.
  - ◦ Retrieve relevant data from web-based and external repositories.
  - ◦ Distribute meteorological data and products efficiently to both internal and external stakeholders — including aviation, defense, regional centers, and professional users.
  - ◦ Ensure reliable GTS message switching and coordination with international meteorological networks.
  - ◦ Transition seamlessly to the WMO Information System (WIS) environment in compliance with the latest standards.
  - ◦ Support ICAO SWIM services through standardized data publishing and subscription mechanisms, ensuring interoperability within the global aviation information framework.

MESSIR-COMM Solution

Delivers secure, fast, and interoperable data exchange — ensuring reliable communication between meteorological, aviation, and international networks.
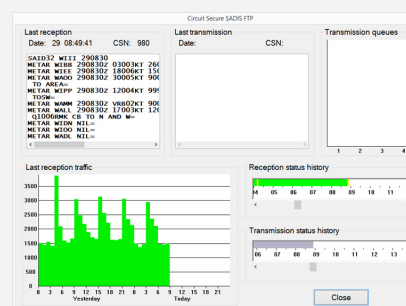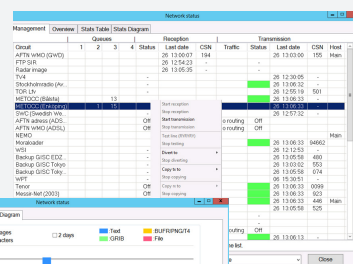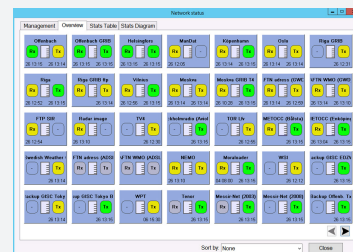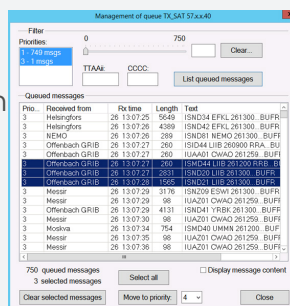
Key Capabilities

- Unified data handling — collects, processes, and distributes meteorological data from national and international sources
- Wide connectivity — supports WIS, TCP/IP, FTP/SFTP, AFTN, /AMHS, WAFC API's, AMQP and legacy circuits (fax)
- Data integration — compatible with global feeds such as SADIS, WIFS, EUMETCast, GEONETCast, and observation systems (AWS, radar, satellite)
- User-friendly interface — intuitive displays, circuit supervision, and real-time statistics

Performance and Reliability

- Proven throughput of 500+ messages per second
- Supports over 2,000 simultaneous circuits
- Hot stand-by architecture with automatic failover for 24/7 availability
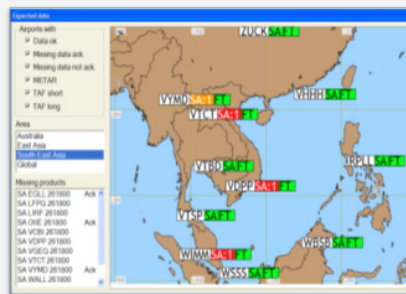- Fast setup and easy administration with menu-driven configuration

Compliance and Modern Standards

- Aligned with WMO and ICAO Annex 3
- Supports both TAC, TDCF (BUFR, GRIB) formats
- Handles IWXXM OPMET data for modern aviation systems
- WIS-ready (GISC, DCPC, NC)
- Supports WAFC API's and SWIM data subscription

Work in progress:
- SWIM publishing, scheduled for January 2026.
- WIS2 compliance, scheduled for July 2026.

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