

Precision six-channel telemetry stream validation, BER estimation, and transport analysis with a simple, browser GUI

Overview

HexaBERT provides Bit Error Rate (BER) estimation across up to six telemetry data streams with either IRIG-218-20 TMoIP (**HexaBERT-IP**) or TTL PCM (**HexaBERT-TTL**) instrument interfaces. HexaBERT-IP ingests multicast or unicast IRIG 218-20 TMoIP streams and analyzes the integrity of packet transport and the telemetry payload quality.

Applications

- Six (6) channels BER estimation
- Dynamic indicators and strip chart views for trending visibility
- TMoIP stream analysis and validation (-218)
- DQM/DQE visibility and assessment (Optional)
- Metrics logging (Optional)

RM-7132 [IP] / RM-7142 [TTL] HexaBERT Indicators, Measurements, and Controls

Indicators	Measurements	Controls
Clock/Data Active	Bit Error Rate / Probability	IP Address
BERT Sync	Bits Received	Host IP Address: Port (per channel)
Data Inversion (PRN, -TTL)	Errors Received	Gap (treatment of missing packets)
Sync Loss (latching indicator)	TMoIP Packets Received / Error (-218)	PRN Pattern

OPTION — DQQL Data Quality Display

Adds DQM visualization, enabling one chassis for both transport validation and operational monitoring.

Added Capabilities:

- BEP exponent display per stream
- Color-coded green / yellow / red quality meter view
- Configurable BEP vs. time strip charts

Added Benefits:

- Operator-facing dashboard alongside transport analysis
- Single chassis serves engineering and operations roles
- Consistent display format with standalone DQQL units

OPTION—Logging

Select one or more input data streams for logging at a configurable rate. Log entries include timestamp, stream identifier, average BER, optional average BEP, DQM status, synchronization status, and alarm events recorded during the measurement interval.

Operational Benefits

- Rapid isolation of transport versus telemetry issues
- Reduced troubleshooting time—no PCM conversion required
- Improved visibility into packet behavior and telemetry quality
- Long-duration monitoring captures intermittent faults
- Reduces reliance on multiple standalone test instruments

Physical & Interface

- 2U 19-inch rackmount chassis with configurable display
- Six-channel architecture
- One IRIG 218-20 1Gb Ethernet input (-218) or Twelve TTL
- One 1Gb Ethernet remote access and monitoring port
- Web-based operator interface via HTTPS
- Optional NTP synchronization for time-tagged logging

