CCSDS COMMUNICATION PRODUCTS
X & S Band for Cube & NanoSatellites


For more information, please contact:
Miguel Fernandez - Sales & Marketing Manager - Email: miguel.fernandez@syrlinks.com - Phone: +33 6 86 56 00 68
www.syrlinks.com

Advanced & High DataRate
Telemetry Transmitter X Band (HDR-TM)
Syrlinks - EWC27

PRODUCT CONCEPT
- CCSDS compliant: RF, modulation, coding
- Very reliable design
  - 2 years life-time design
  - Radiation tested & hardened
  - Smart protection against SEL
  - Miniature version of in orbit products
- Satellite energy saving:
  - Low consumption
  - High efficiency power amplifier
  - Heat dissipation monitored & compensated
- « Heart » of Low Cost systems
  - Use of existing ground stations networks
  - Access to worldwide launchers - ITAR FREE
- 2 years life-time design
- Radiation tested & hardened
- Smart protection against SEL
- Miniature version of in orbit products
- Satellite energy saving:
  - Low consumption
  - High efficiency power amplifier
  - Heat dissipation monitored & compensated
- « Heart » of Low Cost systems
  - Use of existing ground stations networks
  - Access to worldwide launchers - ITAR FREE

14 GBIT / PASS
- Onboard: 2W EIRP, OQPSK, CC 7 1/2 + RS 255/223
- Ground Station: 5-meter X Band, 500s connectivity
- Link Budget: Eb/No: 2.7 dB @ BER < 10E-9
- 14 Gbit / pass in VBR, Vs 7 Gbit in CBR

EWC27 KEY FEATURES
- Miniature / Thickness < 0.95 inches (<24mm)
- Ultra lightmass: < 9.6 oz (<270g)
- Compliant with existing X Band Ground Stations
- X Band antenna: under development

EYE-SAT, CNES

RECEIVER ARCHITECTURE
- ITU EES Frequency Band
  - 2025-2100MHz for Telecommand
- More robust to interference than UHF/VHF
- Tracking by
  - Coherence mode 221/240
- Modulations
  - PCM/PM/SP-L
  - B-256 kbps

TRANSMITTER ARCHITECTURE
- ITU EES: 2200-2290MHz for Telemetry
- High Datarate: Up to 3 Mbps
- Selectable modulation
  - QPSK
  - OQPSK
  - PCM/PM/SP-L
- Coding
  - Differential
  - Convolutional 7 1/2
- High output power: Up to 3 W (35dBm)

EWC31 KEY FEATURES
- Full S Band (Rx & Tx), CCSDS
- Thickness
  - < 0.95 inches (without diplexer) (<24mm)
  - Integrated miniature diplexer
- Larger RF coverage
  - Up to 2 opposite faces mounted antennas
- Other versions (coming soon)
  - Higher Telemetry: 3Mbps
  - ISM 2.4Ghz
  - Hybrid S/X band

APPLICATIONS
- Earth observation
- Spectrum monitoring
- Astronomy
- Technological payloads

Telemetry, Tracking & Command
TT&C Transceiver S Band (Up & Downlink)
Syrlinks - EWC31