

# The Ground Interface Concept of the KOMPSAT-II DLS

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## Abstract

The DLS(Data Link System) is located in the PDT(S(Payload Data Transmission Subsystem)) of KOMPSAT-II, and its main function is to provide communication link with Ground Segment as a space segment. DLS receive the data of MSC, OBC from DCSU(Data Compression Storage Unit) and transmit to the Ground Station by X-Band RF link. DLS is consist of CCU(Channel Coding Unit), QTX(QPSK Transmitter, ASU(Antenna Switch Unit). CCU makes a packet for communication after several kind of data processing such like Ciphering, RS Coding. QTX transmit PDT(S) data by OQPSK Modulation. ASU is the unit for reliability of antenna switching. So, DLS's function is consists of *ciphering, RS coding, CCSDS packetizing, randomizing, modulation and switching to antenna*. These DLS's functions are controlled by PMU(Payload Management Unit). All commands to DLS are sent by PMU and all telemetries of DLS are sent to the PMU. The PMU receives commands from OBC and sends telemetries to the OBC. The OBC communicates with Ground Station by S-Band RF link. This paper presents the on-orbit DLS operation concept through the ground segment.