

Type Acceptance Test Report

Broad Band PCS Transceiver

FCC ID: NUW0A5DATA1900

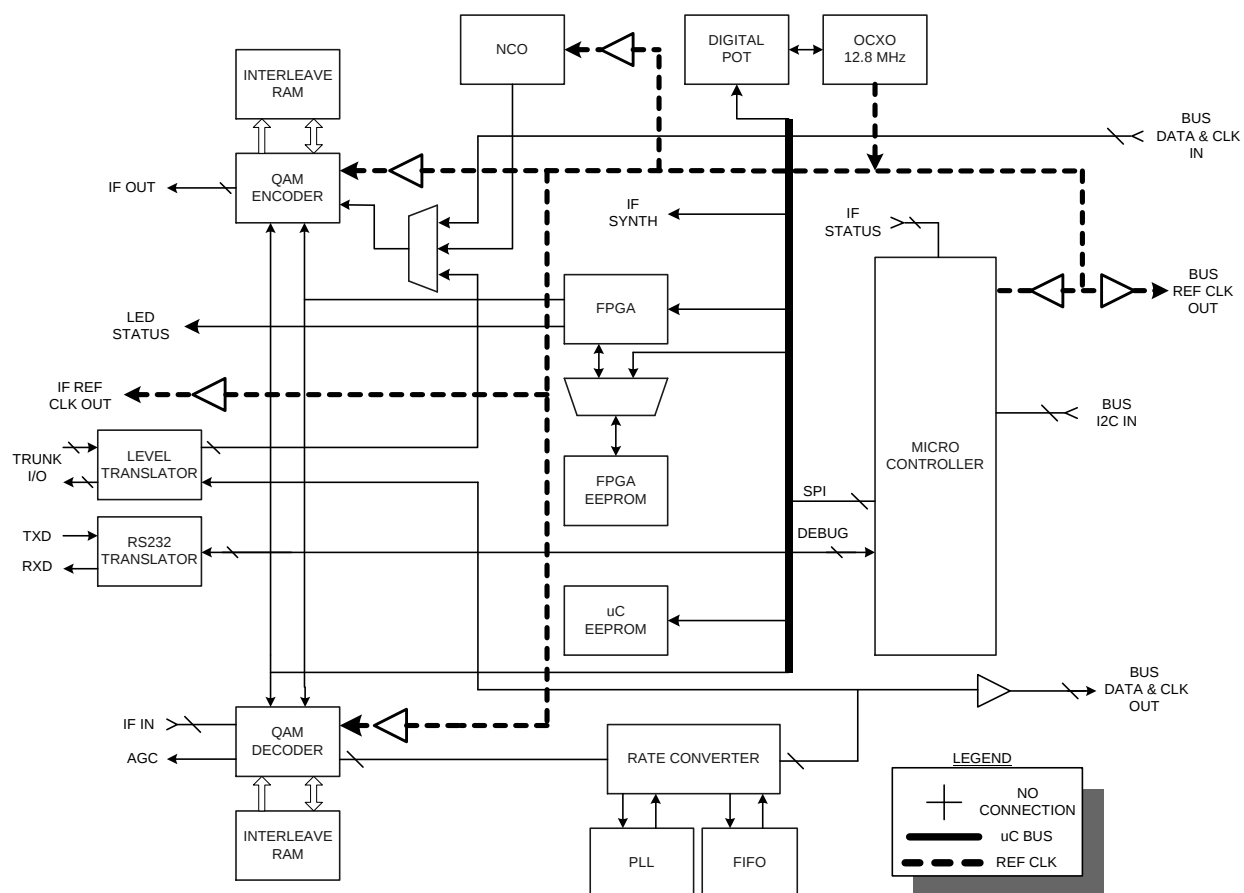
FCC Rule Part: 24E

ACS Report Number: 03-0096-24TA

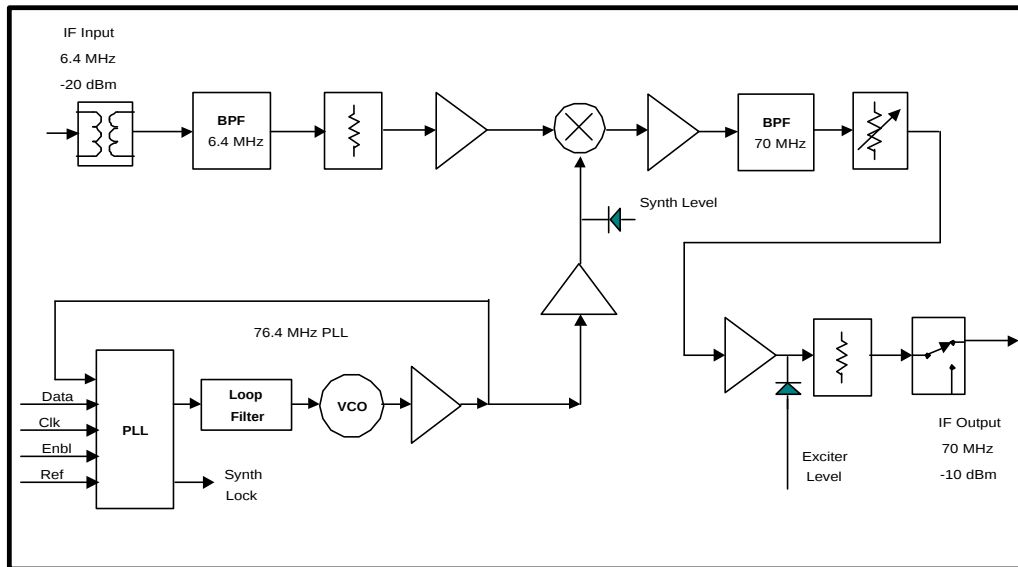
Manufacturer: EMS Wireless
Model: DataNex

Theory of Operation

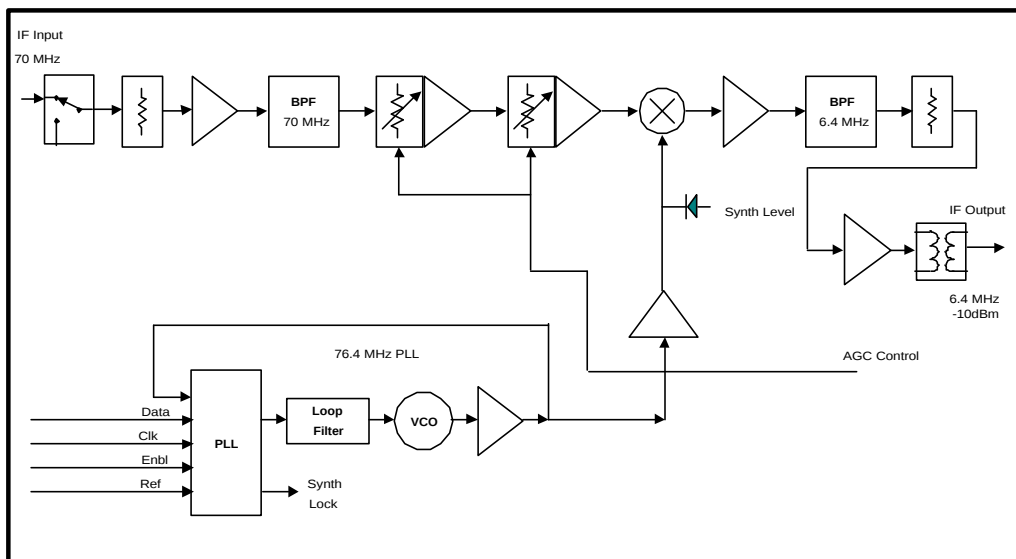
1.0 MODULATOR AND DEMODULATOR



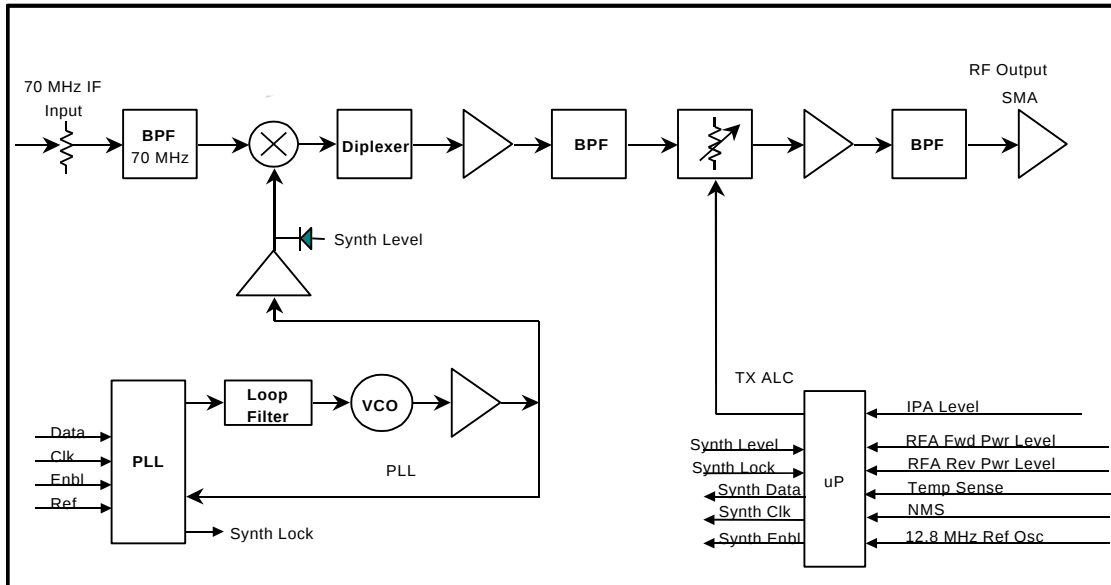
1.1 Modulator IF



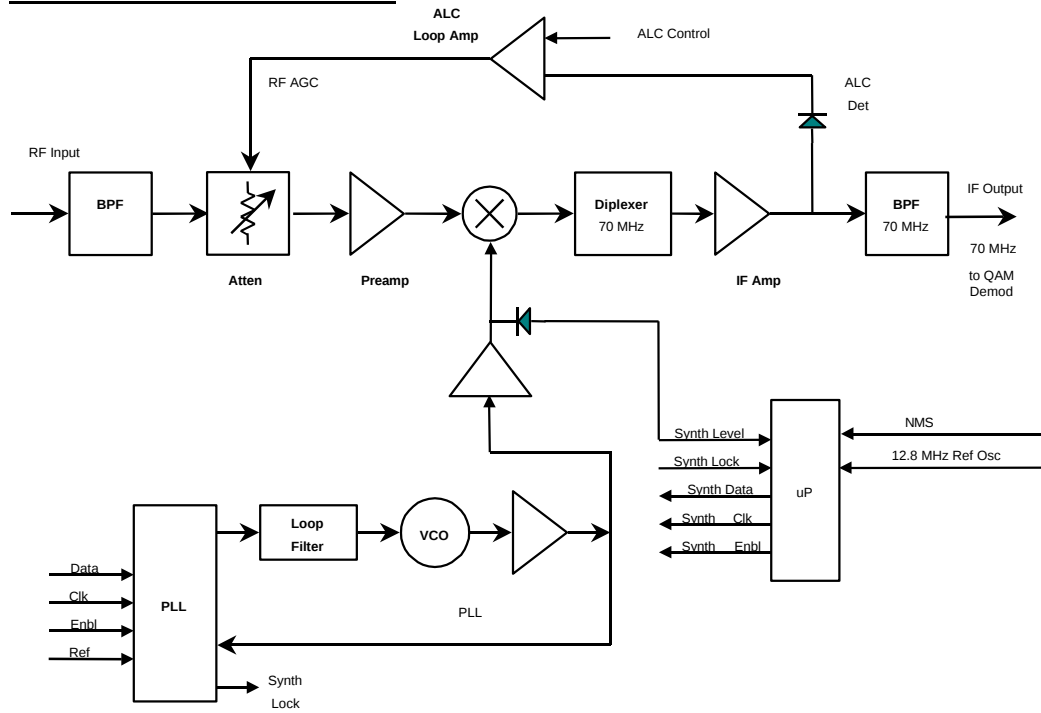
1.2 Demodulator IF



2.0 RF Up-converter



2.1 RF Down-converter



Theory of Operation

The DATANEX units are radio modems utilizing four-level frequency shift keying (4-LFSK) modulation. The assemblies and subassemblies of the unit consist of:

A1—Radio transceiver (XCVR) circuit card assembly (CCA), UHF or VHF frequencies.

A2—Controller CCA.

A2A1—Global Positioning System (GPS) receiver (RCVR) CCA or other function.

A3—I/O CCA having sensor inputs and control outputs.

The basic unit consists of A1 and A2 assemblies with the A2A1 GPS RCVR added as an option. Other configurations consist of the basic unit of A1 and A2, along with an A3 I/O CCA, with the A2A1 GPS RCVR added as an option or having some other function.

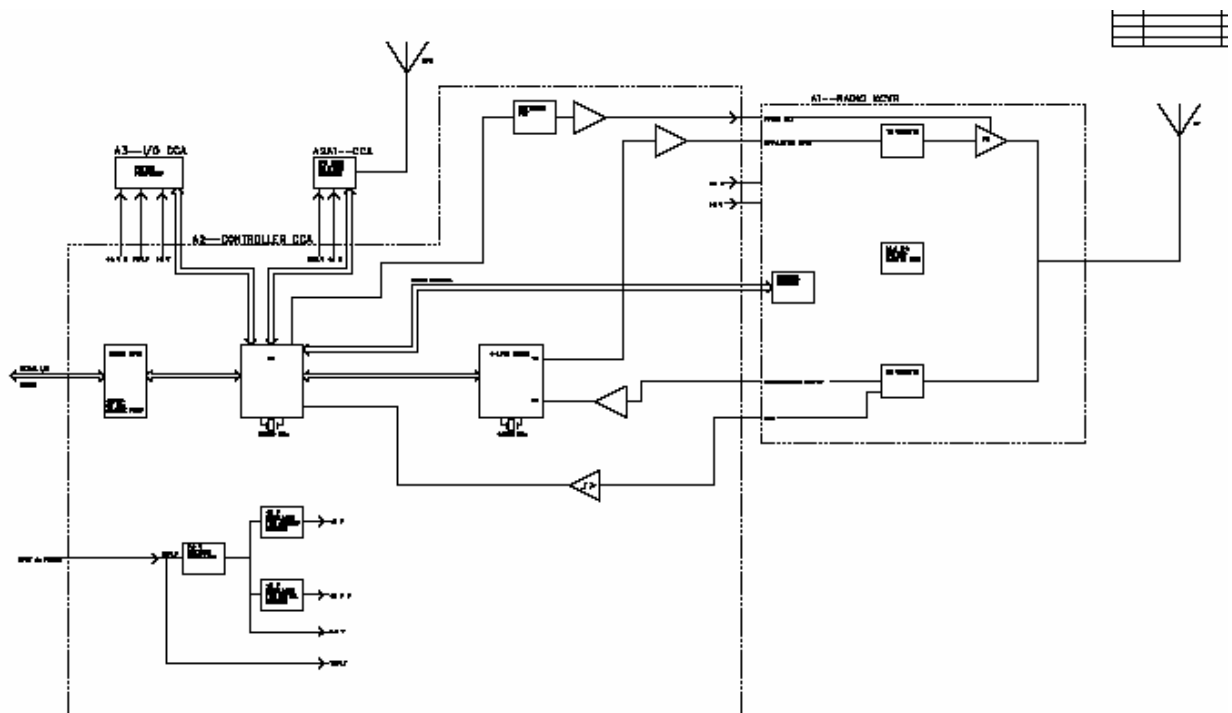


Figure 1. Transmitter Block Diagram