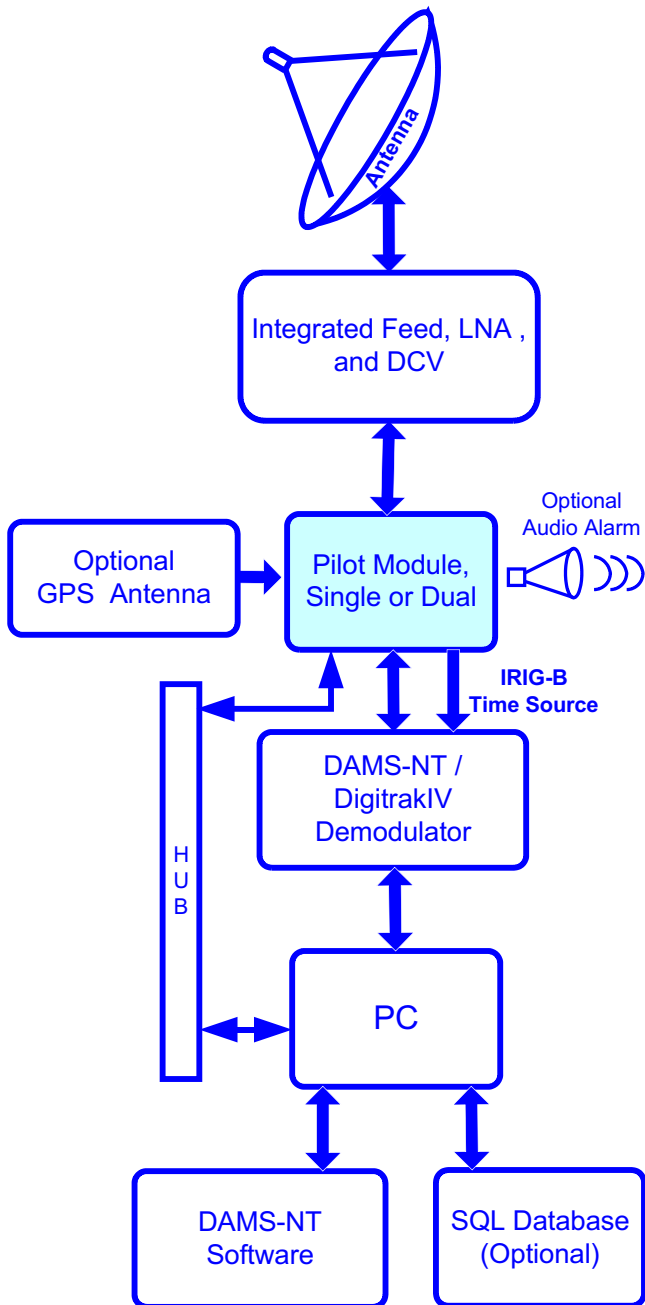




# GOES DCS DUAL PILOT CONTROL MODULE

## GOES DCS Dual Pilot Operation for High Reliability Operation



DRGS Functional Diagram



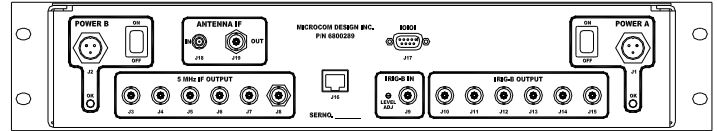
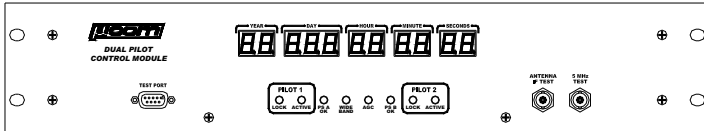
EROS Three Antenna System With DPCMs

## Description

The Microcom **D**ual **P**ilot **C**ontrol **M**odule allows operation of GOES DCS direct reception using the NOAA primary and secondary Pilots. NOAA's primary pilot is at 401.85 MHz and secondary pilot is at 401.7 MHz. The rack mount DPCM is used with the DAMS-NT DRGS based systems. A desk top model (available fall 08) is used with the *DigiTrak* based DRGS. Switch over to the alternate pilot is made automatically (20 ms) whenever there is an interruption in the current operating pilot.



# GOES DCS DUAL PILOT CONTROL MODULE



The DPCM retains operation on the secondary pilot until one of two conditions occurs. If lock is lost on the secondary pilot and the primary is available then operation is returned to the primary. Alternately, the return to primary operation may be manually initiated.

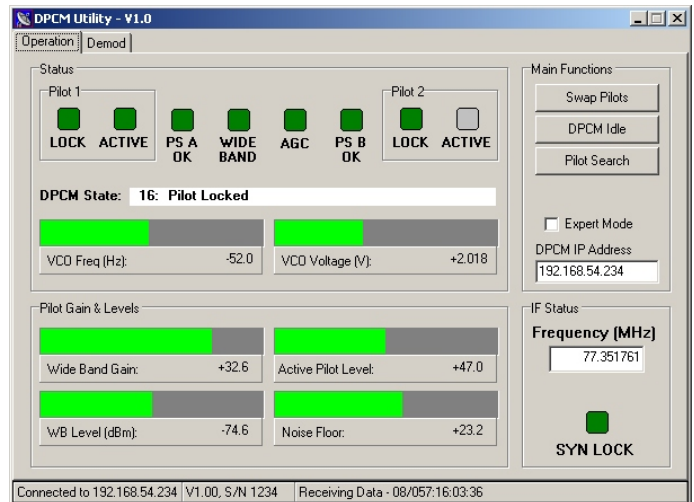
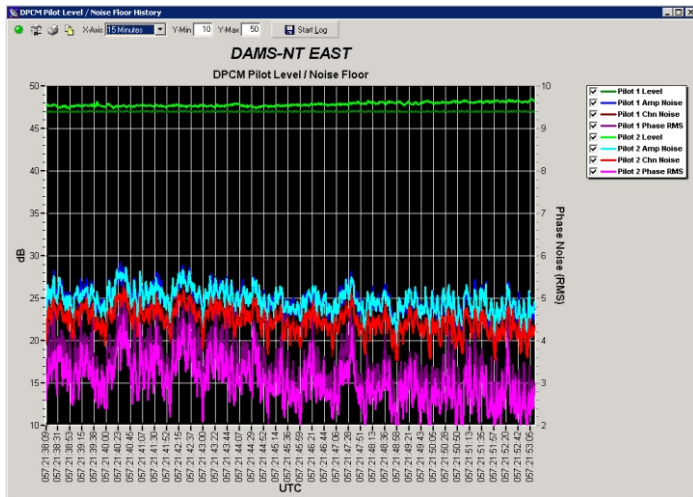
The GOES DCS input signal is frequency translated so that the 401.85 MHz DCS pilot uplink signal is always located precisely at 5 MHz in the IF output signal. Initial acquisition of both primary and back up pilots is made by referencing from the GOES Telemetry and Control Link signal. This feature greatly reduces the chance of false pilot lock.

The standard configuration requires an IIRIG-B input time source. Optionally the DPCM may be ordered with integral GPS receiver to generate IIRIG-B required by the *DigiTrak* demodulators.

Communication with the DPCM is via a TCP/IP LAN connection. Provided with the DPCM at no additional cost is a stand-alone PC utility that utilizes the LAN interface to provide monitoring and control of the unit. The DPCM allows for up to four simultaneous TCP/IP connections; the utility software may be freely distributed and requires no special licensing or installation.

An optional upgrade to the DAMS-NT Server application is also available that integrates the same functionality of the stand-alone utility directly into the DAMS-NT Server application. This upgrade also allows the operating characteristics of both Pilots to be graphically monitored and logged.

Also available is an optional audio alarm to alert operators that the DPCM requires attention. The alarm is triggered on the loss of pilot lock, and must be manually reset.



DPCM Optional DAMS-NT Interfaces, Left: graphical pilot signal displays for both, Right: One of two operating interfaces

## ORDERING INFORMATION

Specify Microcom DPCM selected options of:

- 1) Audio Alert with Manual reset of Lock Loss and Switch over
- 2) DPCM / DAMS-NT Software Upgrade
- 3) IIRIG-B UTC Time Generation using GPS
- 4) Variable Pilot Frequency Designation