LABPRO 5000

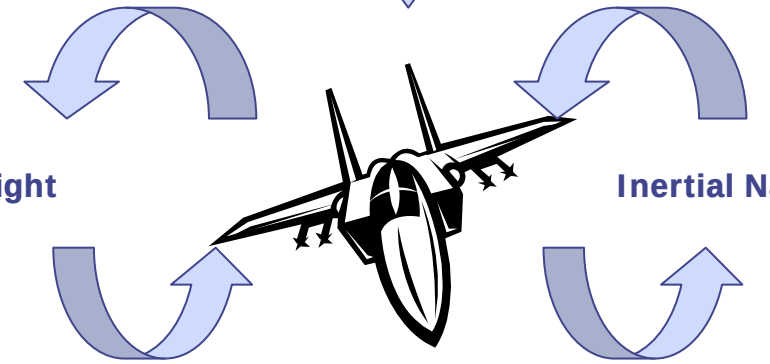
A MODERNIZED GPS SIMULATOR SYSTEM

NAVLABS

INFO@NAVLABS.COM

Global Positioning System

- L_1 L_2 P/Y
- L_1 L_2 M_{AES} SDS
- L_1 L_2 L_2C L_5
- MEVTP CERTIFIED
- ANTENNA MODELS
- FLEX POWER



Realistic Flight

- BUILT IN MOTION GENERATION
- JOYSTICK / REMOTE CONTROL
- SCRAMNet CLOSED LOOP
- ETHERNET CLOSED LOOP
- IMPORT TRAJECTORIES

Inertial Navigation

- HG1700/SDLC
- LN-200 /SDLC
- AMRAAM

SCENARIO BASED JAMMING

- WIDEBAND
- CW
- 80dB DYN RANGE
- 4 ELEMENT WAVEFRONT

Altimeter

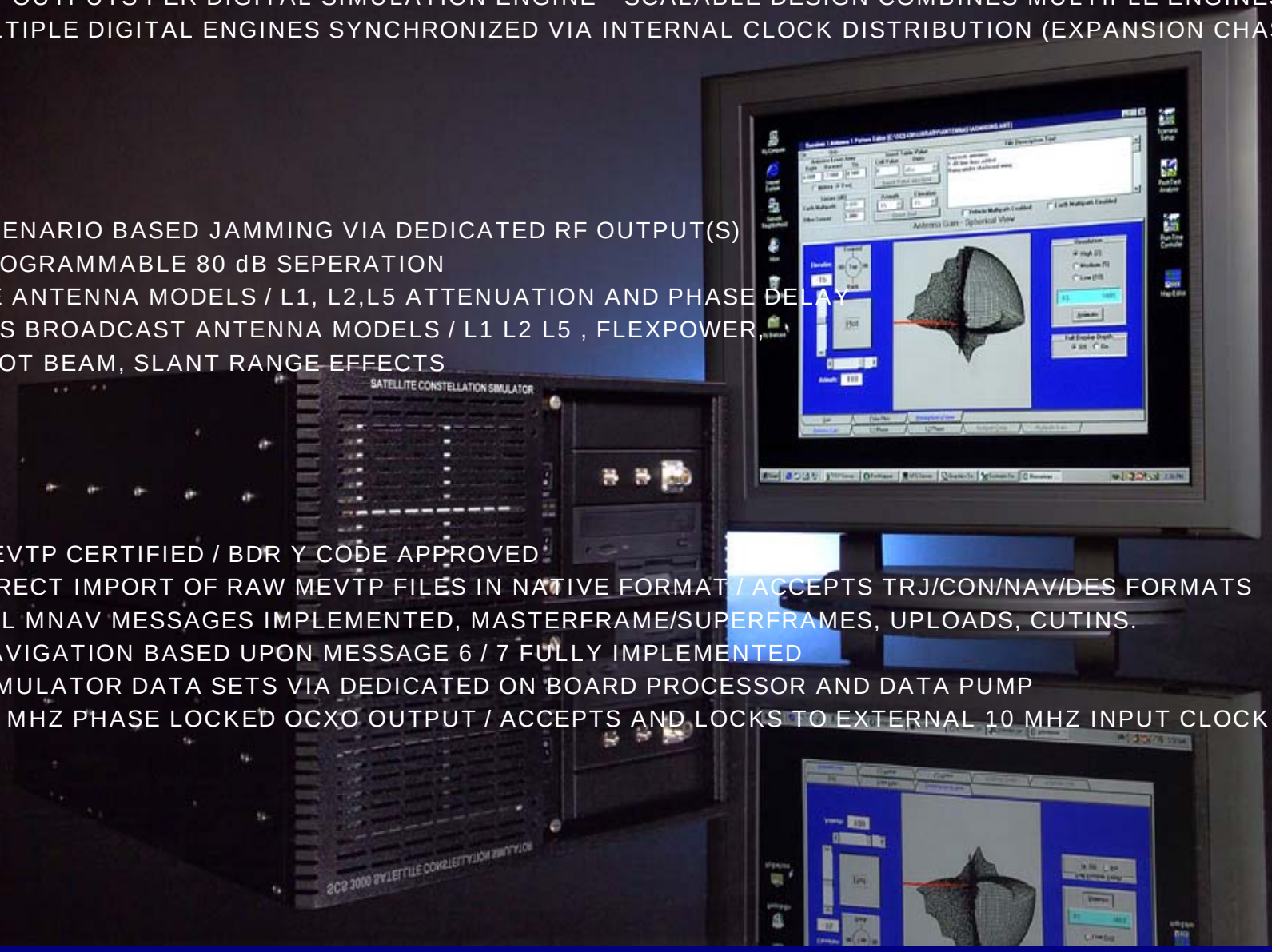
- BARO
- LASER

Differential GPS

- RTCM 104
- SCAT-I,III
- GSSIP 153

CAPABILITIES

. 16 CHANNEL/SATELLITES – EACH CHANNEL L_1 C/A L_1P L_2P L_1M L_2M [Y] or L_1 C/A L_1P L_2C L_2P L_5
• 20 CHANNEL EMBEDDED GPS RECEIVER PROVIDES REAL-TIME MONITOR & OPERATIONAL STATUS
• ALL DIGITAL TO IF / NO CALIBRATION / NO INTERCHANNEL BIAS
. 4 RF OUTPUTS PER DIGITAL SIMULATION ENGINE – SCALABLE DESIGN COMBINES MULTIPLE ENGINES
. MULTIPLE DIGITAL ENGINES SYNCHRONIZED VIA INTERNAL CLOCK DISTRIBUTION (EXPANSION CHASSIS)



• SCENARIO BASED JAMMING VIA DEDICATED RF OUTPUT(S)
PROGRAMMABLE 80 dB SEPERATION
• UE ANTENNA MODELS / L1, L2,L5 ATTENUATION AND PHASE DELAY
. GPS BROADCAST ANTENNA MODELS / L1 L2 L5 , FLEXPOWER,
SPOT BEAM, SLANT RANGE EFFECTS

• MEVTP CERTIFIED / BDR Y CODE APPROVED
• DIRECT IMPORT OF RAW MEVTP FILES IN NATIVE FORMAT / ACCEPTS TRJ/CON/NAV/DES FORMATS
• ALL MNAV MESSAGES IMPLEMENTED, MASTERFRAME/SUPERFRAMES, UPLOADS, CUTINS.
• NAVIGATION BASED UPON MESSAGE 6 / 7 FULLY IMPLEMENTED
• SIMULATOR DATA SETS VIA DEDICATED ON BOARD PROCESSOR AND DATA PUMP
• 10 MHZ PHASE LOCKED OCXO OUTPUT / ACCEPTS AND LOCKS TO EXTERNAL 10 MHZ INPUT CLOCK

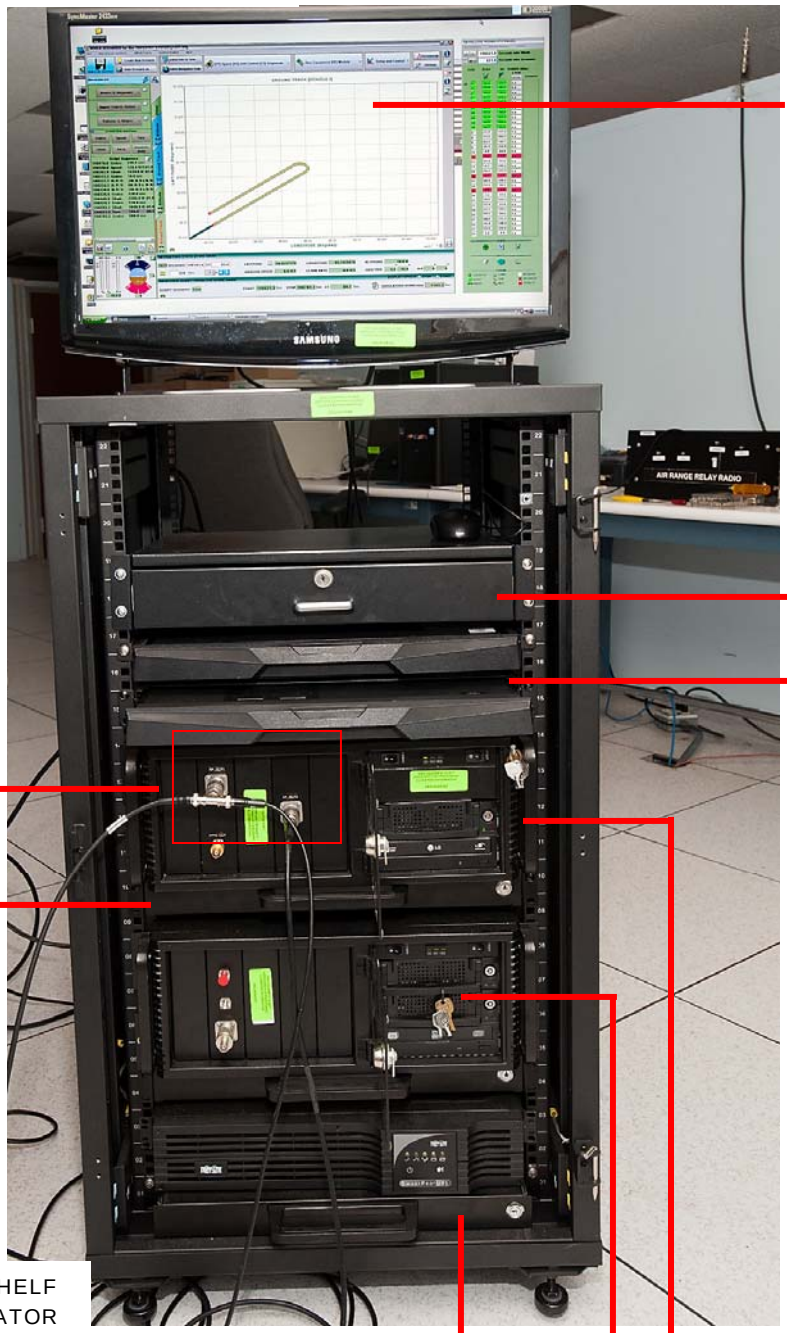
DELIVERY CONFIGURATION

22U INDUSTRIAL STEEL EQUIPMENT RACK

24" HIGH RESOLUTION 1920 X 1200 DUAL INPUT DISPLAY.

INCLUDES RACK TILT MOUNT - SECURELY ATTACHED TO THE RACK

2U HEAVY DUTY LOCKABLE PULLOUT DRAWER



DUAL RF OUTPUT

INTEGRATED KEYBOARD/MOUSE (TRACKBALL OR TOUCH PAD)

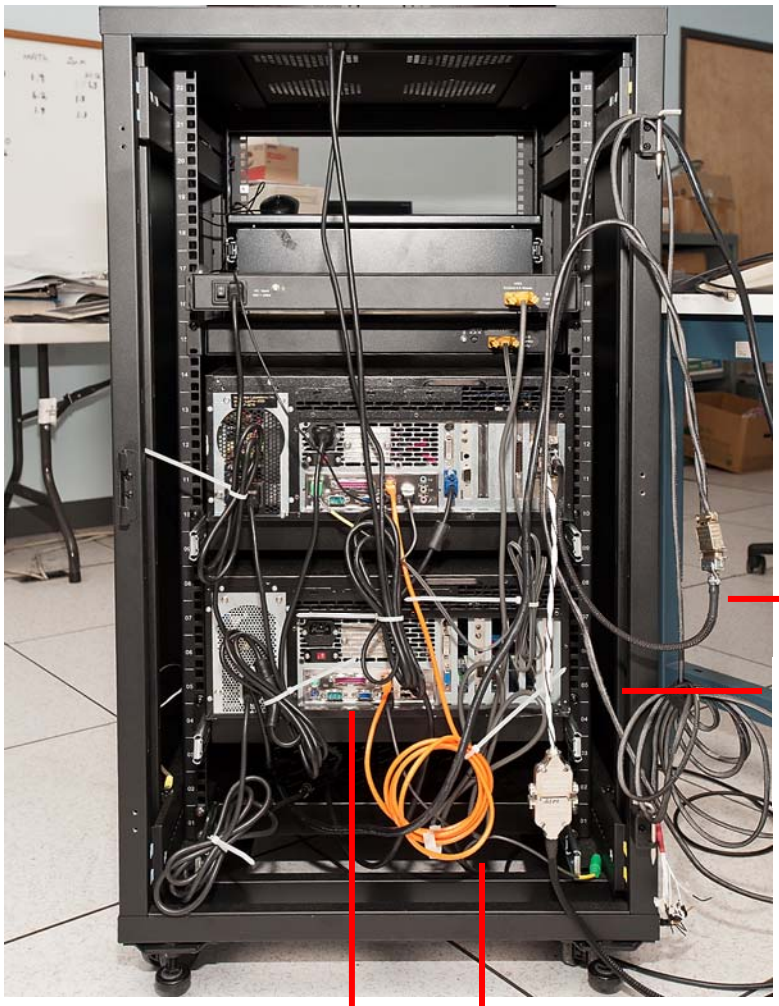
PULLOUT SHELF FOR SIMULATOR TOP PANEL ACCESS

LABPRO GPS5000 MODERNIZED CONSTELLATION SIMULATOR

UNINTERRUPTABLE POWER SUPPLY AND LINE CONDITIONER
(30 MINUTES FULL POWER)

"LAB-BUDDY"
IMU & GPS DATA-RECORDER
[OPTIONAL INCLUDES DEDICATED 2ND KEYBOARD/MOUSE, SHARES HRES MONITOR

22 U / 38"



STRAPDOWN IMU A
OUTPUT [600 HZ]
LN1700/AE08

STRAPDOWN IMU B
OUTPUT [600 HZ]
LN1700/AE08

LABMATE RECORDER

LABMATE / LABPRO ETHERNET
COMMUNICATION PROTOCAL
CLOSED LOOP INTERFACE
(SCRAMNET OPTIONAL)

CHARACTERISTICS

Signals	L1,L2,L2C,L5,SAASM,WAAS,MAES
Power Output	Max ≈ -65 dBm to N Female Dynamic Range 90 dB / 0.5 dB step
Maximum Satellites Output	16 / per embedded digital data engine into 1 RF Output. Multiple RF available
Internal Reference Oscillator	Precision cut OCXO 10MHz IN/OUT Phase locked 1-PPS, 10-PPS to SMA Female
Closed Loop Interface:	SCRAMNet, Ethernet
Remote Control Interface:	GPIB, Ethernet, RS232
Accuracy:	Pseudorange < 0.0004 m Pseudorange Rate < 0.0002 m/s
Maximum Dynamics:	Velocity 15,000 m/sec Acceleration 5,000 m/sec2 Jerk 10,000 m/sec3
Dimensions:	19” x 7” (4U) x 25” Rack mount + handles

COMPLIANCE STANDARDS

- COMPLIANT WITH
  - ICD-GPS-200D
  - ICD-GPS-705 IRN-705-002
  - ICD-GPS-700 IRN-700A-003
  - ICD-GPS-200C IRN-200C-005R1
  - RTCA-DO-229C
- TEST STANDARDS

  MEVTP: Modernized Evaluation and Verification Test Procedure 05-08-2007
- AVIONICS DATA

  STRAPDOWN INERTIAL MEASUREMENT UNIT
  - HONEYWELL HG1700/ SDLC
  - LITTON LN 200 SDLC
  - AMRAAM

  1553:
  - USAF: I-6 / I-11 / I-15
  - NAVY: I-8 / I-9 / I-10 / I-12
  - GRAM: I-27

  ARINC 429:
  - RTCA/DO 217 Special Category-I differential corrections
  - ARINC-743 supported labels:
    - 203 – Pressure Altitude
    - 204 – Barometric Altitude
    - 210 – True Airspeed
    - 310 – Latitude
    - 311 – Longitude
    - 314 – Heading