

# etep<sup>®</sup>

Airborne recorder & Data acquisition system

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# Nano

Cockpit mission Recorder

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## Mission Recorder



**8 to 512GB**  
Solid-state memory  
800 Mbits/s de flow-rate.

**ETEP-554A Central Unit**  
2 x USB ( For configuration and maintenance)  
1 x Ethernet channel  
1 x Audio channel

**ETEP-556 + ETEP-582A**  
16 x Analog channels (Or discrete)  
2 x Video channels

**ETEP-555A**  
2 x PCM channels  
2 x RS 232 or 422 channels  
2 x Mil STD 1553B  
2 x ARINC 429

**ETEP-595A**  
Ultra capa board to prevent power down

\*All Channels can be design on your special requirements.

**HD Video mode** **1080 P<sub>or</sub>I**

MJPEG 2000  
Wavelet compression



### Unit possibility

THE NANO MISSION AIRBORNE DATA RECORDER : Until " 8 to 512 Gbytes" solid state disk with 800 Mbits/s de flow-rate. With real time, PCM Irig 106 transmitting (chapter 4)

Ultra-compact recorder is weight <1Kg it allows to record in priority, video channels (MJPEG 2000 Wavelet compression) and MIL bus 1553, or PCM, Arinc 429 or RS 232 and 422. This recorder has also, the possibility to receive all modules of S family airborne recorder

### Applications

- Mission uploading
- Vehicle, Helicopter & aircraft pilot training and mission debriefing
- Reconnaissance and surveillance (aircraft and Helicopter)

**Chapter 10**  
compliant



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Airborne recorders & Data acquisition systems

## 8 to 512GB

### Solid-state memory

800 Mbits/s de flow-rate.

#### ETEP-554A Central Unit

2 x USB ( For configuration and maintenance)  
1 x Ethernet channel  
4 x Audio channel

#### ETEP-556 + ETEP-582A

16 x Analog channels (Or discrete)  
2 x Video channels

#### ETEP-555A

2 x PCM channels  
2 x RS 232 or 422 channels  
2 x Mil STD 1553B  
2 x ARINC 429

#### ETEP-595A

Ultra capa board to prevent power down

\*All Channels can be design on your special requirements.

#### HD Video mode

1080 P<sub>or</sub>I

MJPEG 2000  
Wavelet compression

#### IRIG B time or GPS, and audio channels

Number of channels: 1 or 2

Sample frequency by channel:  
12 KHz /channel

IRIG B Channel:

400 mV to 6 V pp, 1000 Hz, 1/3 3/3 modulation

Maximum bandwidth and resolution:  
5 KHz, 16 bits

Configurable inputs  
impedance and inputs levels:

600 ohms or 1 M ohms  
Single ended  
0 - 10 Vpp

#### PCM and/or MIL STD 1553B

Number of channels  
1 for PCM and 1 for MIL STD 1553  
or 2 PCM or 2 MIL STD 1553

Minimum flow rate by channel  
> 1 KHz, PCM mode

Maximum flow rate by channel  
20 Mbps/Channel, PCM mode

Acquisition mode: External clock for PCM

Programmable inputs NRZ or Biphasic for PCM:

TTL, Analogic  $\pm 5$  Vpp (diff or single ended), RS 422,  
MIL-STD1553B,

#### Dimensions

Height: 2.7 inches, 68 mm

Width 4.4 inches, 112 mm

Depth 3.9 inches, 100 mm

Weight ~ 1Kg with SSD (solid state disk)

Volume Adaptability to 3/8 ATR  
0,7 litres

#### Temperature

In storage: - 55°C to + 90°C

In use: - 40°C to + 71°C.

Test MIL STD 810D method 520.0(procedure III)

#### Power

28Volts DC (16 to 36V)

MIL STD704 D/E

Consumption: 15 to 25 Watts (depends of configuration)  
,except heating (25 w)



REF : D.T.MUX NANO

## Nano

### Cockpit mission Recorder

Short list boards and system  
ETEP 2011

#### DTS (Data Transfert system)

Allow space memory to solid state disk to record  
other parameters during the mission.

#### Video channels (MJPEG 2000 HD 1080P/I)

Number of channels: 1 to 4 (1 to 2 high  
resolution or VGA)

Standard inputs:

- Composite PAL/NTSC
- RGB inputs
- STANAG A, High resolution or UXVGA.

Resolution and frame rate:

64x64 to 720x576  
30fps (NTSC)- 25fps(PAL)  
high resolution : 1920 x 1080 (FULL HD 1080p)

Compression mode:

JPEG 2000 (wavelet) encoding  
Adjustable bit rate (1 to 20 Mbps) and frame rate  
(1 to 25:30 image/s).

Input levels  
0,1 to 10 Vpp

#### Vibrations and shocks

##### Vibrations

MIL STD 810D-E metod 514.3 (procedure 1).  
0,04 g<sup>2</sup> of 5 to 1000 Hz, 1 hour per axis (3 axis)

##### Shocks

1/2 sinus , > 60g, 11 ms (6/2 axes)  
(MIL STD 810D-E method 513.3 (proc.1&2)

Accelerations MIL STD 810E method 513.3 :  
10 g (6/2 axes)

##### Crash test

20g on 3 axes

##### EMI/EMC

MIL-STD-461E

#### Humidity

In storage: 5% to 95% .

In use: 5% to 95 % without condensation

MIL STD 810D method 507.2 (procedure III)

#### Altitude and decompression:

Min: -1500 feet, max: 60,000 feet

With 12.000 feet/minute (420 Kpa/minute).

#### MTBF

MIL HDBK 217F 30.000 hours

#### MTTR

<30 minutes

Custom Developments : Thanks to our full control over  
manufacturing process, our team will assist you on your  
special requirements.



For more information,  
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