Application Note
AN112-025

Data Interface
Specification Document
Asterix CAT025

Title	Description	Version	Date
Asterix Category (CAT) 025 (19$_h$)	Ground Station Status	1.0	October 19, 2019

Planevision
SYSTEMS

Table of Contents

1.   General

The usage of this Asterix Category CAT 025 by the PlaneTRack surveillance receiver is to transmit ground station status data.

1.1. Purpose

This document provides information about the implementation, specific usage and deviations for CAT 025 data output from *PlaneTRack* surveillance receivers.

For detailed information on CAT 025 please refer to the current EUROCONTROL document at:

https://www.eurocontrol.int/sites/default/files/content/documents/single-sky/specifications/Cat025pt26ed12.pdf

2.   User Application Profile and Data Blocks

CAT = 025 (19$_h$)	LEN	FSPEC	Items of the first record		FSPEC	Items of the last record
1 octet	2 octets	2 octets			n.a.	n.a.

The below table shows which data items are supported by the PlaneTRack implementation of CAT 025. Green data items marked as M or O are transmitted, while red data items are not available.

Type Item	001 Service and System Status	002 Component Status	003 Service Statistics
I025/000 Report Type	M	M	M
I025/010 Data Source Identifier	M	M	M
I025/015 Service Identification	M	X	M
I025/020 Service Designator	O	X	O
I025/070 Time of Day	M	M	M
I025/100 System & Service Status	O	X	X
I025/105 Service Error Codes	O	X	X
I025/120 Component Status	O	M	X
I025/140 Service Statistics	X	X	M
I025/200 Message Identification	O	O	O
I025/600 System Reference Point	M	O	X
I025/610 Height of System Reference Point	M	O	X

T-1: Table of available data items

3.   Deviations from CAT 025 Standard Data Items

This section lists deviations from CAT 025 standard data items as they are implemented by the PlaneTRack ADS-B receiver output.

3.1   Data Item I025/015, Service Identification

This data item is always set to ZERO (0).

3.2   Data Item I025/020, Service Designator

This data item is always set to "1090ADSB".

3.3   Data Item I025/070, Time of Day

The actual accuracy of this timestamp is 1 second, while the LSB bit 1 is 1/128 seconds.

3.4   Data Item I025/100, System & Service Status

This data item is set to ZERO (0), if no degradation exists.
This data item is set to SSTAT=2 (bit3=1), if a GPS error exists.

Octet no. 1

8	7	6	5	4	3	2	1
NOGO	OPS		SSTAT				FX

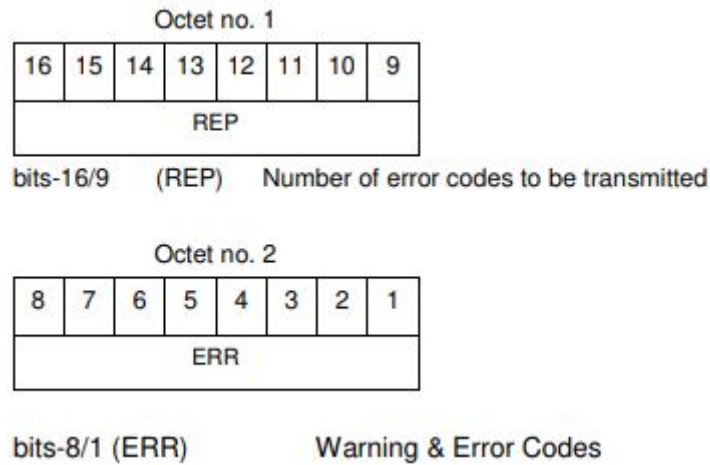|		
bit-8	(NOGO)	Operational Release Status of the Data = 0 Data is released for operational use = 1 Data must not be used operationally
bit-7/6	(OPS)	Operational Service Mode = 0 Operational = 1 Operational but in Standby = 2 Maintenance = 3 reserved for future use
bits-5/2	(SSTAT)	System and Service State = 0 Running = 1 Failed = 2 Degraded = 3 Undefined = 4 – 15 reserved for future use
bit-1	(FX)	= 0 No extension = 1 Extension

3.5   Data Item I025/105, System & Service Error Code

This data item is set to ZERO (0), if no degradation exists (One octet sent only = 00).
This data item is set to ERROR CODE=2 (Octet No.2, bit2=1), if a GPS error exists (Time Source Invalid). Two octets are sent in this case, i.e. 01 followed by 02.

Octet no. 1

16	15	14	13	12	11	10	9
REP							

bits-16/9   (REP)   Number of error codes to be transmitted

Octet no. 2

8	7	6	5	4	3	2	1
ERR							

bits-8/1 (ERR)   Warning & Error Codes

3.6   Data Item I025/120, Component Status

This data item is not available.

3.7   Data Item I025/140, Service Statistics

This data item is not available.

3.8   Data Item I025/200, Message Identification

This data item represents a 24-bit number that is upcounted with each CAT025 packet transmission.

3.9   Data Item I025/600, Reference Point (Position)

This data item represents a 64-bit number that represents the latitude and longitude of the receiver position.

3.10 Data Item I025/610, Reference Point (Height over MSL)

This data item represents a 16-bit number that represents the height over MSL of the receiver position.

4   Network interface

CAT025 data are sent whenever a CAT021 channel (V0.23 or V0.26) is activated in the configuration menu.

The same destination IP/port as for CAT021 is used.

The transmission interval is 20 secs.

The transmission cannot be inhibited.

Record of Revisions

1.0	Oct 19, 2019	Initial issue