

Asterix category 019 - Multilateration System Status Messages

category: 019

edition: 1.3

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Preamble

Surveillance data exchange.

Description of standard data items

I019/000 - Message Type

definition: This Data Item allows for a more convenient handling of the messages at the receiver side by further defining the type of information.

Element

bit size: 8

Values:

- 1: Start of Update Cycle
- 2: Periodic Status Message
- 3: Event-triggered Status Message

NOTES:

- 1. In applications where data of various types is exchanged, the Message Type Data Item facilitates the proper message handling at the receiver side.
- 2. All Message Type values are reserved for common standard use.

I019/010 - Data Source Identifier

definition: Identification of the system from which the data is received.

Group

I019/010/SAC - System Area Code

Element

bit size: 8

Raw Content

I019/010/SIC - System Identification Code

Element

bit size: 8

Raw Content

Note:

- The up-to-date list of SACs is published on the EUROCONTROL Web Site (<http://www.eurocontrol.int/asterix>).

I019/140 - Time of Day

definition: Absolute time stamping expressed as UTC.

Element
bit size: 24
Unsigned quantity
 $\text{LSB} = 1/2^7 \text{ s} \approx 7.8125e-3 \text{ s}$
unit: "s"

Note:

The time of day value is reset to zero each day at midnight.

I019/550 - System Status

definition: Information concerning the configuration and status of a System.

Group

I019/550/NOGO - Operational Release Status of the System

Element
bit size: 2
Values:
0: Operational
1: Degraded
2: NOGO
3: Undefined

I019/550/OVL - Overload Indicator

Element
bit size: 1
Values:
0: No overload
1: Overload

I019/550/TSV - Time Source Validity

Element
bit size: 1
Values:
0: Valid
1: Invalid

I019/550/TTF - Test Target

Element
bit size: 1
Values:
0: Test Target Operative
1: Test Target Failure

Spare bits: 3

Note:

A time source is considered as valid when either externally synchronised or running on a local oscillator within the required accuracy of UTC.

I019/551 - Tracking Processor Detailed Status

definition: Information concerning the configuration and status of the Tracking processors.

Group

I019/551/TP1A

Element
bit size: 1
Values:
 0: Standby
 1: Exec

I019/551/TP1B

Element
bit size: 1
Values:
 0: Faulted
 1: Good

I019/551/TP2A

Element
bit size: 1
Values:
 0: Standby
 1: Exec

I019/551/TP2B

Element
bit size: 1
Values:
 0: Faulted
 1: Good

I019/551/TP3A

Element
bit size: 1
Values:
 0: Standby
 1: Exec

I019/551/TP3B

Element
bit size: 1
Values:
 0: Faulted
 1: Good

I019/551/TP4A

Element
bit size: 1
Values:
 0: Standby
 1: Exec

I019/551/TP4B

Element
bit size: 1
Values:
 0: Faulted
 1: Good

Note:

Both Bits of one TP set to zero means, that this TP is not used in the system.

I019/552 - Remote Sensor Detailed Status

definition: Information concerning the configuration and status of the Remote Sensors (RS)

Repetitive

Regular, 1 byte(s) REP field size.

Group

I019/552/RSI - 8-bit Identification Number of RS

Element

bit size: 8

Raw Content

Spare bits: 1

I019/552/RS1090 - Receiver 1090 MHz

Element

bit size: 1

Values:

0: Not present

1: Present

I019/552/TX1030 - Transmitter 1030 MHz

Element

bit size: 1

Values:

0: Not present

1: Present

I019/552/TX1090 - Transmitter 1090 MHz

Element

bit size: 1

Values:

0: Not present

1: Present

I019/552/RSS - RS Status

Element

bit size: 1

Values:

0: Faulted

1: Good

I019/552/RSO - RS Operational

Element

bit size: 1

Values:

0: Offline

1: Online

Spare bits: 2

I019/553 - Reference Transponder Detailed Status

definition: Information concerning the configuration and status of the Reference Transponder.

Extended

I019/553/REFTR1 - Ref Trans 1 Status

Element

bit size: 2

Values:

- 1: Warning
- 2: Faulted
- 3: Good

Spare bits: 2

I019/553/REFTR2 - Ref Trans 2 Status

Element

bit size: 2

Values:

- 1: Warning
- 2: Faulted
- 3: Good

Spare bits: 1

(FX) - extension bit

I019/553/REFTR3 - Ref Trans 3 Status

Element

bit size: 2

Values:

- 1: Warning
- 2: Faulted
- 3: Good

Spare bits: 2

I019/553/REFTR4 - Ref Trans 4 Status

Element

bit size: 2

Values:

- 1: Warning
- 2: Faulted
- 3: Good

Spare bits: 1

(FX) - extension bit

I019/600 - Position of the MLT System Reference Point

definition: Position of the MLT reference point in WGS-84 Coordinates.

Group

I019/600/LAT - Latitude

Element

bit size: 32

Signed quantity

LSB = $180/2^{30} \text{ }^\circ \approx 1.676380634307861328125e-7 \text{ }^\circ$

unit: "°"

≥ -90.0

≤ 90.0

I019/600/LON - Longitude

Element

bit size: 32

Signed quantity

LSB = $180/2^{30} \text{ }^\circ \approx 1.676380634307861328125e-7 \text{ }^\circ$

unit: "°"

≥ -180.0

< 180.0

I019/610 - Height of the MLT System Reference Point

definition: Height of the MLT system reference point in two's complement form. The height shall use mean sea level as the zero reference level.

Element

bit size: 16

Signed quantity

LSB = $1/2^2$ m \approx 0.25 m

unit: "m"

≥ -8192.0

≤ 8192.0

I019/620 - WGS-84 Undulation

definition: WGS-84 undulation value of the MLT system reference point, in meters. Geoid undulation value is the difference between the ellipsoidal height and the height above mean sea level

Element

bit size: 8

Signed quantity

LSB = 1 m \approx 1.0 m

unit: "m"

I019/RE - Reserved Expansion Field

definition: Expansion

Explicit (ReservedExpansion)

I019/SP - Special Purpose Field

definition: Special Purpose Field

Explicit (SpecialPurpose)

User Application Profile

- 1: I019/010 - Data Source Identifier
- 2: I019/000 - Message Type
- 3: I019/140 - Time of Day
- 4: I019/550 - System Status
- 5: I019/551 - Tracking Processor Detailed Status
- 6: I019/552 - Remote Sensor Detailed Status
- 7: I019/553 - Reference Transponder Detailed Status
- (FX) - Field extension indicator
- 8: I019/600 - Position of the MLT System Reference Point
- 9: I019/610 - Height of the MLT System Reference Point
- 10: I019/620 - WGS-84 Undulation
- *Spare*
- *Spare*
- 13: I019/RE - Reserved Expansion Field
- 14: I019/SP - Special Purpose Field
- (FX) - Field extension indicator