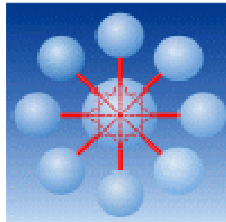


---

# EDI-Services

## Cargo-IMP Amendments For ZAPP-Air - Technical Response (FMA/FNA) -

Version 1.0.1



## DAKOSY

Datenkommunikationssystem AG

Mattentwiete 2

20457 Hamburg

Telefon: 040 370 03 – 0 Fax: - 370

Created:	<b>Daniel Blanken</b>
Checked:	:
Released:	:
Location:	:
Printed:	: 21.09.2009 11:49:00
File:	:

**Änderungsnachweis**

Version	Betr. Abschnitte	Grund	Name	Datum
1.0	alle	Initial Release	D. Blanken	02.11.2007
1.0.1	1.2.6	Bugfix: Corrected field length of CCS Participant Identifier (19 char instead of 1)	D. Blanken	21.09.2009

EDI-Services  
Daniel Blanken  
+49 40 37003 502  
<mailto:blanken@dakosy.de>

# Cargo-IMP Amendments for ZAPP-Air

## Contents

<b>1. THE ZAPP-AIR EDI INTERFACE .....</b>	<b>4</b>
1.1 GENERAL INFORMATION .....	4
1.1.1 Introduction .....	4
1.1.2 Information on Message Exchange .....	4
1.2 MESSAGE FORMAT CARGO-IMP .....	4
1.2.1 Structures and Limitations .....	4
1.2.2 The EDIFACT Envelope .....	5
1.2.3 Structure of the UN/EDIFACT Envelope .....	6
1.2.4 Structure of the UNB-Segment .....	6
1.2.5 Structure of the UNH segment.....	7
1.2.6 PIMA Addresses .....	7
<b>2. STRUCTURE OF THE MESSAGE DESCRIPTIONS .....</b>	<b>8</b>
2.1 TERMINOLOGY .....	8
2.2 PRESENTATION OF THE MESSAGE STRUCTURE.....	8
2.3 STRUCTURE OF THE SEGMENT DESCRIPTIONS.....	9
<b>3. THE MESSAGE FMA – TECHNICAL ACKNOWLEDGEMENT .....</b>	<b>11</b>
3.1 USAGE IN ZAPP-AIR.....	11
3.2 STRUCTURE OF THE MESSAGE .....	11
3.3 DESCRIPTION OF THE SEGMENTS .....	12
3.3.1 ACK.....	12
3.3.2 Message Reference.....	12
<b>4. THE MESSAGE FNA – TECHNICAL ERROR MESSAGE .....</b>	<b>13</b>
4.1 USAGE IN ZAPP-AIR.....	13
4.2 STRUCTURE OF THE MESSAGE .....	13
4.3 DESCRIPTION OF THE SEGMENTS .....	13
4.3.1 ACK.....	13
4.3.2 Message Reference.....	14
<b>5. FMA EXAMPLE MESSAGES .....</b>	<b>15</b>
5.1 FMA IN RESPONSE TO AN FWB MESSAGE .....	15
5.2 FNA IN RESPONSE TO AN ERRORNEOUS FSU.....	15

# 1. The ZAPP-Air EDI Interface

## 1.1 General Information

### 1.1.1 Introduction

Based on the message format „Cargo-IMP“, defined by the IATA/ATA, DAKOSY has created an EDI interface for the communication between ZAPP-Air and the inhouse systems of ZAPP-Air participants.

Cargo-IMP is an abbreviation for „Cargo Interchange Message Procedures“, it defines a variety of EDI messages for electronic data interchange in the airfreight sector.

This document explains the Cargo-IMP messages FMA and FNA which are used as technical responses (acknowledgement and error report) in most of ZAPP-Air's EDI scenarios.

### 1.1.2 Information on Message Exchange

Usually, the FTP protocol is used for the exchange of messages between DAKOSY and it's customers. Detailed information can be found in the (german) document „Datenaustausch mit DAKOSY über FTP“<sup>1</sup>.

The use of different communication protocols is possible, but requires additional talks with DAKOSY.

## 1.2 Message Format Cargo-IMP

The following chapter gives an overview of the Cargo-IMP format as it is used by DAKOSY as well as the EDIFACT envelope used for addressing communication partners.

### 1.2.1 Structures and Limitations

The Cargo-IMP Standard defines a number of limitations and regulations regarding the character set to be used and the formatting of the individual records. These are as follows:

Table 1 - Syntax Cargo-IMP

Element	Description
Segments	A Cargo-IMP Message is sub-divided into logical groups of data (“Segments”). The shipper address would be an example for a segment. Usually segments are identified by a three-character field at their beginning, the so-called “Tag”. The Tag for the shipper address is “SHP”, for example.
Fields	Cargo-IMP Segments are divided into individual data elements (Fields) which contain the actual data. The fields are separated, either by a separator character (Slash, Dash or Carriage Return, for example) or by fixing the fields' length. Each field has a fixed format, defining the characters/values that may be used for its content.

<sup>1</sup> [http://www.dakosy.de/support/documents/hb\\_ftp\\_v3.3\\_d\\_210905.pdf](http://www.dakosy.de/support/documents/hb_ftp_v3.3_d_210905.pdf)

Repetition and Grouping of fields	In some cases, fields or groups of fields may be repeated within a segment.
Character Set	<p>Depending on the field format, the following characters may be used in Cargo-IMP messages:</p> <ul style="list-style-type: none"> <li>▪ Capital Letters A – Z (no Diacriticals / Umlauts)</li> <li>▪ Digits 0 – 9</li> <li>▪ The point '.'</li> <li>▪ The dash '-'</li> <li>▪ A white space character ' '</li> </ul> <p>The point is defined to be the decimal point.</p>
Line Length	<p>The maximum length for a line in Cargo-IMP is defined to be 70 characters (including a carriage return at it's end).</p> <p>If a segment's content can be longer than 70 characters, the segment's fields are spread over several lines. After a segment's first line, each subsequent line is begun with a slash:</p> <pre>CNE/MR. MARK MYERS /TADMORE STREET /NEW YORK</pre>

### 1.2.2 The EDIFACT Envelope

Since Cargo-IMP itself does not define any possibilities for addressing messages, a UN/EDIFACT envelope is used for this purpose. Within the EDIFACT envelope, the Cargo-IMP message is used as if it was a single EDIFACT segment.

A detailed discussion of the UN/EDIFACT standard is not a part of this document, please refer to the documentation of the UN's Joint Syntax Working Group<sup>2</sup> for further information.

<sup>2</sup> <http://www.gefeg.com/jswg/>

### 1.2.3 Structure of the UN/EDIFACT Envelope

The basic structure of a Cargo-IMP message with the UN/EDIFACT envelope is as follows:

```

UNB-Segment
UNH-Segment
Cargo-IMP Nachricht
UNT-Segment
UNZ-Segment

```

#### Graphic 1 - Structure of a Cargo-IMP message within the EDIFACT envelope

Since the Cargo-IMP message is treated as a single EDIFACT segment within the envelope, the segment counter in the envelope's UNT segment has a fixed value '3'.

### 1.2.4 Structure of the UNB-Segment

Below, one can find an example of a UNB-Segment as it is used for Cargo-IMP messaging:

Character Set: „IATA:1“	Recipient's PIMA Address	Message's UNB reference	
UNB+IATA:1+SENDER:PIMA+EMPFÄNGER:PIMA+071105:1052+ZPH01141+++++1'			
Sender's PIMA Address	Date/Time of the message	Test Indicator	

#### Graphic 2 - Structure of the UNB Segment for Cargo-IMP messaging

**The test indicator in the UNB segment must be set for all test messages sent to ZAPP-Air. For the use in production, the indicator must not be used.**

## 1.2.5 Structure of the UNH segment

Below, an example for the UNH-Segment is depicted. The information on the message type ( CIMFWB : 15 ) is of special importance. When using the EDIFACT envelope for Cargo-IMP messaging, the format for the message type fields is: CIM[Message Type]:[Version].

Example for the UNH segment used with an FWB message:

UNH+1+CIMFWB:15+1'

## 1.2.6 PIMA Addresses

For a Cargo-IMP message's EDIFACT envelope, the IATA/ATA has defined the structure of sender/recipient addresses as depicted below. For communicating with ZAPP-Air, the participant's PIMA address has to be registered with DAKOSY.

**DAKOSY's PIMA Address is: REUSWH87DEDKSY**

Table 2 - Structure Of PIMA Addresses

Field	Length	Status
CCS System Identifier	3	Mandatory
CCS Group Code	3	Mandatory
CCS Code Type	2	Mandatory
CCS Participant Identifier	19	Mandatory
Slash	1	Conditional
Airport Code	3	Optional
CCS Participant Office	2	Optional

## 2. Structure of the Message Descriptions

### 2.1 Terminology

Table 3 - Terms used within the Cargo-IMP message descriptions

Begriff	Bedeutung
CRLF	“Carriage Return, Line Feed“ (Newline)
Hyphen	-
Slash	/
SMI	Standard Message Identifier – The first segment of a Cargo-IMP message, describing the message’s type and version (e.g. FWB/15)

### 2.2 Presentation of the Message Structure

This documentation presents the structure of a Cargo-IMP message as follows:

Table 4 - Example of a Message Structure

#### Message NAME

Segment Group: X		Repetitions: Z/Y		
No.	Tag	Name	Occ.	Remarks
1	ABC	Standard Message Identifier	1	Information
2	DEF	DDD	1 - 2	Further Informationen
(...)				

The meaning of the individual elements of a Message Structure table is as follows:

#### Nachricht NAME:

NAME is the name of the Cargo-IMP message.

#### Segment Group: X

Some of the Cargo-IMP messages used in ZAPP-Air are sub-divided into segment groups. A segment group is a repeatable group of segments within a Cargo-IMP message. Inside of a segment group, the individual segments have to appear in a fixed order, depending on the minimum/maximum repetition defined for the segment.

#### Repetitions: Z/Y

The number of the (minimum)/maximum repetitions allowed for a segment group. A fixed number of repetitions is represented by a single digit (i.e. 2 for exactly two occurrences of a segment)

#### No.

No special meaning.

#### Tag

The „Tag“ are three capital letters which identify a segment

#### Name

The segment’s name



**Occ.**

The number of minimum/maximum occurrences allowed for a segment within a segment group (e.g. "1 - 3" the segment has to occur at least once, but not more often than 3)

**Remarks**

Self explaining

*Segments shaded in blue*

...are segments which have been added or amended for the use with ZAPP-Air.

## 2.3 Structure of the Segment Descriptions

The structure of the individual segments and field contents of the Cargo-IMP messages is presented as depicted below:

Table 5 - Example for a segment structure

**Segment FSU**

Field Group: 1		Repetitions: 1			
No:	Name	Status	Format	Example	Remarks
1	Tag	M	a[3]	FSU	Fester Wert „FSU“

**Field Group: 1**

Like segments, fields within segments can be grouped as well.

**Repetitions: 1**

The number of repetitions admissible for a field group.

**Segment FSU**

The name of a segment (usually the same as it's tag)

**No.**

No special meaning

**Status**

Possible statuses are:

Table 6 - Possible Field Statuses

Status	Bedeutung
M	The segment <b>must</b> occur
O	The segment <b>may</b> occur
D	The segment <b>must occur under certain circumstances</b> (as described in "Remarks")
X	The segment <b>must not</b> be used

**Format**

The format describes the characters allowed for a field's content. It is structured like this:

[Character[[Length]][Decimal Point]

**Table 7 - Formats**

<b>Format</b>	<b>Character Set</b>
a	A – Z, capital letters only
n	digits 0 – 9
m	All characters from set a to n
t	All characters from set m, point, dash and white space

**Example**

Self explaining

**Remarks**

Self explaining

## 3. The message FMA – Technical Acknowledgement

### 3.1 Usage in ZAPP-Air

The message FMA is used to inform the sender of a Cargo-IMP Message that his message was received and could be processed by the receiving system.

In ZAPP-Air the FMA Message sent in response to AWB Data (Cargo-IMP Message FWB or FHL) carries some additional references in order to simplify processing of the FMA at the receiver's side.

### 3.2 Structure of the message

The following index is an overview of the segments of the FMA message, as used in ZAPP-Air. The segment groups/ segments are listed in order of appearance within the FMA.

Segments which are highlighted in light blue have been amended or added for the use of the FMA message in ZAPP-Air.

#### Message FWB

Segment group: 1		Occurrences: 1		
No.	Tag	Name	Occ.	Remarks
1	FMA	Standard Message Identifier	1	Identifies message as FMA.
2	ACK	Acknowledgement	1	Textual Information about the acknowledgement
3		Message Reference	1	The first two lines of the original message (i.e. the message which is acknowledged).

### 3.3 Description of the segments

#### 3.3.1 ACK

##### 3.3.1.1 Short Description

The "ACK" segment carries some textual information about the acknowledgement. In ZAPP-Air, when used in an FMA which responds to a FHL or FWB message, a special formatting is applied (see 3.3.1.3)

##### 3.3.1.2 Segment Structure

The following index is an overview of the individual elements of this segment. The elements are listed in order of appearance of the actual segment.

##### Segment ACK

Field group:		Occurrences: 1			
1					
No.	Name	Status	Format	Example	Remarks
1	Tag	M	a[3]	ACK	Constant value „ACK“
Field group:		Occurrences: 1 - 2			
2					
2	Slash	M		/	
3	Free Text	M	t[1..65]	Z09A1234567 000- 00000000 00087213437	Textual Information
4	CRLF	M			

##### 3.3.1.3 Formatting

As described in section 3.3.1.1, ZAPP-Air applies a special formatting to the ACK segment when used in a FMA message responding to a FHL or FWB message. The format is as follows:

```
ACK/[Z-No./12 char][space/1 char][Master AWB/12 char][space/1 char][House AWB/12 char]
/Art AWB:['H' for FHL, 'D' for FWB representing a direct AWB]
```

##### 3.3.1.4 Example

```
ACK/Z09A12345678 000-00000000 00087213437
/Art AWB:H
```

#### 3.3.2 Message Reference

##### 3.3.2.1 Short Description

The reference segment does not have a fixed structure. The Cargo-IMP standard defines that an FMA should contain the first two lines of the original message which is acknowledged by the FMA.

## 4. The message FNA – Technical Error Message

### 4.1 Usage in ZAPP-Air

The message FNA is used to inform the sender of a Cargo-IMP Message that his message could **not** be processed by the receiving system or was not accepted by the receiving party.

In ZAPP-Air the FNA Message is used in accordance with the IATA's Cargo-IMP standard. It is sent in response to FWB, FHL, ZMF and ZUC messages.

### 4.2 Structure of the message

The following index is an overview of the segments of the FMA message, as used in ZAPP-Air. The segment groups/ segments are listed in order of appearance within the FMA.

Segments which are highlighted in light blue have been amended or added for the use of the FMA message in ZAPP-Air.

#### Message FWB

Segment group: 1		Occurrences: 1		
No.	Tag	Name	Occ.	Remarks
1	FNA	Standard Message Identifier	1	Identifies message as FNA.
2	ACK	Acknowledgement	1	Textual Information about the error/problem that occurred.
3		Message Reference	1	A copy of the original message.

### 4.3 Description of the segments

#### 4.3.1 ACK

##### 4.3.1.1 Short Description

The "ACK" segment carries some textual information about the error or problem that occurred.

##### 4.3.1.2 Segment Structure

The following index is an overview of the individual elements of this segment. The elements are listed in order of appearance of the actual segment.

#### Segment ACK

Field group: 1		Occurrences: 1			
No.	Name	Status	Format	Example	Remarks
1	Tag	M	a[3]	ACK	Constant value „ACK“
Field group: 2		Occurrences: 1 - 2			
2	Slash	M		/	
3	Free Text	M	t[1..65]	INVALID CHARACTERS IN SEGMENT ZPL	Textual Information
4	CRLF	M			

**4.3.1.3 Example**

ACK/INVALID CHARACTERS IN SEGMENT ZPL

**4.3.2 Message Reference****4.3.2.1 Short Description**

The reference segment does not have a fixed structure. A copy of the original message is appended to the FNA and ACK lines (see example messages in chapter 5).

## 5. FMA Example Messages

*(Note: The Line Breaks between UNB/UNH and UNH/FHL have been included for better readability. Line Breaks between EDIFACT Segments are NOT allowed in Cargo-IMP Messages destined for ZAPP-Air)*

### 5.1 FMA in response to an FWB message

```
UNB+IATA:1+REUSWH87DEDKSY:PIMA+REUSWH87DEDKSY:PIMA+090224:1533+222'  
UNH+223+CIMFMA+223'  
FMA  
ACK/Z09A00000001 001-23456789  
/ART AWB: D  
FWB/15  
001-23456789HAMRDU/T1K6.0  
'UNT+3+223'UNZ+1+222'
```

### 5.2 FNA in response to an erroneous FSU

```
UNB+IATA:1+REUAGT82HARTRODT:PIMA+REUAGT82HARTRODT:PIMA+090220:1629+333'  
UNH+334+CIMFNA:1+334'  
FNA/1  
ACK/HOUSE AWB EXISTIERT NICHT.  
FSU/13  
000-00000000HAMCPT/T1K110  
ZEV/FWD0001/HAS0001/HAL0001/HAC0001  
GIL/200902201514/000-00000000/00012345678  
'UNT+3+334'UNZ+1+333'
```