



Subject: Communication – Questionnaire for avionic items

Effectivity

Dornier 328-100 and 328-300
EASA TCDS A. 096
Serial No's: All Aircraft

General

On February 16, 2012 the first Dornier 328 Web Conference has taken place, one result of this conference is to ask all Operators for their interest in several avionic items. The reasons for an update of specific avionic devices vary from Authority regulations to economical aspects etc. Negotiations with vendors like Honeywell can be accelerated if basic information about the needs of the fleet are on hand, therefore we kindly ask you to support this questionnaire.

The discussions during the web conferences show, that the Operators are very interested in the following subjects:

- replacement AH 800 → AH 900
- EGPWS & GPS upgrade
- CPDLC
- TCAS 7.1 considering FAA AD 2012-02-08
- S-BAS (WAAS / EGNOS)

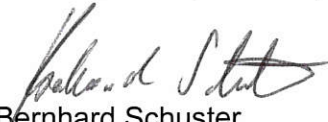
For more detailed information to the last Web-Conference please find the MoM attached.

The tables attached are briefly describing each item for Dornier 328-100 and Dornier 328-300 separately, with an opportunity to enter your comments in tick boxes.
Please return the attached questionnaire at your earliest convenience but not later than April 13, 2012 to the GSC:

The Global Support Centre
Email: gsc.op@328support.de
Fax: ++49 8153 88111 6565

NOTE: please discuss this CSI internally with all individuals / departments concerned (e.g. Operations, Planning, Flight Crew) and note the agreed result in the table below. All data submitted are non-binding.

Thank you for your co-operation!


Bernhard Schuster
Director of Customer Support


Alexander Zirkel
Head of Customer Projects



Operator identification

Name of Company: _____

Name of Reporter: _____

Date: _____

Phone: _____

email: _____

Fleet size

Dornier 328-100 _____

Dornier 328-300 _____



Dornier 328-100

#	Item	Description	Interest for (number of A/C)	Interest driven by national authority requirements			Realisation within the fleet planned before end of 2013	
				Yes	No	Un-known	Yes	no
1	AH-800 --> AH-900 replacement	A SB is in preparation for installation of AH-900 in 328-300. A possibility for installation of an AH-900 in the Dornier 328-100 must be verified. The change to AH-900 is necessary due to discontinued technical support for AH-800 by Honeywell.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	S-BAS Satellite – Based – Augmentation – System (WAAS / EGNOS / MSAS)	Within United States this System is known as WAAS (Wide Area Augmentation System), in Europe it is called EGNOS (European Geostationary Navigation Overlay System) and the Japanese named it MSAS (Multi Functional Navigation Overlay Service). However the functionality of these three systems is identical. S-BAS improves GPS signal accuracy by satellites and ground stations and enhances navigational accuracy, which helps ATC to make air traffic management more efficient. Further it allows flying satellite based non-precision approaches on airports not equipped with an ILS and gives an opportunity to extend operation. For more detailed information please refer to the website: For the U.S.: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gnss/waas/ For Europe: http://www.esa.int/esaNA/egnos.html	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	EGPWS Enhanced Ground Proximity Warning System / GPS Global Positioning System	An upgrade of the existing EGPWS is not possible. The installation of the EGPWS Mark 8 is only possible in conjunction with an upgrade of the IAC's. For the GPS a new system must be certified for the Dornier 328-100, Honeywell will work together with 328SSG to find a solution. The upgrade of EGPWS Mark 8 results in an improvement of the accuracy and the indications are displayed on the DUs. At the Dornier 328-300 aircraft an EGPWS is already part of the Primus 2000 system. For more detailed information please refer to website: http://www51.honeywell.com/aero/Products-Services/Avionics-Electronics/Egpws-Home3/Products4/MK-VIII.html?c=21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



#	Item	Description	Interest for (number of A/C)	Interest driven by national authority requirements			Realisation within the fleet planned before end of 2013	
				Yes	No	Un-known	Yes	no
4	TCAS 7.1	The 328SSG cover SB is in progress and will be available end of first half of 2012. The upgrade of the TCAS Computer will include the FAA AD 2012-02-08. The software upgrade provides improved call-outs to the crew. For more detailed information please refer to the website: http://www.acss.com/change71	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	CPDLC Controller Pilot Data Link Communication	A new strategy for the communication between pilots and ATC is required due to increasing density airspaces, because the number of available voice channels is finite. The new strategy is a data link based communication. All aircrafts operating in the states of the European Union must be equipped with a CPDLC system from February 5, 2015. For more detailed information please refer to the website: http://www.eurocontrol.int/link2000/public/subsite_homepage/homepage.html The FAA will watch at European experience and will set the deadline for introduction of CPDLC for 2017.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	ADS-B Automatic Dependent Surveillance-Broadcast	ADS-B, which consists of two different services ADS-B Out and ADS-B In, will be replacing ground based radar as the primary surveillance method for controlling aircraft worldwide. ADS-B enhances safety by making an aircraft visible, real-time, to ATC and to other appropriately equipped ADS-B aircraft with position and velocity data transmitted every second. A tracking on portable electronic devices (PED) and a reduction of airborne time could be possible with ADS-B. For more detailed information please refer to the website: http://www.acss.com/Avionics/SafeRoute	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	RAAS Runway Awareness and Advisory System	This system improves situational awareness by providing timely aural advisories - with new advisories and now graphical alerts to the flight crew and advises them of their position during taxi, takeoff, final approach, landing and rollout. For more detailed information please refer to the website: http://www51.honeywell.com/aero/Products-Services/Avionics-Electronics/Eqpws-Home3/raas.html?c=21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



#	Item	Description	Interest for (number of A/C)	Interest driven by national authority requirements			Realisation within the fleet planned before end of 2013	
				Yes	No	Un-known	Yes	no
8	Complete new avionics suite	Due to high development and certification costs this issue will be considered at this time. As discussed in the 1st Web-Conference a shift to a complete new avionics suite replacing Primus 2000 will be very expensive and can't be realized by the TC-Holder only. The change could only be feasible if several Operators will support the project commercially. The most important advantage of a new avionics suite could be the state of the art equipment which allows the implementation of all new applications resulting from Authority requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please enter any additional comments you may have in the following lines:



Dornier 328-300

#	Item	Description	Interest for (number of A/C)	Interest driven by national authority requirements			Realisation within the fleet planned before end of 2013	
				Yes	No	Un-known	Yes	no
1	AH-800 --> AH-900 replacement	A SB is in preparation for installation of AH-900 in 328-300. A possibility for installation of an AH-900 in the Dornier 328-100 must be verified. The change to AH-900 is necessary due to discontinued technical support for AH-800 by Honeywell.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	S-BAS Satellite – Based – Augmentation – System (WAAS / EGNOS / MSAS)	Within United States this System is known as WAAS (Wide Area Augmentation System), in Europe it is called EGNOS (European Geostationary Navigation Overlay System) and the Japanese named it MSAS (Multi Functional Navigation Overlay Service). However the functionality of these three systems is identical. S-BAS improves GPS signal accuracy by satellites and ground stations and enhances navigational accuracy, which helps ATC to make air traffic management more efficient. Further it allows flying satellite based non-precision approaches on airports not equipped with an ILS and gives an opportunity to extend operation. For more detailed information please refer to the website: For the U.S.: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gnss/waas/ For Europe: http://www.esa.int/esaNA/egnos.html	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	EGPWS Enhanced Ground Proximity Warning System / GPS Global Positioning System	An upgrade of the existing EGPWS is not possible. The installation of the EGPWS Mark 8 is only possible in conjunction with an upgrade of the IAC's. For the GPS a new system must be certified for the Dornier 328-100, Honeywell will work together with 328SSG to find a solution. The upgrade of EGPWS Mark 8 results in an improvement of the accuracy and the indications are displayed on the DUs. At the Dornier 328-300 aircraft an EGPWS is already part of the Primus 2000 system. For more detailed information please refer to website: http://www51.honeywell.com/aero/Products-Services/Avionics-Electronics/Egpws-Home3/Products4/MK-VIII.html?c=21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



#	Item	Description	Interest for (number of A/C)	Interest driven by national authority requirements			Realisation within the fleet planned before end of 2013	
				Yes	No	Un-known	Yes	no
4	TCAS 7.1	The 328SSG cover SB is in progress and will be available end of first half of 2012. The upgrade of the TCAS Computer will include the FAA AD 2012-02-08. The software upgrade provides improved call-outs to the crew. For more detailed information please refer to the website: http://www.acss.com/change71	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	CPDLC Controller Pilot Data Link Communication	A new strategy for the communication between pilots and ATC is required due to increasing density airspaces, because the number of available voice channels is finite. The new strategy is a data link based communication. All aircrafts operating in the states of the European Union must be equipped with a CPDLC system from February 5, 2015. For more detailed information please refer to the website: http://www.eurocontrol.int/link2000/public/subsite_homepage/homepage.html The FAA will watch at European experience and will set the deadline for introduction of CPDLC for 2017.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	ADS-B Automatic Dependent Surveillance-Broadcast	ADS-B, which consists of two different services ADS-B Out and ADS-B In, will be replacing ground based radar as the primary surveillance method for controlling aircraft worldwide. ADS-B enhances safety by making an aircraft visible, real-time, to ATC and to other appropriately equipped ADS-B aircraft with position and velocity data transmitted every second. A tracking on portable electronic devices (PED) and a reduction of airborne time could be possible with ADS-B. For more detailed information please refer to the website: http://www.acss.com/Avionics/SafeRoute	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	RAAS Runway Awareness and Advisory System	This system improves situational awareness by providing timely aural advisories - with new advisories and now graphical alerts to the flight crew and advises them of their position during taxi, takeoff, final approach, landing and rollout. For more detailed information please refer to the website: http://www.51.honeywell.com/aero/Products-Services/Avionics-Electronics/Egpws-Home3/raas.html?c=21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



#	Item	Description	Interest for (number of A/C)	Interest driven by national authority requirements			Realisation within the fleet planned before end of 2013	
				Yes	No	Un-known	Yes	no
8	Complete new avionics suite	Due to high development and certification costs this issue will be considered at this time. As discussed in the 1st Web-Conference a shift to a complete new avionics suite replacing Primus 2000 will be very expensive and can't be realized by the TC-Holder only. The change could only be feasible if several Operators will support the project commercially. The most important advantage of a new avionics suite could be the state of the art equipment which allows the implementation of all new applications resulting from Authority requirements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please enter any additional comments you may have in the following box:



Attachment I

Minutes of Meeting from: 16.02.2012

Participants:	Distribution:	Name:
Alex Thoss AT ✓		Alexander Zirkel
Simon Hafele SH ✓		Department: C2
Rainer Sarközi RS ✓		Phone: -2920
Robert Horneber RH ✓		Date: 21.02.2012
Günther Zenkert GZ ✓		
Alexander Zirkel AZ ✓		
Darryl Brown DB ✓		
Pat Brady PB ✓		
Conny Uihlein CU ✓		
Christian Besserer CB ✓		
René Goletz RG ✓		
	Chris Tamerius	
	Tom Chacko	
	William Kwas	
	Evan Laroque	
	Donald Kamenz	
	David M. Jones	
	John White	

Subject: 1st Dornier 328 Web-Conference

	I - Information A - Action	Due date
1. Operators Conference 2010		
1a) Open items list of CSI-328ALL-2011-02 A new CSI should be established in order to ask the Customers and Operators for interest in subjects as follows: <ul style="list-style-type: none"> AH 800 → AH 900 Replacement EGPWS & GPS upgrade CPDLC (Controler Pilot Data Link Communication) TCAS 7.1 additional AD 2021-02-08 WAAS (Wide Area Augementation System) / EGNOS (European Geostationary Navigation Overlay Service) 	AZ A:	March 2012
1b) Latest news New members of the Customer Support team introduced New address for technical publication presented Additional data for Maintenance Evolution Programme for 328-300 required	AZ I: AZ I: AZ I:	
2a) CCMR task interval escalation Still in work at our engineering department	AZ I:	
2b) TRs No further comments	AZ I:	

I: Information A: Action

Seite 1 von 2



<p>2c) ICY Codes There is a misunderstanding in the MoMs of 19th MRB/ISC Meeting (review ICY-Codes). Suggestion from Pat Brady: Operator send request for change of a specific ICY code via SPR → Operator should receive information about a change via SPR and 328 Design collects all changes for a complete review of IPC.</p> <p>We will discuss this procedure internally and come back to the Customer latest in May at the 2nd Web-Conference.</p>	AZ A:	2 nd Web conference
<p>2d) Technical Publications Customers are interested in documentation in digital format. Especially an updating process of CMMVs in digital format would be helpful. Progress with new TechPub provider will be presented at the next Web-Conference. Documents on Homepage are not up-to-date. Customers announced that it was more comfortable to find required documentation on old Homepage.</p>	AZ I: CB A:	2 nd Web conference
<p>3. Agenda for 2nd Web-Conference Discuss results of new CSI for open Honeywell items. How long does Honeywell provide support for CRT screens? Integration of WAAS into Dornier 328 How will 328SSG organize X-Rod exchange campaign? 328SSG will inform about date and location of Operators Conference 2012</p>		
<p>Next meeting The 2nd Web-Conference will be arranged in May 2012, 328SSG will provide a letter of invitation with more detailed information</p>		

I: Information A: Action

Seite 2 von 2