

United States of America
Department of Transportation - Federal Aviation Administration
Supplemental Type Certificate

Number ST02907NY

This certificate, issued to Delta Engineering
13 DRBA Way
New Castle County Airport
New Castle, Delaware 19720

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 25 of the Federal Aviation Regulations..

Original Product — Type Certificate Number: A20WE

Make: Boeing
Model: 747-400 Series

Description of Type Design Change:

Installation of a Panasonic Global Communication Suite (GCS) in accordance with Delta Engineering Master Data List 0107-07810-2300 Revision C dated Oct. 2, 2013 or later FAA approved revisions to Delta Engineering Master Data List previously listed. The Instructions for Continued Airworthiness, Electrical Wiring Interconnect System Instructions for Continued Airworthiness and Airplane Flight Manual Supplement as listed on the Master Data List is required with this installation.

Limitations and Conditions:

1. If the holder agrees to permit another person to use the certificate to alter the product, the holder shall give the other person written evidence of that permission.

(See Continuation Sheet 2 & 3)

This certificate and the supporting data which is the basis for approval shall remain in effect sur-rendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: February 10, 2012

Date reissued:

Date of issuance: June 7, 2012

Date amended: December 14, 2012,
October 3, 2013



By direction of the Administrator

Jonathan E. Moritz *(Signature)*
ODA Administrator
Delta Engineering, ODA-800728-NE
(Title)

United States of America
Department of Transportation - Federal Aviation Administration

Any Alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

Supplemental Type Certificate

(Continuation Sheet)

Number ST02907NY

Amendment Date: October 3, 2013

Limitations and Conditions (continued):

2. Compatibility of this design change with previously approved modifications must be determined by the installer.
3. Operational approval to use T-PED's must be obtained separately from this STC.
4. The Panasonic GCS must interface with the following listed required existing systems/components, which must be installed in a manner acceptable to the FAA Administrator, The below listed required existing systems are not approved by this STC.

Required existing systems/components:

System/Component	Manufacture	Additional Requirements
T-PED Tolerant	Armstrong	FAA STC ST03047CH. When installing/activating the GCS on the aircraft the aircraft must comply with the requirements of the above mentioned FAA STC including but not limited to aircraft systems compatibility with RF (Radio Frequencies) effects from T-PED's (Transmitting Portable Electronic Devices). No design changes to required aircraft systems may be made without considering the RF (Radio Frequencies) effects from T-PED's (Transmitting Portable Electronic Devices) to the aircraft system per the above mentioned FAA STC or other approved method.
GCS Antenna	Panasonic	FAA STC ST02927NY-D Not required for configuration interfaced with existing SATCOM.
Crew Terminal and DTU Provisions	Lufthansa	CRAS Approval 3445 Only required for TL10681 configurations
Crew Terminal	Lufthansa	Service Bulletin 747-EB25-1579 Only required for TL10683 configurations

Any Alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

United States of America
 Department of Transportation - Federal Aviation Administration
Supplemental Type Certificate
(Continuation Sheet)

Number ST02907NY

Amendment Date: October 3, 2013

Certification Basis:

Based on 14 CFR §§ 21.115 and 21.101, and the FAA policy for significant changes in FAA Order 8110.48, this STC is a non-significant change. The certification basis for un-changed or not affected areas by this STC remains un-changed by this STC and the certification basis for this STC is as follows:

- a. FAA Alternate Means of Compliance 140S-12-160
- b. The following regulations for CFR Part 25 at later amendment than the TCDS all other regulations at certification basis defined in the TCDS:

Section	Title	At Amendment
§25.831	Ventilation	25-89
§25.853	Compartment interiors	25-116
§25.869	Fire protection: systems	25-113
§25.981	Fuel tank ignition prevention	25-102
§25.1307	Miscellaneous equipment	25-72
§25.1309	Equipment, systems, and installations	25-41
§25.1316	Electrical and electronic system lightning protection	25-80
§25.1351	General	25-72
§25.1353	Electrical equipment and installations	25-113
§25.1423	Public address system	25-115
§25.1431	Electronic equipment	25-113
§25.1529	Instructions for Continued Airworthiness	25-54
§25.1581	General	25-72
§25.1583	Operating limitations	25-105
§25.1585	Operating procedures	25-105

- c. CFR Part 26:

Section	Title	At Amendment
§26.11	EWIS	26-0
§26.47	AASR	26-1

-----END-----

Any Alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.