



# EUTELSAT S.A.

Type Approval

## VSAT OUTDOOR UNITS

# TYPE APPROVAL CERTIFICATE FOR A VSAT-ODU

PARIS, 07-11-2003

FOLLOWING VERIFICATION OF THE RADIO-FREQUENCY PERFORMANCE AND IN PARTICULAR COMPLIANCE WITH THE EUTELSAT S.A. CRITERIA ON RF STABILITY, EUTELSAT S.A. IS GRANTING TYPE APPROVAL FOR THE KU-BAND POWER AMPLIFIER UNIT MODEL: **GILAT 1 WATT**, TO: **GILAT SATELLITE NETWORKS LTD 21 Yegia Kapayim St. Kiryat Arye PETAH TIKVA 49130 ISRAEL**, UNDER THE CONDITIONS STATED IN ANNEX 1 OF THIS CERTIFICATE AND WITH REGISTRATION NUMBER:

## EODU-001

THIS APPROVAL ALLOWS THAT VSAT-ODUs OF THE MODEL INDICATED ABOVE BE OPERATED IN THE EUTELSAT S.A. SYSTEM. ANY INDIVIDUAL EARTH STATION/VSAT USING THIS ODU WILL ONLY BE SUBJECT TO THE NORMAL APPLICATION/REGISTRATION PROCEDURE AS STIPULATED IN ESOG MODULE 110.



J. Domingo  
Director of Operations Department  
Eutelsat S.A.

Annex 1 : Conditions

Annex 2 : Equipment Configuration

## CONDITIONS

1. The type approval concerns only ODU's of the model stated in the certification and the detailed configuration as given in Annex 2 of the certificate.
2. If in future any modifications are applied to any of the components of the SSPA or the manufacturing process, Eutelsat S.A. should be notified immediately, with a view to reassess the validity of the Type Approval.
3. On request, the applicant is obliged to provide to Eutelsat S.A. with any information on any delivered system of the kind covered by this type approval, as deemed necessary by Eutelsat S.A.

## EQUIPMENT CONFIGURATION

<b>Item</b>	<b>Make</b>	<b>Model</b>
SSPA	NJRC	V3
MMIC	GaAsTEK	ITT8602FN

EXPIRY DATE:12/12/2006

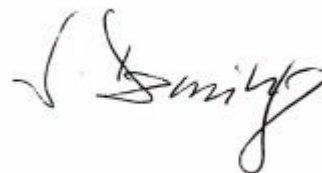
# TYPE APPROVAL CERTIFICATE FOR A VSAT-ODU

PARIS, 07-11-2003

FOLLOWING VERIFICATION OF THE RADIO-FREQUENCY PERFORMANCE AND IN PARTICULAR COMPLIANCE WITH THE EUTELSAT S.A. CRITERIA ON RF STABILITY, EUTELSAT S.A. IS GRANTING TYPE APPROVAL FOR THE KU-BAND POWER AMPLIFIER UNIT MODEL: **GILAT 1 WATT**, TO: **GILAT SATELLITE NETWORKS LTD 21 Yegia Kapayim St. Kiryat Arye PETAH TIKVA 49130 ISRAEL**, UNDER THE CONDITIONS STATED IN ANNEX 1 OF THIS CERTIFICATE AND WITH REGISTRATION NUMBER:

**EODU-002**

THIS APPROVAL ALLOWS THAT VSAT-ODUs OF THE MODEL INDICATED ABOVE BE OPERATED IN THE EUTELSAT S.A. SYSTEM. ANY INDIVIDUAL EARTH STATION/VSAT USING THIS ODU WILL ONLY BE SUBJECT TO THE NORMAL APPLICATION/REGISTRATION PROCEDURE AS STIPULATED IN ESOG MODULE 110.



J. Domingo  
Director of Operations Department  
Eutelsat S.A.

**EXPIRY DATE:12/12/2006**

ANNEX 1  
EODU-002

## **CONDITIONS**

1. The type approval concerns only ODU's of the model stated in the certification and the detailed configuration as given in Annex 2 of the certificate.
2. If in future any modifications are applied to any of the components of the SSPA or the manufacturing process, Eutelsat S.A. should be notified immediately, with a view to reassess the validity of the Type Approval.
3. On request, the applicant is obliged to provide to Eutelsat S.A. with any information on any delivered system of the kind covered by this type approval, as deemed necessary by Eutelsat S.A.

**EXPIRY DATE:12/12/2006**

ANNEX 2  
EODU-002

## **EQUIPMENT CONFIGURATION**

<b>Item</b>	<b>Make</b>	<b>Model</b>
SSPA	YOKOWO	V3
MMIC	GaAsTEK	ITT8602FN


# TYPE APPROVAL CERTIFICATE FOR A VSAT-ODU

PARIS, 24-02-2004

FOLLOWING VERIFICATION OF THE RADIO-FREQUENCY PERFORMANCE AND IN PARTICULAR COMPLIANCE WITH THE EUTELSAT S.A. CRITERIA ON RF STABILITY, EUTELSAT S.A. IS GRANTING TYPE APPROVAL FOR THE POWER AMPLIFIER OF THE KU-BAND TRANSCEIVER UNIT MODEL: **SKYWARE KR1214S/KR1216L/KR1226L/KR1212L** TO: **SKYWARE RADIO SYSTEMS GmbH, Kreuzweg 60 D-47809 KREFELD GERMANY**, UNDER THE CONDITIONS STATED IN ANNEX 1 OF THIS CERTIFICATE AND WITH REGISTRATION NUMBER:

## EODU-003

THIS APPROVAL ALLOWS THAT VSAT-ODUs OF THE MODEL INDICATED ABOVE BE OPERATED IN THE EUTELSAT S.A. SYSTEM. ANY INDIVIDUAL EARTH STATION/VSAT USING THIS ODU WILL ONLY BE SUBJECT TO THE NORMAL APPLICATION/REGISTRATION PROCEDURE AS STIPULATED IN ESOG MODULE 110.



J. Domingo  
Director of Operations Department  
Eutelsat S.A.

Annex 1 : Conditions

Annex 2 : Equipment Configuration



## CONDITIONS

1. The type approval concerns only ODU's of the model stated in the certification and the detailed configuration as given in Annex 2 of the certificate.
2. If in future any modifications are applied to any of the components of the SSPA or the manufacturing process, Eutelsat S.A. should be notified immediately, with a view to reassess the validity of the Type Approval.
3. On request, the applicant is obliged to provide to Eutelsat S.A. with any information on any delivered system of the kind covered by this type approval, as deemed necessary by Eutelsat S.A.

## EQUIPMENT CONFIGURATION

Item	Make	Model
BUC (including LNB and OMT)	SKYWARE RADIO	KR 1214 S * KR 1216 L KR 1226 L KR 1212 L
MMIC	TRIQUINT	TGA 2902-SCC-SG

Note \*:

S: S-band interface

L: L-band interface

# TYPE APPROVAL CERTIFICATE FOR A VSAT-ODU

PARIS, 23-06-2004

FOLLOWING VERIFICATION OF THE RADIO-FREQUENCY PERFORMANCE AND IN PARTICULAR COMPLIANCE WITH THE EUTELSAT S.A. CRITERIA ON RF STABILITY, EUTELSAT S.A. IS GRANTING TYPE APPROVAL FOR THE POWER AMPLIFIER OF THE KU-BAND TRANSCEIVER UNIT MODEL: **INVACOM TUL201, TUL204** TO: **INVACOM Ltd. Bessemer Drive, Stevenage HERTS, SG1 2DX, UNITED KINGDOM** UNDER THE CONDITIONS STATED IN ANNEX 1 OF THIS CERTIFICATE AND WITH REGISTRATION NUMBER:

## EODU-004

THIS APPROVAL ALLOWS THAT VSAT-ODUs OF THE MODEL INDICATED ABOVE BE OPERATED IN THE EUTELSAT S.A. SYSTEM. ANY INDIVIDUAL EARTH STATION/VSAT USING THIS ODU WILL ONLY BE SUBJECT TO THE NORMAL APPLICATION/REGISTRATION PROCEDURE AS STIPULATED IN ESOG MODULE 110.



J. Domingo  
Director of Operations Department  
Eutelsat S.A.

Annex 1 : Conditions

Annex 2 : Equipment Configuration

## **CONDITIONS**

1. The type approval concerns only ODU's of the model stated in the certification and the detailed configuration as given in Annex 2 of the certificate and for the bandwidth 14.0-14.5 GHz.
2. If in future any modifications are applied to any of the components of the SSPA or the manufacturing process, Eutelsat S.A. should be notified immediately, with a view to reassess the validity of the Type Approval.
3. On request, the applicant is obliged to provide to Eutelsat S.A. with any information on any delivered system of the kind covered by this type approval, as deemed necessary by Eutelsat S.A.

## EQUIPMENT CONFIGURATION

Item	Make	Model
SSPA 2 Watt	INVACOM	TUL201, TUL204 *
MMIC	TRIQUINT	TGA8659-EPU-FL

Note \*:

TUL201: Constant level (DiSEqC)

TUL204: Fixed Gain (no DiSEqC)

# TYPE APPROVAL CERTIFICATE FOR A VSAT-ODU

PARIS, 27-05-2005

FOLLOWING VERIFICATION OF THE RADIO-FREQUENCY PERFORMANCE AND IN PARTICULAR COMPLIANCE WITH THE EUTELSAT S.A. CRITERIA ON RF STABILITY, EUTELSAT S.A. IS GRANTING TYPE APPROVAL FOR THE POWER AMPLIFIER OF THE KU-BAND TRANSCEIVER UNIT MODEL: **NERA SATLINK 4033** TO: **NERA SatCom AS Bergerveien 12 P.O. Box 91 N-1375 BILLINGSTAD, NORWAY** UNDER THE CONDITIONS STATED IN ANNEX 1 OF THIS CERTIFICATE AND WITH REGISTRATION NUMBER:

## EODU-005

THIS APPROVAL ALLOWS THAT VSAT-ODUs OF THE MODEL INDICATED ABOVE BE OPERATED IN THE EUTELSAT S.A. SYSTEM. ANY INDIVIDUAL EARTH STATION/VSAT USING THIS ODU WILL ONLY BE SUBJECT TO THE NORMAL APPLICATION/REGISTRATION PROCEDURE AS STIPULATED IN ESOG MODULE 110.



J. Domingo  
Director of Operations Department  
Eutelsat S.A.

Annex 1 : Conditions  
Annex 2 : Equipment Configuration

## **CONDITIONS**

1. The type approval concerns only ODU's of the model stated in the certification and the detailed configuration as given in Annex 2 of the certificate and for the bandwidth 14.0-14.5 GHz.
2. If in future any modifications are applied to any of the components of the SSPA or the manufacturing process, Eutelsat S.A. should be notified immediately, with a view to reassess the validity of the Type Approval.
3. On request, the applicant is obliged to provide to Eutelsat S.A. with any information on any delivered system of the kind covered by this type approval, as deemed necessary by Eutelsat S.A.

## EQUIPMENT CONFIGURATION

Item	Make	Model
SSPA 2 Watt (nominal)	NERA	SATLINK 4033
MMIC	TRIQUINT	TGA8659-EPU-FL

Note: if used in conjunction with the NERA IDU, RF stability will be additionally ensured by software controls of the SSPA output



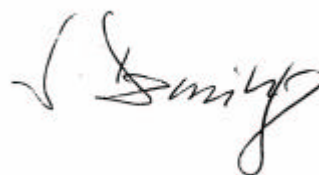
# TYPE APPROVAL CERTIFICATE FOR A VSAT-ODU

PARIS, 14-02-2006

FOLLOWING VERIFICATION OF THE RADIO-FREQUENCY PERFORMANCE AND IN PARTICULAR COMPLIANCE WITH THE EUTELSAT S.A. CRITERIA ON RF STABILITY, EUTELSAT S.A. IS GRANTING TYPE APPROVAL FOR THE POWER AMPLIFIER OF THE KU-BAND TRANSCEIVER UNIT MODEL: **HNS OSIRIS** TO: **Hughes Network Systems LLC -11717 Exploration Lane- Germantown, MD 20876, UNITED STATES OF AMERICA** UNDER THE CONDITIONS STATED IN ANNEX 1 OF THIS CERTIFICATE AND WITH REGISTRATION NUMBER:

**EODU-006**

THIS APPROVAL ALLOWS THAT VSAT-ODUs OF THE MODEL INDICATED ABOVE BE OPERATED IN THE EUTELSAT S.A. SYSTEM. ANY INDIVIDUAL EARTH STATION/VSAT USING THIS ODU WILL ONLY BE SUBJECT TO THE NORMAL APPLICATION/REGISTRATION PROCEDURE AS STIPULATED IN ESOG MODULE 110.



J. Domingo  
Director of Operations Department  
Eutelsat S.A.

Annex 1 : Conditions  
Annex 2 : Equipment Configuration

## **CONDITIONS**

1. The type approval concerns only ODU's of the model stated in the certification and the detailed configuration as given in Annex 2 of the certificate and for the bandwidth 13.75-14.5 GHz.
2. If in future any modifications are applied to any of the components of the SSPA or the manufacturing process, Eutelsat S.A. should be notified immediately, with a view to reassess the validity of the Type Approval.
3. On request, the applicant is obliged to provide to Eutelsat S.A. with any information on any delivered system of the kind covered by this type approval, as deemed necessary by Eutelsat S.A.

## EQUIPMENT CONFIGURATION

<b>Item</b>	<b>Make</b>	<b>Model</b>
SSPA 1 Watt (nominal)	HNS	OSIRIS
MMIC	TRIQUINT	TGA 8658-1