

SkySweep Technologies

Dedicated Solutions for High Speed
HF/VHF/UHF DIGITAL RADIO



SkySweep Digital Radio System
HF/50MHz Communications

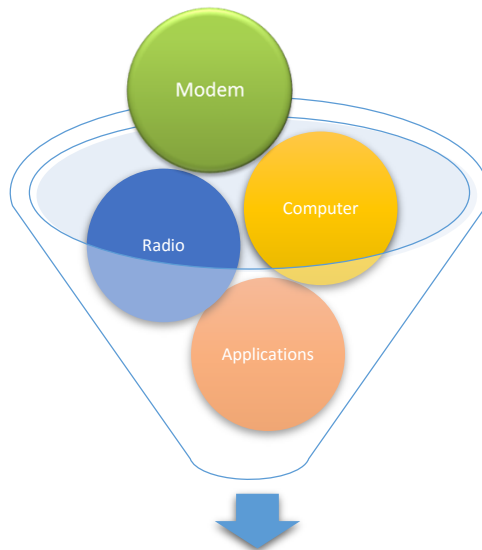
Digital Data Radios

The SkySweep SkyDR-2HRS HF/50MHz ruggedized digital voice and data radio can act as base or mobile station, it has direct audio-port-connector for hand-microphone and supports remote IP / Ethernet voice and data connections,. The SkyCR-1RD dispatcher manage the voice & data connections. The units are ready to start and provides the SkySweep applications like E-Mail, instant messaging (chat), GPS based tracking, flexible data, secure digital voice etc. to be connected to other mobile stations or to fixed IP network through a base station. The platform also supports customer specific Windows™ based applications.

Some of the system possibilities:

- **STANAG (5066, 4285, 4539) and MIL-STD-188-141 (ALE) compliant HF communication**
- **Optimal ALE (Automatic Link Establishment)**
- **GPS based tracking possibilities**
- **E-mail**
- **SMTP / POP 3 based data services**
- **Customer specific data applications**
- **Instant messaging (chat client)**
- **High Encryption AES, DES and customer specific encryption possible**

Example: **SkyDR-2HRS** HF/50MHz station, compact rugged aluminum enclosure



SkyDR HF/50MHz



*"Make use of the many HF/50MHz communication advantages.
Connect your data communication over huge distances with less costs."*

The **SkySweep data radios based on latest embedded platforms provide very cost efficient data communication and high coverage solutions on HF/50MHz frequency bands.**

A state-of-the-art **SkyOFDM** modem offers high speed HF (up to 9.6kbit/s in 1.8 -50 MHz and up to 20kbit/s in 50 - 54 MHz) inclusive applications.

HF Stations	TRX 1.8 - 54 MHz	19 inch	R-ALU	S-MK	GPS	EM	MS	TR	DA	CA	CH	WiFi	Blue
SkyDR-2HRS													

Abbreviations:

Ch. 12.5 / 25 kHz	Supported TRX-channels in mode FM	DA	Data Connection Service
		CA	Customer own applications
R-ALU	Compact rugged alu enclosure IP67/66	CH	Instant messaging (Chat client)
S-MK	Station holders mounting-kit	WiFi	Wireless-LAN (<i>optional with USB-adapter</i>)
GPS	GPS receiver (optional with USB-adapter)	Blue	Bluetooth (<i>optional with USB-adapter</i>)
EM	Secure E-mail		
MS	Mail server		
TR	GPS based tracking possibilities		

Please see PDF [i7_SkySweep-Data-Radio-Applications-STANAG](#) for information regarding applications

Frequency band	1.8 - 54 MHz
Output power	100 W
Max gross bit rate 1.8 – 50 MHz	9.6 kbit/s
Max. gross bit rate 50 - 54 MHz mode FM in 12.5 khz channel	10 kbit/s
Max. gross bit rate 50 - 54 MHz mode FM in 25 khz channel	20 kbit/s
Transmission mode	USB
Antenna impedance	50 Ω unbalanced (tuner off)
Antenna connector	1 x SO-239 (50 Ω)
Power supply requirement	13.8 VDC or 110/230 VAC ± 15%
Temperature range	- 10 to + 50 °C
Modulation system	DPSN modulation
Spurious emission	Less than – 50 dB
Carrier suppression	More than 50 dB
Receive system	Triple conversion super heterodyne system
Sensitivity 10 dB SINAD	Less than 0.16 μV
Selectivity	More than 2.4 kHz/-6 dB Less than 3.6 kHz/-60 dB
Spurious and image rejection	More than 70 dB
Power consumption	20 W
Cooling	Active
Temperature range	Mobile Station: -20 to + 70 °C; 0 - 90 % non-condensing
Standards and declarations	CE ETSI 1999/5/EC FCC approved

SkySweep HF/50MHz Digital Data Radios

Frequency band 1.8 - 54 MHz

Software-features:

STANAG 5066 v1.0/1.2 data transfer protocol

CFTP / HMTP

Modems available for HF/50MHz Digital Voice and Data Radios:

SkyOFDM up to 9.6 kbit/s (net)

STANAG 4285 up to 2.4 kbit/s

STANAG 4539 up to 2.4 kbit/s

MIL-STD-188-110A/B

MIL-STD-188-141A (ALE)

Supported services:

Point-to-point data transfer

Point-to-multipoint data transfer

STANAG 5066 compliant system

High capacity IP interface between base station and fixed network

E-mail routing between base station radio interface and fixed network

E-mail (group, individual)

GPS position and status report

Data modem services

TCP/IP data interface (client, server)

UDP data interface (client, server)

RS-232 data interface

STANAG 5066 subnet data interface

POP3 data interface

SMTP data interface

High Encryption AES, DES and customer specific encryption possible

API for customer specific applications

Automatic data rate change

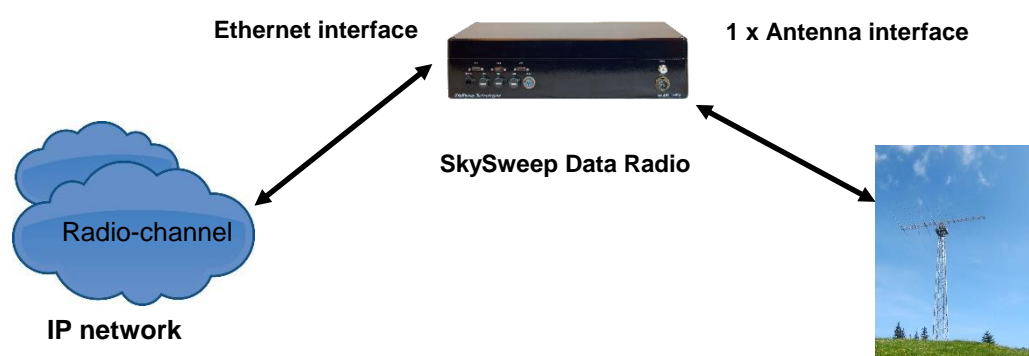
External modem support

Data compression

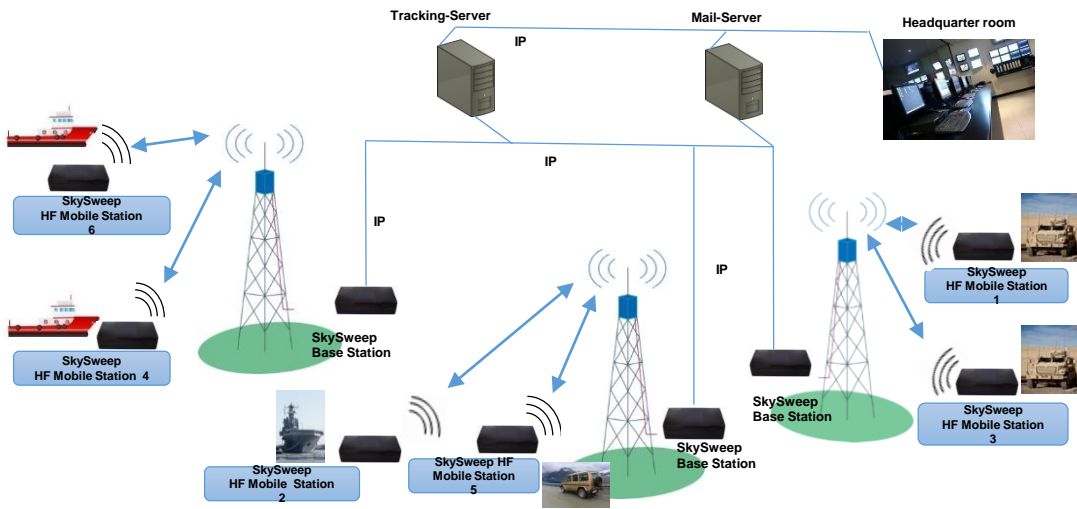
Base Station handover

Advanced collision avoidance

Instant messaging (Chat Client)

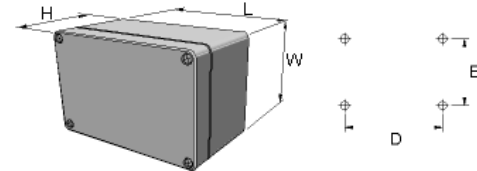
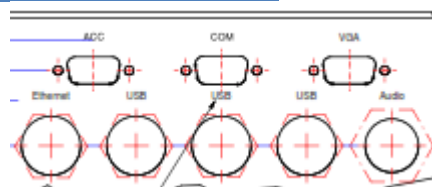


Note: SkySweep data radio specifications might be subject to change due to product innovation and improvements without prior notice.



Specifications of SkySweep HF/50MHz Digital Data Radio enclosures

SkyDR-2HRS rugged Station:



Front interfaces

Compact rugged aluminium enclosure for outdoor use	(L x W x H) 480 x 240 x 120 mm
Lid screw position	(D x E) 460 x 220 mm
Professional screw secured front Interface connectors	1 x COM RS232/422/485 with Auto Flow control 3 x USB 2.0 1 x ACC (accessories) 1 x Audio (type: U-183/U) 1 x VGA 1 x 1000 base T Ethernet Wireless-LAN (Optional)
Professional screw secured rear Interface connectors	1 x Antenna, 1 x 12 VDC (type: KPT07A12-3P)
Temperature range	- 20 to + 70 °C; 0 - 90 % non-condensing
Weight	6 kg

- High quality rugged aluminium alloy
- black powder coated RAL9005
- EMC gasket

- stainless steel Lid screws
- waterproofed IP 66 /IP 67 EN 60529
- external mounting brackets (Optional)

SkySweep Technologies

Dedicated Solutions for High Speed HF/VHF/UHF DIGITAL RADIO

About SkySweep Technologies Oy

Operating World Wide the SkySweep Technologies provides HF/VHF/UHF digital voice and data radios, IP based data radios, controllers, high speed modems, protocols and applications.

Customers include Military, Embassies, public safety, transport companies, telecommunications operators, utilities, international aid organizations, oil and gas companies and security organizations. SkySweep digital radios are optimized for performance in harsh environments, supporting TCP/IP, STANAG5066, serial data and customer applications.

While every precaution has been taken in the preparation of this literature, SkySweep Technologies Oy assumes no liability for errors or omissions, or for any damages resulting from the use of this information. This document is protected by copyright belonging to SkySweep Technologies Oy and may not be reproduced or republished in whole or part in any form without the prior written consent of SkySweep Technologies. The contents and product specifications within it are subject to revision due to ongoing product improvements and may change without notice.



**If you have any questions about our products,
please do not hesitate to contact us:**

Global Sales:
E-Mail: sales@skysweep.com
Tel: +358 10 3465185
Web: www.skysweep.com

Mail: SkySweep Technologies Oy
P.O. Box 6
02661 Espoo - Finland
Street-Address: Linnoitustie 4