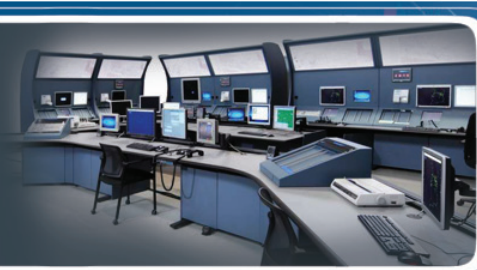


## SKYNAV ILS BY INTELCAN



### INTELCAN'S N8000 SERIES

**Instrument Landing System (ILS) exceeds the highest standards for precise radio guidance in the aircraft's final approach and landing. Whether for Category I, II, or III, the N8000 guarantees signal integrity and comes in single or dual frequency configuration.**

Intelcan's team of experts knows that each airport is unique and that each site comes with its specific challenges and complexity. For that, the N8000 has been designed to be simple to operate, easy to maintain and to offer a high degree of configurability.

The N8000 is a solid state system, built with the latest technologies, ensuring a long life at low cost. The design relies on DSP and FPGA processing units to monitor all parameters of the transmitted signals in realtime; combined with extensive BITE (Built-in Test Equipment), the system autonomously takes corrective action whenever needed; the outcome is a highly dependable system for safe landing management, and full awareness for your technical staff.

The N8000 series offer the following sub systems:

- The N8100 Localizer, provides horizontal alignment for the aircraft with the runway centerline
- The N8200 Glide Path, provides vertical alignment and angle of approach
- The N8300 Marker Beacons to identify particular locations along the approach

#### Key Features

- Highly reliable systems built to run continuously and fully unattended for continuous service
- Durability against time and weather to ensure signal accuracy is never compromised
- Fully compliant with ICAO Annex 10, international RF, electrical, and environmental standards
- Configurable for CAT I, II or III
- Antennae with proven performance under extreme environmental conditions.
- Multiple antenna configuration options depending on site requirements.
- Localizer and GlidePath available in single or dual frequency modes.
- Available near field and far field monitors for superior signal integrity monitoring.

- Full redundancy of critical components and advanced embedded watchdogs ensure 100% system uptime.
- Enhanced BITE (Built-in Test Equipment) for detailed capture and analysis of system status.
- RCMS – Remote Control and Monitoring Systems

Intelcan offers unparalleled management capabilities without compromising ease of use. RCMS can be easily connected with multiple types of communication media: wireless, fiber optic cable and traditional telephone cable. The RCMS presents critical information and control at your fingertips, in real time:

- Remote Control Unit (RCU) for technical operators
- Remote Status Unit (RSU) for the air traffic control room
- Remote Monitoring and Maintenance application (RMM) for maintenance personnel.

The RMM uses an open-architecture software with an intuitive interface, allowing for fast localization of problems, and providing the user with suggested corrective actions. Its primary features include:

- At-a-glance view of the whole ILS system and its status
- Centralized monitoring of up to 100 systems simultaneously and in real-time
- Continuous monitoring for alarms and warnings
- Alarm reporting to field technicians via email or SMS to ensure faults in the system are received instantly by the appropriate personnel
- Continuous status logging and periodic reports for performance measurements and preventive maintenance
- Full remote control
- Remote configuration and software upgrade
- Compare multiple systems side-by-side
- Save configuration as a file, load configuration from file
- Multiple users can access in parallel
- Multiple access levels ensure the right users have the right privileges
- Support remote web browser monitoring (password protected)



# SKYNAV ILS N8000 series

	Glide Path Specifications	Localizer Specifications
<b>SIGNAL</b>		
Type	Dual freq. with 16 KHz diff.	Dual freq. with 8 KHz diff.
Channel Width	150 kHz	50kHz
Carrier frequency (Synthesizer control)	329.15 MHz to 335.00 MHz	108.10 MHz to 111.95 MHz
Frequency stability	± 0.0005%	± 0.0005%
Output power	up to 8 W adjustable	up to 25 W adjustable
Spurious / harmonics	> 60 dB	> 60 dB
Modulating tones	90 Hz, 150 Hz	90 Hz, 150 Hz, ID @ 1020 Hz
Phase control	± 180° (360°)	± 180° (360°)
SDM stability	± 0.6%	± 0.3%
DDM stability	± 0.006DDM	± 0.003DDM
Modulation depth	Max. 90% adjustable	Max. 50% adjustable
Total harmonic distortion	< 1%	< 1%
<b>INTERFACES</b>		
Ethernet (LAN)	10/100 Mbps, full duplex, RJ45 connector	10/100 Mbps, full duplex, RJ45 connector
RS-232 (Serial)	EIA-232 DTE, DB9 male	EIA-232 DTE, DB9 male
Configurable Inputs/Outputs	8 digital inputs, 8 analog inputs	8 digital inputs, 8 analog inputs
<b>POWER</b>		
Input voltage	110 to 230 VAC 50/60 Hz	110 to 230 VAC 50/60 Hz
Consumption	< 300 W for single transmitter	< 500 W for single transmitter
Battery	Min 4 hours of autonomy	Mini 4 hours of autonomy
<b>ENVIRONMENTAL</b>		
Operating temperature	-50 to 70°C (outdoor equip.) -10 to 50°C (indoor equip.)	-50 to 70°C (outdoor equip.) -10 to 50°C (indoor equip.)
Storage temperature	-50 to 70°C	-50 to 70°C
Humidity	0% to 95% RH	0% to 95% RH
<b>MECHANICAL</b>		
Dimensions	1400mm x 600mm x 600mm	1400mm x 600mm x 600mm
<b>ANTENNA</b>		
Number of elements	2, 3	8, 14, 20
Antenna type	3 co-linear dipoles with reflector	LPDA (Log Periodic Dipole Array)(Frangible)
HPBW (Half-power beam width)	25°	23°
Frequency range	328 – 336 MHz	108 – 112 MHz
Gain	12dB	10dB
Front-to-Back Ratio	17dB	26dB
VSWR (50 )	1.1:1 maximum	1.11:1 maximum
Coaxial connectors	N-female, 500hms	N-female, 50 Ohms
Wind velocity	200 km/h	200 km/h

## Marker Beacon Specifications

<b>RF SIGNAL</b>	
Carrier Frequency (Synthesizer control)	75 MHz ± 0.005 %
Output power	up to 6 W adjustable
Power stability	± 0.5 dB
<b>MODULATION</b>	
AM frequency Transmitted ID (Morse code)	Outer: 400 Hz – (dashes, 2/sec) Middle: 1300 Hz, ---. (alternate dash and dot) Inner: 3000 Hz, .... (dots, 6/sec)
Modulation depth	95% ± 4%, adj from 45 to 97%
Total harmonic distortion	< 5%
<b>INTERFACES</b>	
Output to transmit antenna	Type N, 50 Ohm, female
Input from receive antenna	Type N, 50 Ohm, female
Ethernet (LAN)	10/100 Mbps, full duplex, RJ45 connector
RS-232 (Serial)	EIA-232 DTE, DB9 male
Configurable Inputs/Outputs	8 digital inputs, 8 analog inputs
<b>POWER</b>	
Input voltage	110 to 230 VAC 50/60 Hz
Consumption	50 Watts
Battery	Min 6 hours of autonomy
<b>ENVIRONMENTAL</b>	
Operating temperature	-50 to +70° for outdoor equipment
Storage temperature	-50 to +85° for outdoor equipment
Humidity	0% to 95% RH
<b>ANTENNA</b>	
Number of elements	1 or 2
Gain	7 dBi
VSWR	< 1.4
Material	Hot-dip galvanized steel

## About Intelcan Technosystems

Intelcan is the leading Canadian communications, navigation, surveillance and air traffic management (CNS/ATM) system and airport infrastructure solution provider. Integrating Intelcan's own products or utilizing products from a diverse supplier network, Intelcan has delivered complete turnkey solutions both cost-effective and flexible, to fulfill civil and military clients' requirements in over 60 countries, worldwide.



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