

# Multichannel Receiver HUGIN 2000

2048 INDIVIDUALLY CONFIGURABLE  
DIGITAL DROP RECEIVERS



# Networked Multichannel Receiver HUGIN 2000

## HUGIN 2000

HUGIN 2000 is a networked multichannel receiver with 2048 radio channels

### High dynamic range multichannel receiver

HUGIN 2000 is Novator Solutions high dynamic range multichannel receiver with 50MHz, 80MHz or 200MHz bandwidth and 2048 individually configurable DDCs. The Server Client architecture is optimized for real-time performance which continuously processes and streams individual signals in parallel to multiple remote clients & operators.

## HUGIN 2000:

- Frequency range: 2MHz - 3.6, 14 or 26.5GHz
- 1-2 individual receivers with 50, 80 or 200MHz instantaneous bandwidth each
- 1024 individual digital downconverters (DDC) per receiver
- AM, FM, SSB & CW Demodulation
- Configurable DDC parameters: Center frequency, sample rate, gain, filter coefficients & IQ data stream or demodulation
- Independent or networked operation with build-in server
- Multicast channel streaming to virtually unlimited remote computers



## Narrowband Communication

We see a continuously growing number of communication signals in the spectrum. At the same time wireless communication standards are increasingly diverse. Using conventional methods for communication surveillance and spectrum monitoring would increase the cost almost proportionally to the number of signals. New cost-efficient solutions are needed to effectively monitor the diverse communication signals and to identify RF interferers. HUGIN 2000 is the cost effective, yet flexible multichannel receiver solution for narrowband communication surveillance and spectrum monitoring applications.

## Strategic COMINT in focus

The most important goal in strategic COMINT is to gather as much data as possible. HUGIN 2000 has 2048 individually configurable DDCs, also known as digital drop receivers, which gives the freedom to capture as many signals as needed.

The combination of the large amount of DDCs with analog demodulation reduces the amount of data to the necessary minimum making it ideal for networked narrowband signal surveillance.

Multiple operators can listen to and control the 2048 channels from different locations. In parallel, surveillance software can send tasking functions to HUGIN 2000 to automatically record and analyze hundreds of channels.

## Core Benefits and Features

### Superior cost per channel

HUGIN 2000 is built on COTS industry standard PXI platform from the leading vendor NI with which Novator Solutions has a long-term partnership. The core signal processing technology, enabling an efficient implementation of thousands of DDCs, comes from RFEL. Thanks to both partnerships combined with Novator Solutions expertise we were able to develop a high-end multichannel receiver solution with superior cost per channel performance. Additional partnership-benefits include short lead-times and a high degree of flexibility to configure the DDC channels individually thanks to the novel architecture.

### Networked operation

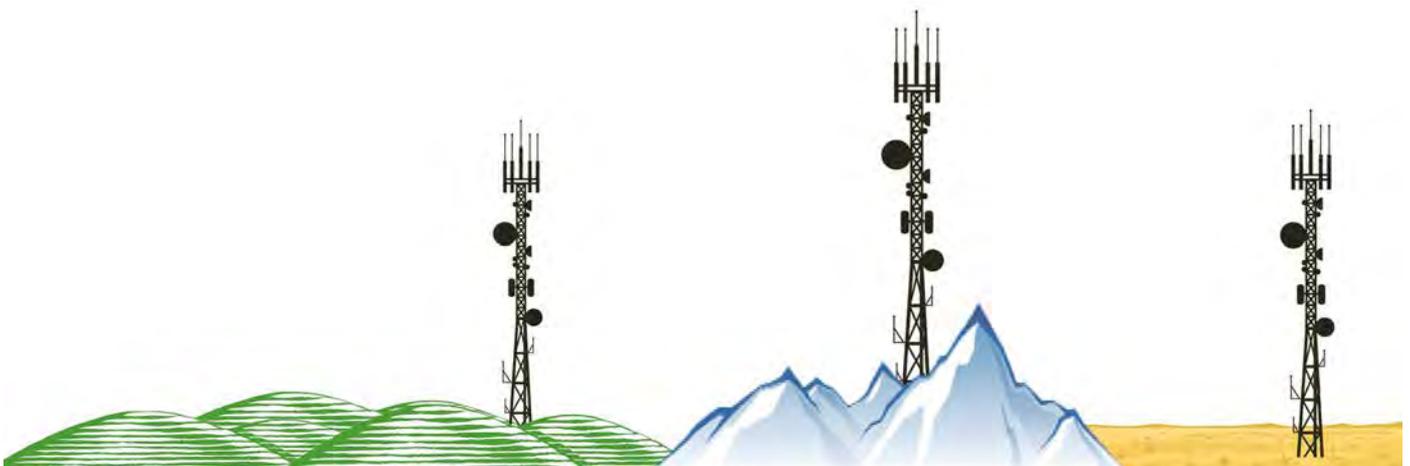
The receiver can be operated independently and supports out of the box networked operation thanks to the build-in server. Networked operation is ideal when the receiver is placed in remote locations which are difficult to access. Remote operation gives a higher level of freedom to have multiple operators monitoring and controlling the signals from various locations. Each operator has full control over the assigned channels and can configure the DDC channels individually. Beside the center frequency and sample rate, gain, filter coefficients and whether to stream IQ or demodulated data can be configured per DDC channel. The intuitive API ensures a smooth integration into existing environments such as SANDRA from Combi-tech, commercial third-party or propriety environments.

### Flexible tuning

A single system can be equipped with two individual receivers. Each receiver comes with either 50, 80 or 200MHz instantaneous bandwidth and can be tuned in between 2MHz and 3,6GHz or optional 14 or 26.5GHz. This gives a high level of freedom for continuously listening to communication signals over a spread spectrum with a single system.

### Low streaming data rates

In networked COMINT environments the amount of data can quickly become overwhelming to handle. With HUGIN 2000 it is possible to optimize the streaming rate to the host computer in several steps. First, it channelizes only the signals of interest which eliminates the need to stream the entire spectrum. Second, the build-in analog demodulation blocks reduce the amount of data further. Combined it reduces the amount of data which needs to be transferred and the processing load on the computer. The result is reduced cost for the infrastructure and simplified data management.



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### **Customized Solutions**

On request we are happy to provide customized solutions. The possibilities with the FPGA architecture combined with our business model help you to get the best possible solution fulfilling your requirements while keeping the price at an affordable level.

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