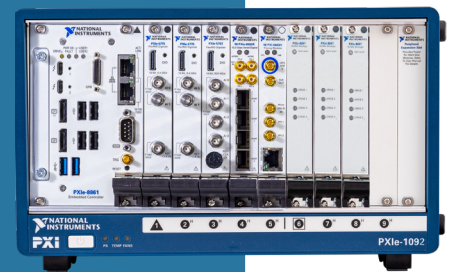# Wideband IF RECEIVER
HUGIN 1005

HUGIN 1005 is a wideband monitoring receiver with up to 2200 MHz real-time bandwidth. Built on a modular platform, HUGIN 1005 provides one or more IF inputs and it comes with run-time configurable DDCs which are ideal for interception of Radar and satellite signals. A single receiver system provides both real-time IQ data to the operator and records all interceptions of interest.

HUGIN 1005

- 1 - 4 IF receiver channels
- 100 MHz & 1 GHz real-time bandwidth options
- Configurable IF frequency up to L band
- 64 configurable DDCs from 100 kHz – 40 MHz
- 250 MSPS aggregated output rate per I and Q
- Server/Client architecture that allows remote operations and seamless streaming of intercepted data
- Intuitive API that enables easy integration with any 3rd party COMINT monitoring software
- Recording to disk option
- TCP/IP API

Flexible IF receiver architecture

HUGIN 1005 modular architecture allows to combine one or more wideband & narrowband IF inputs with direct sampling technology. The flexibility to adapt the receiver to various Radar and SATCOM system configurations enables the reuse of the same receiver system for various missions.

Real-time data reduction

Reducing the data from 1GHz bandwidth or more to the signal of interest speeds up the post-processing time and reduces the system cost for streaming and recording the data. HUGIN 1005 comes with 64 narrowband DDCs per module which can be individually configured, activated & de-activated as well as re-configured during run-time. The down converted channels are being streamed via 10 Gb Ethernet ports.

Timing & synchronization

The modular architecture with an integrated timing & synchronization bus is ideal for demanding TDOA and similar measurements. HUGIN 1005 provides superior timing precision supporting PPS, 10 MHz reference, PTP synchronization & IRIG-B signals. It also has a build-in GPS receiver.

Data recording option

The IF receiver can optionally be equipped with high-speed data recording storage. Both in-chassis and external RAID storage as well as quick removable disk options are available. Depending on the mission requirements the storage can be scaled accordingly.

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Technical Specifications HUGIN 1005

Receiver	
RF receiver channels (Rx)	1 or 2 wideband (1GHz bandwith) Optional: 1 or 2 narrowband (100MHz bandwith)
Full-scale input range (at 10 MHz)	1,25 Vpp (wideband input) 2,03 Vpp (narrowband input)
Center frequency	Configurable
Instantaneous bandwidth per IF receiver channel	1000 MHz (wideband input) 2 MHz – 100 MHz (narrowband input)
SFDR	-62dBc (wideband input) -88 dBc (narrowband input)
Synchronization	PPS, PTP, external 10 MHz ref. & IRIG-B Bulid-in GPS receiver

DDC channel specification	
Wideband DDC	1 wideband DDC per IF input (optional)
Narrowband DDCs	64 DDCs per module, run-time configurable
Channel (DDC) bandwidth	100 kHz to 40 MHz
IQ filter	Default: 80% of IQ rate
Digital output	IQ – VITA-49 compliant (optional)
IQ data format	Complex (32 bit)
IQ output rate per narrowband DDC	Configurable from 125 kSPS to 50 MSPS
Aggregated IQ output rate per module	Up to 250 MSPS for I and 250 MSPS for Q

Data recording specification (option)		
Form factor	Single slot in-chassis module	External RAID 2U chassis
RAID	Software Controller	Hardware Controller
Capacity	8 TB – 32 TB per module	24 TB – 96 TB per chassis
Disk type	NVME SSD	SATA III SSD

Mechanical / Environmental	
Form factor	4U - 19" rack mountable chassis
Operating Altitude	3.000 m

Novator Solutions AB, part of Novator Consulting Group, is a leading provider of products & system development within SIGINT & EW domains. Our highly skilled R&D team applies its extensive know-how in high-speed data processing and software defined radio "SDR" technology to develop next generation COMINT receivers and ELINT signal recorders. Our software expertise combined with a modular hardware architectures allows us to provide customized products and complete turn-key solutions tailored to specific project or mission requirements.

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