



ENENSYS Net

between main & backup IP sources based on a set of configurable criteria in order to provide reliable IP transport and error-free streams.

Highlights

Secure your IP infrastructures

IPGuardV2 switches automatically between IP-based devices or IP networks by selecting the best streams based on configurable criteria.

Safe DTT SFN broadcasting

Used with ENENSYS' gateways and SFN adapter, IPGuardV2 prevents from facing DTV blackout or audio/video glitches when problems occur in your infrastructure in DVB-T/T2, ISDB-Tb, ATSC3.0...

Straightforward setup into existing networks

IPGuardV2 is the only IP transparent switch on the market that does not modify the IP streams, leading to a straightforward integration into existing network infrastructures.

100% service availability for great viewers experience

By checking continuously the broadcasted contents and by being highly reliable, the IPGuardV2 allows the operator to provide a great experience to their customers ensuring a high QoS.

Convenient for DTT, CATV & IPTV

Due to its high processing capability and the number of switching criteria available, IPGuardV2 can be setup in any IP infrastructures, securizing every distribution or contribution links.

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System diagram

key_points_title

- Avoid DTT blackout (DVB-T/T2, ATSC3.0, ISDB-TB)
- Avoid audio & video glitches in case of equipment or network link failures
- Seamless switching between undefined identical RTP streams
- SMPTE2022-7
- Check the integrity of digital signals with an unmatched set of configurable switching criteria
- No change of network topology when inserted into existing network or in bypass mode
- High density & scalable solution with up to 66x switches in 1 module and 396x in 1U
- FEC modification & generation for TSoIP
- Modification of IP characteristics of the streams to fit customer networks
- Synchronize different locations (head-end, transmission sites) with Peering feature

Applications



- 1+1 automatic IP switching of IP-based equipment and networks
- Contribution & distribution links securization
- Seamless switching between IP links with different propagation delays
- Seamless switching between between SFN adapters (DVB-T/T2, ISDB-TB, ATSC3.0)
- Seamless switch over between TS, T2-MI, BTS and RTP streams
- SMPTE2022-7 seamless protection switching
- Switch-over based on:
 - ETR290 1/2/3 and audio/video



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Technical specifications

Inputs

Control

1x Gigabit Ethernet (RJ45) for GUI/SNMP

Data

2x Gigabit Ethernet (RJ45) for IP input streams
2x optional SFP ports

Outputs

Data

2x mirrored Gigabit Ethernet (RJ45) for IP output streams
2x optional SFP ports

Availability

Bypass mechanism to always output IP streams in case of power outage

Featuring

UDP/IP stream management

Unicast/Multicast stream
RTP support

IP switch

Up to 60 IP streams managed
Up to 6 TS/T2-MI over IP analyzed



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... ..
RTP packets loss
Network jitter

Network transparent bridge

No MAC/IP addresses for data interfaces

Peering

Peer several IPGuardV2 so that they select the same streams

FEC management

SMPTE 2022-1 (Pro MPEG CoP#3)
FEC input correction (TSolP)
FEC output distribution (TSolP)
FEC output generation (option)

Network address translation

Modify IP characteristics of the incoming streams

Daisy chain mode

Serialization of several IPGuards to increase processing capacities

Monitoring supervision

Real-time monitoring of incoming streams
Web-based GUI
Full SNMP v2 support

Physical

Height

43mm / 1.69in.

Width

443,7mm / 17.46 in.

Depth

322,8mm / 12,70 in.

Format

1 RU, width 19"

Front Panel

LCD Display and control

Power supply

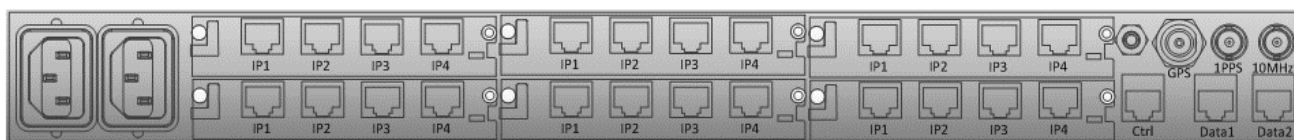
100-240V 50-60Hz - 48V DC (option)

Power consumption

20W/module

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Back





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IPGuardV2-SeamlessTS

Seamless switching between TS/T2-MI streams

IPGuardV2-FEC

FEC generation on the outputs

IPGuardV2-Peering

Peering of several IPGuardV2 to synchronize selected input

IPGuardV2-1/2/6STL

STL Error Indicator and ATSC3.0 switching criteria for 1/2/6STL streams

IPGuardV2-SeamlessRTP

Seamless switching between identical RTP streams - SMPTE2022-7

IPGuardV2-DaisyChain

Share processing with another IPGuardV2

IPGuardV2-1/2/6TSoIP

ETR290 and advanced switching criteria for 1/2/6 MPEG2-TS

IPGuardV2-SeamlessSTL

Seamless switching between identical STL streams