



IPGuard E2

1+1 Smart IP switch for data port redundancy

IPGUARD E2 IS ENENSYS' UNIQUE AND SECURE SOLUTION THAT ENABLES 1+1 AUTOMATIC REDUNDANCY OF IP STREAMS WITH BYPASS MECHANISM.

Nowadays, IP network is commonly used to carry any kind of data services. Broadcast network operators are migrating to the IP infrastructure to deliver audiovisual content. **IPGuard E2** is the solution to secure the delivery of any IP stream by providing an automatic 1+1 redundancy of the IP streams upon IP, MPEG-2 TS or T2-MI criteria. It is designed for the redundancy of data Ethernet ports : whenever an error arises over one input Ethernet port, the **IPGuard E2** changes automatically over the other input Ethernet port. By default, the **IPGuard E2** offers a bypass mechanism in order to offer 100% of service availability in case of power outage.

IPGuard E2 is perfectly suited to provide automatic 1+1 redundancy of network appliances that deals with IP streams such as encoders, multiplexers, DVB-T2 gateways, EPG servers,... It can monitor up to 60 independent redundant IP streams to perform an automatic change-over to the other Ethernet port in case of IP stream missing or bit rate underflow. Inherently, it provides the automatic redundancy of regular IP switches that handle multimedia IP streams.

Also, **IPGuard E2** offers seamless switching capability of two independent MPEG-2 TS or T2-MI stream carried over IP. Combined with ENENSYS DVB-T2 Gateway and the patented technology **T2Guard**, **IPGuard E2** provides a seamless switch-over between both DVB-T2 gateways that deliver T2-MI streams over IP networks.

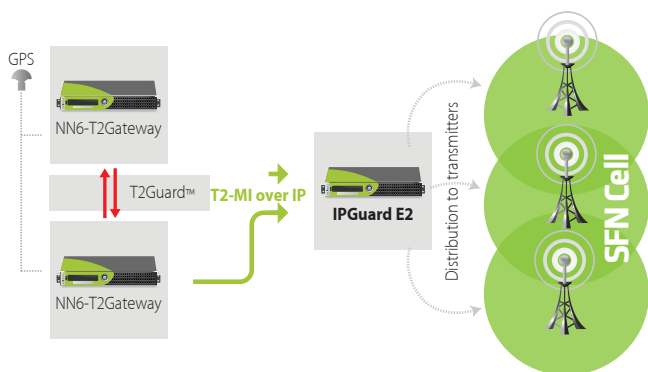


APPLICATIONS

- 1+1 automatic redundancy of IP appliances
- 1+1 automatic redundancy between IP streams
- Seamless switch-over of TS carried over IP
- Seamless switch-over of T2-MI carried over IP

BENEFITS

- Multi-standard applicable (DVB, ATSC, ISDB,...)
- Video agnostic: MPEG-2, H264 or HEVC
- Maintain service continuity
- Automatic 1+1 redundancy of any IP appliances
- Avoid TV black-out in SFN (an MFN in DVB-T2)
- Avoid video glitches with delayed sources
- Transparent for end-to-end devices
- Straight integration into any NMS



CHARACTERISTICS

- UDP and RTP management
- Unicast and Multicast support
- VLAN management
- Transparent IP switch
- Up to 60 IP streams monitored
- TS over IP automatic and seamless switch
- T2-MI over IP automatic and seamless switch
- FEC (Pro MPEG CoP#3) management
- Bypass mechanism support
- Easy-to-use web based GUI
- Full SNMPv2 support

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INPUTS

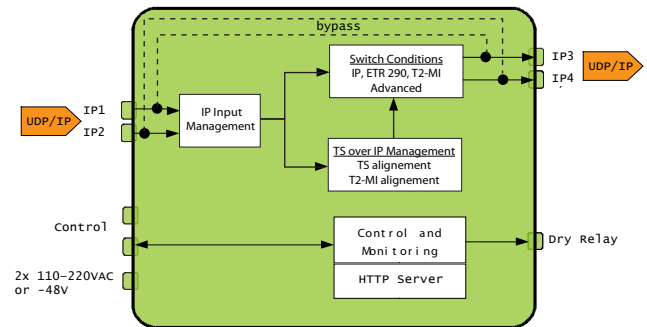
Control	2x Gigabit Ethernet (RJ45) for GUI/SNMP
Data	2x Gigabit Ethernet (RJ45) for UDP/IP input streams

OUTPUTS

Data	2x mirrored Gigabit Ethernet (RJ45) for UDP/IP output streams
Availability	Bypass mechanism to always output IP streams in case of power outage

FEATURING

UDP/IP stream management	Unicast/Multicast stream RTP support VLAN management
IP switch	Up to 60 IP streams managed Up to two TS/T2-MI over IP support IP Bypass for service availability
Seamless TSoIP Seamless T2-MI over IP	Seamless switch-over between the same TS or T2-MI carried over IP Alignment of delayed streams
FEC management	SMPTE 2022-1 (Pro MPEG CoP#3) FEC input correction (TSoIP) FEC output distribution (TSoIP)
Switching modes	Automatic switch Priority input Manual switch
Switching conditions	IP input loss ETR290 and T2-MI alarms Advanced alarms
Monitoring	Real-time monitoring of incoming streams, Web-based GUI
Supervision	Full SNMP v2 support Easy integration into NMS



PHYSICAL

Height	44 mm / 1.7 in.
Width	444 mm / 17.48 in.
Depth	274 mm / 10.79 in.
Format	1 RU, width 19"
Power supply	100-240VAC 48V DC (option)
Power consumption	20W

ORDERING CODES

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Options

Additional TS	Management of one additional TS or T2-MI carried over IP
SeamlessTS	Seamless switch-over between two identical TS over IP
SeamlessT2-MI	Seamless switch-over between two identical T2-MI over IP
IPGuard-AdvBypass	Maintain last selected input
NN6-In48V	48 V input instead of 110V/220V
NN6-In220VRedundant	110V/220V redundant power supply
NN6-In48VRedundant	48V DC redundant power supply

