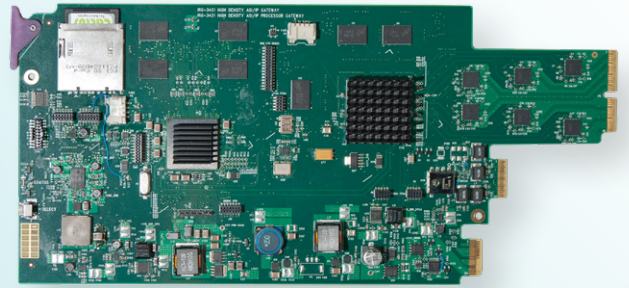


DATASHEET

# IRG-3401

## High Density ASI/IP Gateway



Space-saving, modular platform for advanced signal processing.

The IRG-3401 from Grass Valley® facilitates cable, satellite and IPTV operators' migration towards IP infrastructures by offering a flexible highly integrated DVB-ASI/IP bidirectional gateway that can bridge any type of MPEG transport stream from/to IP networks. The high density allows 120 gateways per 3 RU Densité® 3 frame, saving substantial rack space in high channel count environments. Its scalability through modularity is the ideal solution to address increasing TV channel lineups.

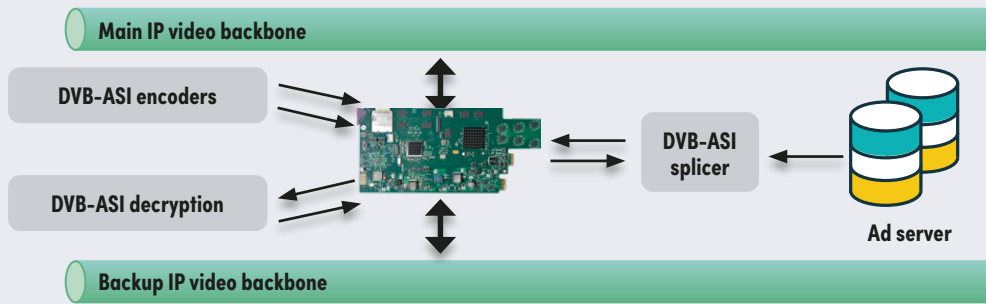
The dual Ethernet SFP sockets allow fiber or electrical connectivity to the main and backup video backbone to provide complete redundancy of MPEG transport streams. Each DVB-ASI I/O can also be paired in redundant mode. Combined together the IP and DVB-ASI redundant ports offer a robust solution to ensure uninterrupted services.

### Key Features

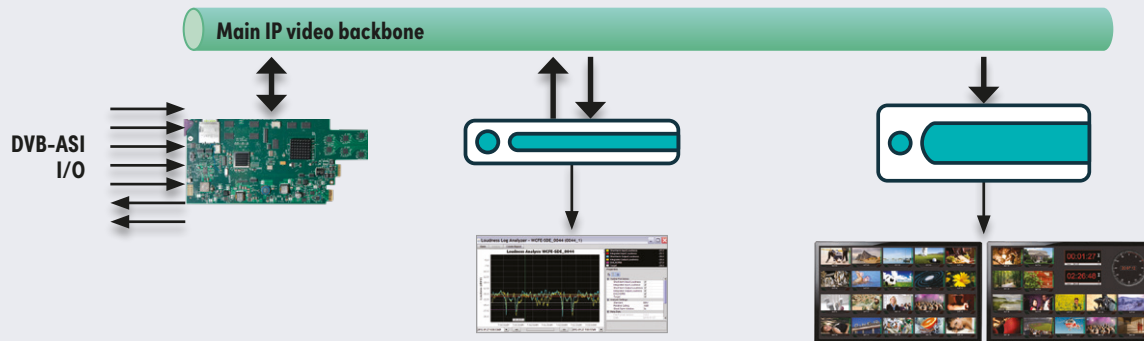
- Very high density with 12 gateways per card/120 gateways per 3 RU frame
- Handle most demanding streams:
  - Up to 213 Mb/s per DVB-ASI
  - Total of 800 Mb/s on Ethernet
- Configure each DVB-ASI as an input or output
- Convert legacy ASI devices to IP with simultaneous IP to ASI and ASI to IP conversions
- Flexible IP connectivity through two distinct SFP ports for optical or electrical modules
- Full redundancy to avoid service interruptions
- Pair DVB-ASI I/Os as main and backup
  - Copy TS streams on both IP ports simultaneously (port mirroring)
  - Automatic change-over switch for both Ethernet ports and DVB-ASI ports
- MPEG Cop3 FEC (SMPTE ST 2022) support for better signal integrity over IP
- UDP/RTP encapsulation 1 to 7 TS/IP packet
- Better multicast traffic control using IGMPv3 MSM/SSM
- Network jitter removal

## Typical Applications

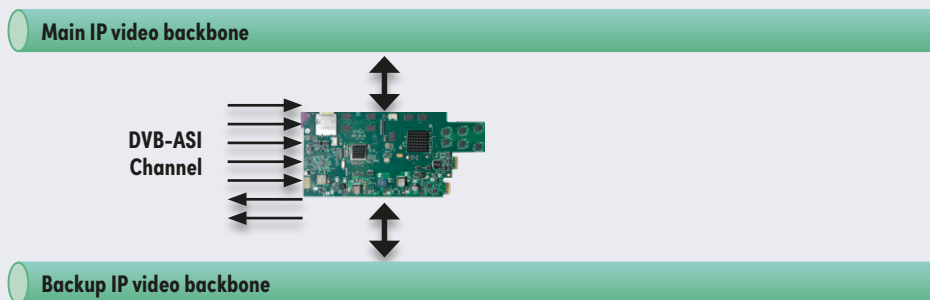
### Connect any legacy DVB-ASI equipment to an IP video network



### DVB-ASI interface to IP-only devices



### Aggregate/Distribute DVB-ASI TV channels from/to the IP video backbone



## Specifications

### ASI (Inputs/Outputs)

**Physical:** 12 BNC connectors configurable independently as input or output

**Standards:** EN50083-9 (V2:3/98) DVB ASI

**Cable length:** 300m (984 ft.) Belden 1694A at 270 Mb/s

**Data bit rate:** Each I/O up to 213 Mb/s

**TS packet size:** 188/204 bytes

**Return loss:** >15 dB up to 270 MHz

**Output jitter:** <0.2UI (0.74 ns) pp

### Ethernet Ports

**Physical:** 2 SFP sockets for electrical (RJ45) or optical cartridge

**Standards:** IEEE 802.3 1000 Mb/s Ethernet

**Transport:** UDP/RTP with FEC Pro-MPEG CoP3 1-7 TS/IP Unicast or Multicast with IGMPv3 MSM/SSM

**Performance:** Up to 800 Mb/s of streaming

### Electrical

**Power:** 15W

## Ordering

### Densité 3 frame

IRG-3401

### Description

High density ASI/IP gateway

IRG-3401-3DRP

Double 3 RU rear module with SFP sockets

Note: One or two SFP option must be ordered for each IRG-3401

### SFP options

SFP-ETH-10-RT-W13-LC

### Description

Ethernet 10 km (6.21 mi.) cartridge / I/O 1310 nm with WDM with LC/PC connector

SFP-ETH-10-RT-W15-LC

Ethernet 10 km (6.21 mi.) cartridge / I/O 1550 nm with WDM with LC/PC connector

SFP-ETH-RT-1000-RJ45

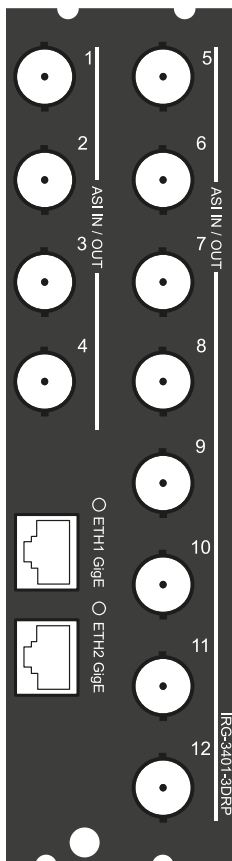
Ethernet electrical GigE cartridge RJ45 connector

SFP-ETH-10-S13-LC

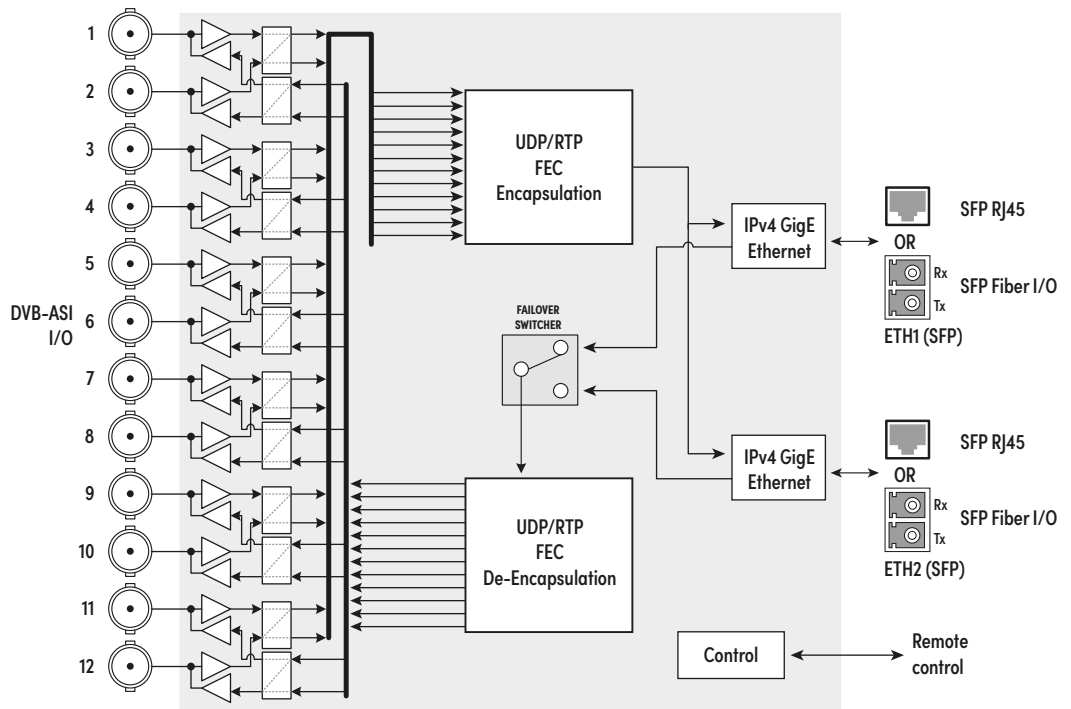
Ethernet 10 km (6.21 mi.) cartridge / 1310 nm with LC/PC connector

SFP-ETH-RT-M85-LC

Ethernet multimode cartridge / 850 nm with LC/PC connector



IRG-3401-3DRP



IRG-3401 Functional Block Diagram

This product may be protected by one or more patents. For further information, please visit: [www.grassvalley.com/patents](http://www.grassvalley.com/patents)

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