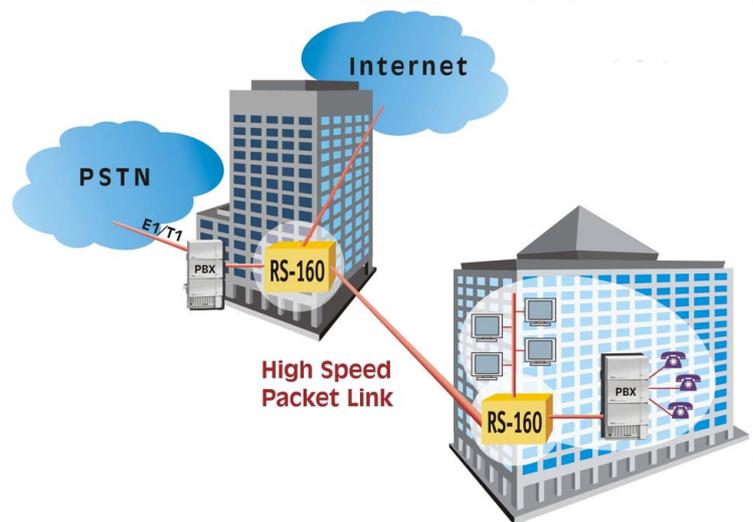


# RS-160 Product Brief

The **StelaGate RS-160** is a special purpose network processor that enables a single high-speed data link to transport data and circuit-based E1/T1/J1 services thereby *eliminating the cost of a dedicated E1/T1/J1 line*.

## TDM over IP



### TDM Packetization over Ethernet/IP

- supports any standard fractional or full E1/T1/J1 device
- guarantees bandwidth and prioritizes packetized traffic during transmission
- upon reception identifies Ethernet/IP packets carrying E1/T1/J1 traffic and converts them back to their original format
- accurately recreates the original Tx clock signal with a highly optimized algorithm

### Ethernet Multiplexing and Bridging

- multiplexes E1/T1/J1 and Ethernet traffic onto a single data line
- transports E1/T1/J1 traffic over all types of high speed packet-based connections
- uses highly optimized scheduling and prioritization techniques to ensure that TDMoIP traffic is not degraded by multiplexed Ethernet traffic on the Service Interface
- provides bridging functionality on the Ethernet traffic ensuring that only relevant packets are transported across the Service interface (thereby further increasing the efficiency of the link)
- bridging is performed on up to 1024 MAC addresses at wire-speeds of up to 100 Mbps

### Applications

- tunneling E1/T1/J1 frames, or any type of bitstream, over a single broadband connection
- transporting E1/T1/J1 frames over packet-based campus and enterprise networks

### TDM over Ethernet/IP

- supports structured and unstructured E1, T1 and J1 frames transparently
- integrated clock recovery

### Interfaces

The RS-160 includes three high speed interfaces:

- **E1/T1/J1** interface to E1/T1/J1 equipment in the subscriber premises or PSTN switch equipment in the Central Office
- **Ethernet** interface to the subscriber premises LAN or router connection in the Central Office
- Service interface, configurable to **Ethernet** or **HDLC** operation, for connection to the high speed packet-based link

### General

- "drop-in" solution
- no external CPU required
- no software development required
- E1/T1/J1 to Ethernet protocol conversion
- Ethernet to Ethernet processing
- Ethernet to HDLC WAN link support

### Bridging

- 1024 address MAC table
- auto. MAC table learning/aging
- filtering rate of 150,000 pps
- forwarding rate of 300,000 pps

### Packaging

- low power 0.18 $\mu$  CMOS
- 3.3V and 5V tolerant I/O
- package: 240 pin PQFP
- temp. range: -40°C to +85°C

## StelaGate RS-160

High Performance, Single Chip Traffic Processor  
for TDM over Ethernet/IP Applications



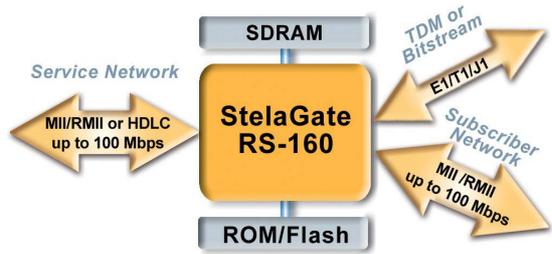
# StelaGate RS-160

## Interfaces

The RS-160 includes three interfaces:

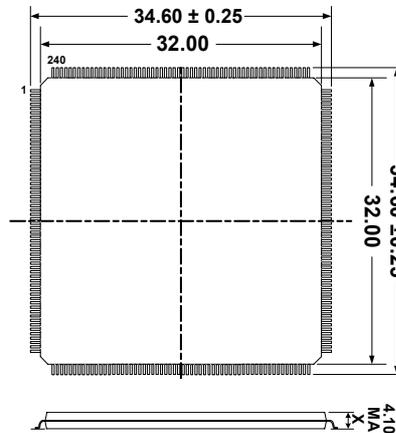
- Subscriber - MII/RMII at up to 100 Mbps
- TDM/Bitstream - E1, T1 or J1
- Service - MII or HDLC at up to 100 Mbps

The RS-160 operates with low cost industry standard SDRAM and ROM/Flash memory



## Packaging

### 240 Pin Plastic Quad Flat Pack



## Ordering

Item	Description	Order No.
RS-160Q	StelaGate RS-160 Quad Flat Pack	RS-0160Q
Data Sheet	StelaGate RS-160 Data Sheet	DC-DS-0160

Contact your local distributor, Redux Sales Office, or Redux Support for complete ordering details.

## Company Brief

Redux is a fabless chip manufacturer of network processors for the broadband home and office environments. Redux's unique chip-based technology facilitates the delivery of multiple, high-value services over the broadband First Mile. With Redux, service providers can deliver high revenue customized services, and broadband access device vendors can differentiate their products.

[www.reduxcom.com](http://www.reduxcom.com)

Specifications and information are subject to change without notice. The product described in this document is subject to continuous developments and improvements. No responsibility is assumed by Redux for the use of this information, nor for infringements of patents or other rights of third parties. This document is the property of Redux and implies no license under patents, copyrights or trade secrets.

StelaGate and Redux are trademarks of Redux.

Copyright © 2002 Redux. All rights reserved.

DC-PB-0160-A



### Int. Headquarters

Redux Communications Ltd.  
P.O.B. 101  
Modi'in 71700 Israel  
Tel: +972-8-914-8888  
Fax: +972-8-914-8889  
E-mail: [info@reduxcom.com](mailto:info@reduxcom.com)

### U.S.

Redux Inc.  
1750 Tysons Blvd., Suite 400  
McLean, VA 22102 U.S.A.  
Tel: (703) 744-1196  
Fax: (703) 744-1001  
E-mail: [usinfo@reduxcom.com](mailto:usinfo@reduxcom.com)