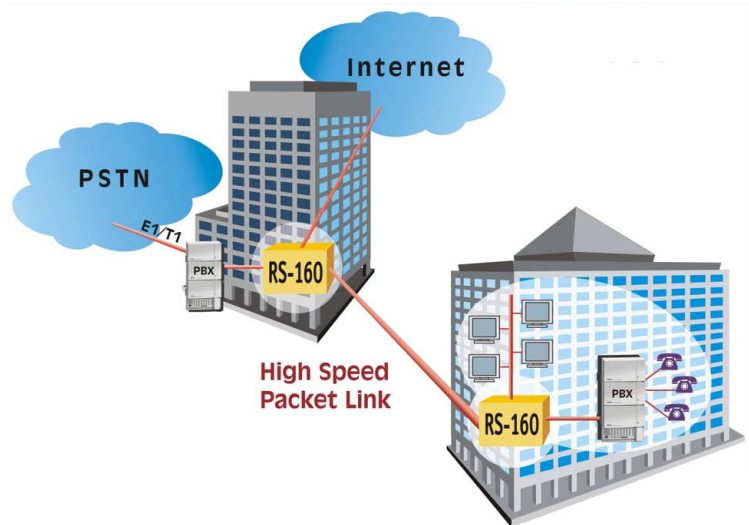


RS-160 Product Brief

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 μ 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



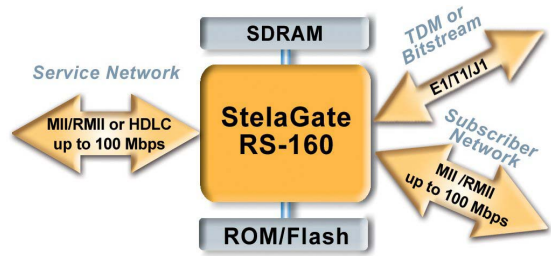
StelaGate RS-160

Interfaces

The RS-160 includes three interfaces:

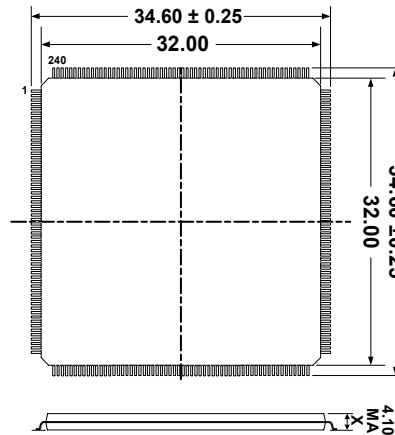
- Subscriber - MII/RMII at up to 100 Mbps
- TDM/Bitstream - E1, T1 or J1
- Service - MII or HDLC at up to 100 Mbps

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

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DC-PB-0160-A



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