



# Novra S200CA DVB-S2 Data Receiver/Router



## Overview

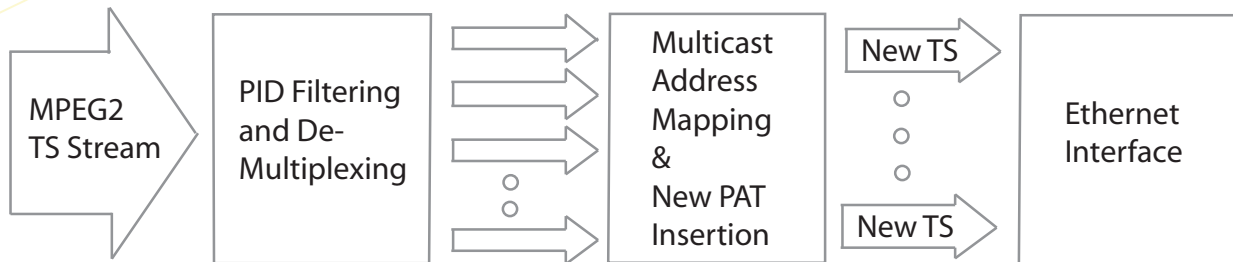
Novra is pleased to introduce the S200CA into our lineup of DVB-based IP/MPEG data receiver/routers. Based on Novra's Generation-II S75 hardware platform, the S200CA provides support for both DVB-S and DVB-S2 air interface standards and provides a DVB conditional access Common Interface (CI) slot. The S200CA lets you choose your demodulation technique, supporting QPSK and 8PSK over a variety of coding rates. Compatibility with the DVB-S2 standard enables you to take advantage of the significant efficiency gains when compared with DVB-S.

The S200CA augments IP delivery with enhanced MPEG content aggregation and distribution capabilities that make ideally suited to pass MPEG-2 elementary stream PID's directly onto the host LAN for redistribution or viewing. Processing of the incoming stream enables the operator to set up multiple programs each with its own internally generated mini-PAT (see Functional Block Diagram below).

The inclusion of a Common Interface (CI) slot in the S200CA provides a cost effective means to provide compatibility with the vast majority of currently available DVB conditional access systems.

## Applications

The S200CA is a DVB-S2 receiver that is ideally suited for consumer or small-medium enterprise use, delivering IP-based applications that require encrypted security measures or providing aggregation/distribution of encrypted MPEG-2 programming. Typical applications include: IPTV content aggregation (headend) and/or delivery, hotel or cruise ship infotainment, distance education, digital signage, corporate LAN's and cable network head-ends.



S200CA MPEG Reception Functional Block Diagram

## Features

- Compatible with TCP/IP Protocol Suite
- DVB-S/DVB-S2 Complaint
- Downloadable Firmware
- 70 Mbps Sustained Throughput
- RJ45 10/100 Base-T Ethernet Interface
- Exceptional Flexibility - Delivery of IP or MPEG Services
- IGMP
- DVB Conditional Access Common Interface Slot
- MPEG Features
  - Raw Transport Stream Forwarding
  - SPTS/MPTS
  - Multi-PID Mapping to a Single IP Address
  - Single-PID Mapping to Multi-IP Addresses
  - Forward Original PAT, or Generation of Single Program Mini-PAT's
  - Multicast full DVB Multiplex onto LAN



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# Technical Specifications Novra S200CA Receiver/Router

## RF Tuner

- Receiving Frequency: 950 to 2150 MHz
- Frequency Acquisition:  $\pm 50\%$  Symbol Rate up to  $\pm 10$  MHz
- Input Signal Level: -70 dBm to -25 dBm

## Multi-standard Demodulation

### DVB-S

- QPSK: 1.0 to 45 Msps (auto selection)

### DVB-S2

- QPSK: 1-30 Msps (auto selection)
- 8PSK: 1-30 Msps (auto selection)

- Data Rate: 72 Mbps

- Nyquist Root Filter: 0.2, 0.25, 0.35 rolloff

## Multi-Standard Decoding FEC (Forward Error Correction)

### DVB-S

- Viterbi 1/2, 2/3, 3/4, 5/6, 6/7, 7/8 puncture rates
- Reed Soliman 16 bit decoder

### DVB-S2

- LDPC 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 rates
- BCH (Bose-Chaudhuri-Hocquenghem) decoder

## LNB Power and Control

- LNB Supply Voltage: Selectable 13/18V, 11/15V, 21V or off
- LNB Supply with selectable long line compensation
- LNB Control: Selectable 22 KHz, 44 KHz or off
- LNB Supply Current: 400 mA with Short Circuit and Surge Protection

## Configuration

- IP Address Configuration
- PID Selection
- LNB Power
- Transponder Settings: Symbol Rate, Frequency, Polarization, Band, Power
- Management Console Application Currently Available as both an Executable and a DLL for MS Windows

## Status Monitoring

- Signal Strength
- Signal Lock, Data Lock
- Error status: Viterbi BER, Uncorrectable Errors

## Status Indicators

- Power: Red LED
- Lock: Green LED
- Data: Blue LED
- Ethernet Link (green) and Transmit (yellow)

## Hardware Capabilities

- Multiprotocol Encapsulation (MPE)
- PID Filters: 32
- Internal Hardware Watchdog
- Non-Volatile Configuration Storage
- Field upgradeable operating system for new s/w releases and functional upgrades

## Operating Systems

- Once Configured, Receiver Supports all Operating Systems

## Physical Interfaces

- RF Input Connector: F-Type, 75 ohms
- Ethernet 100 Base-T LAN Interface: RJ-45

## Physical/Environmental

- Height: 1.41 in (3.58 cm)
- Width: 5.22 in (13.26 cm)
- Depth: 4.10 in (10.42 cm)
- Operating Temperature: 0C to 40C
- Storage Temperature: -55C to 85C
- Operating Humidity: 10 to 90% Non-Condensing

## Standards/Regulatory

- UDP/TCP/IP Protocol
- IP Multicast
- IGMP: V1.0, V2.0
- ETSI 301.192 DVB
- ISO/IEC 13818-1
- ISO/IEC 13818-6
- IEEE 802.3 10/100 Mbps
- FCC/Industry Canada CE
- Emission EN 55022
- Immunity EN 55024
- Safety EN 60950
- S200CA Common Interface: EN50221

## Other S200 Models

- S200: DVBS2/DVB-S IP Data Receiver
- S200-Pro: DVB-S2/DVB-S IP/MPEG Data Receiver

