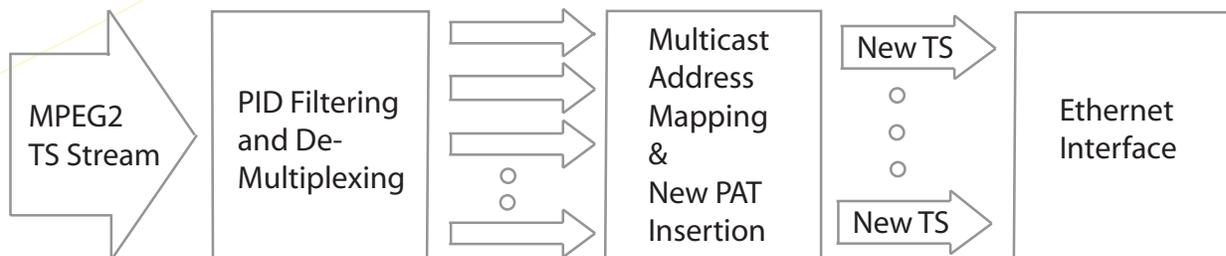# Novra S75CA DVB-S Data Receiver/Router

Overview

Based on the very successful S75 Generation II platform, the S75CA combines the superior throughput performance, flexibility and cost of Novra's S75-Pro IP/MPEG data receiver with a DVB conditional access Common Interface (CI) slot. The S75CA 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 S75CA provides a cost effective means to provide compatibility with the vast majority of currently available DVB conditional access systems. As with all S75-based receivers, the RJ45 Ethernet connection provides powerful and distinct installation, performance, and maintenance advantages over other form factors.

Applications

The S75CA 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.

MPEG2 TS Stream → PID Filtering and De-Multiplexing → Multicast Address Mapping & New PAT Insertion → New TS ... New TS → Ethernet Interface

S75CA MPEG Reception Functional Block Diagram

Features

- Compatible with TCP/IP Protocol Suite
- DVB-S 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

Technical Specifications Novra S75CA Receiver/Router

RF Tuner
- Receiving Frequency: 950 to 2150 MHz
- Frequency Acquisition: ± 50% Symbol Rate   up to ±10 MHz
- Input Signal Level: -65 dBm to -25 dBm

QPSK
- Symbol Rate: 1.5 to 45 Msps
- Data Rate: 70 Mbps
- Root-Raise Cosine Filter with Roll-off 0.35
- DVB Signalling

FEC
- Decoding: Viterbi/Reed-Solomon
- Viterbi Inner Code: K=7, R=1/2, 2/3, 3/4, 5/6, 7/8
  (Auto Detection)
- Reed-Solomon Decoding: 204, 188, T=8
- Deinterleaving: Interleaving Depth=12

LNB Power and Control
- LNB Supply Voltage: Selectable 13/18V, 11/15V or off
- LNB Supply with selectable long line compensaton
- 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 Available
   as an Executable for MS Windows
- Static and Dynamic Library available for OEM Configuration Console

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

Operating Systems
- Once Configured, is OS Independent

Status Indicators
- Power: Red LED
- Signal: Green LED
- Lock: Green LED
- Ethernet Link and Transmit

Hardware Capabilities
- Multiprotocol Encapsulation (MPE)
- PID Filters: 16
- Internal Hardware Watchdog
- Non-Volatile Configuration Storage
- Remote firmware download

Physical Interfaces
- RF Input Connector: F-Type, 75 ohms
- Ethernet 10/100 Base-T LAN Interface: RJ-45

Physical/Environmental
- Height: 1.41 in (3.58 cm)
- Width: 5.22 in (13.27 cm)
- Depth: 4.10 in (10.41 cm)
- Weight: 0.38 Kg
- 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
- FCC/Industry Canada
- CE
- Emission EN 55022
- Immunity EN 55024
- Safety EN 60950
- S75CA Common Interface: EN50221

Other S75 Models
- S75+: DVB-S IP Data Receiver
- S75-Pro: DVB-S IP/MPEG Data Receiver

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