Radiant’s VAB745 series is designed to meet “Must Carry” requirement for both HDTV and Standard NTSC signals.

This system combines both types of signals onto one fiber for transmission from the studio to the CATV headend making efficient use of the existing fiber between facilities.

The standard product combines one channel of each (NTSC + DVB) onto one single mode fiber for transmission distances of 100Km or more. NTSC short haul video offers 4 audio channels and NTSC with medium haul specifications has 2 audio channels per video.

There are many options—multiple channels of each signal type can be combined onto one (1) fiber; the standard NTSC signal can meet either RS250 Medium or Short Haul specifications. Digital transport will handle either ASI or SMPTE 310. Other signals can also be transported—SMPTE 292, ask factory.

**DESCRIPTION**

Meets new “Must Carry” requirement
One fiber transmission with multiple signals
Transmission distances of 100 km or more

Combines DVB+NTSC V/A onto one single mode fiber
Choice of Medium or Short Haul Video specifications
Handles ASI or Serial Digital signal transport

**FEATURES**

**BENEFITS**

Radiant Communications Corporation
P.O. Box 867
South Plainfield NJ 07080
USA

12/2007
## Specifications

### RS250 Medium Haul Video
- **Type:** 8-bit Digitally Encoded Video
- **Video Bandwidth:** 8 MHz
- **SNR/CTN:** > 60 dB
- **Input Level:** 1 volt peak to peak
- **I/O Level:** 75 Ohms

### RS250 Short Haul Video
- **Type:** 12-bit Digitally Encoded Video
- **Video Bandwidth:** 8 MHz
- **SNR/CTN:** > 67 dB
- **I/O Level:** 75 Ohms

### Audio
- **Type:** Medium Haul: 18-bit Digitally Encoded Audio
- **Short Haul:** 24-bit Digitally Encode Audio
- **Input/Output Signal Level:** up to +20dB (20Vp-p) Max.
- **Input/Output Impedance:** 10k or 600 Ohms
- **Bandwidth:** 20Hz to 24kHz

### DVB
- **Signals:** SMPTE 259, 292, 310
- **Bandwidth:** 270 MBS
- **Impedance:** 75 ohms

### Optical
- **Wavelength:** 1310/1550nm, CWDM, DWDM
- **Number of Fibers:** 1
- **Power Budget:** see table below

### General Characteristics
- **Power:** 15W @ 90 to 240V AC
- **Operating Temp:** -20° to 50° C
- **Storage Temp:** -40 to 85° C
- **Size:** 17.0" W x 13.0D x 1.75" H

### Optical Power Budget

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Wavelength</th>
<th>Optical Budget</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singlemode</td>
<td>1310/1550nm</td>
<td>18 db</td>
<td>50 km</td>
</tr>
<tr>
<td>Singlemode</td>
<td>CWDM</td>
<td>14 db</td>
<td>50 km</td>
</tr>
</tbody>
</table>

Contact Factory for higher optical budgets and distances

### Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAB745S-XM/YD-T-UZW</td>
<td>Transmitter, RS-250 Medium Haul Video with 2 audio channels and 1-270MB DVB stream</td>
</tr>
<tr>
<td>VAB745S-XM/YD-R-UZW</td>
<td>Receiver, RS-250 Medium Haul Video with 2 audio channels and 1-270MB DVB stream</td>
</tr>
<tr>
<td>VAB745S-XS/YD-T-UZW</td>
<td>Transmitter, RS-250 Short Haul Video with 4 audio channels and 1-270MB DVB stream</td>
</tr>
<tr>
<td>VAB745S-XS/YD-R-UZW</td>
<td>Receiver, RS-250 Short Haul Video with 4 audio channels and 1-270MB DVB stream</td>
</tr>
</tbody>
</table>

**Note:**
- Specify X—number of video channels,
- Specify Y—number of DVB channels
- Specify Z—connector type: A—SC/APC, E—SC, B—FC, Z—FC/APC
- Maximum attenuation can be increased
- Single channel system is 1U high, multiple channel systems will be higher
- CR200 Card Cage version available
- For other types of HDTV or SDI signals, contact factory
- For DWDM systems, contact factory
- Due to product enhancements, specifications subject to change without notice