

The VCom **TR700B** is a UHF Transceiver for use in broadband wireless networks. The TR700B integrates an up-converter, a power amplifier, RF and IF diplexers to provide a single unit solution for two-way wireless RF communications.

The TR700B circuitry is field hardened over a broad temperature range and is contained in weather proof housing. The unit is ready to mount next to and connect directly to an antenna. The TR700B is then connected to an indoor modem by standard low cost RG-59 cable.



The transceiver is configured to work with standard DOCSIS™ cable modem frequency plans and levels, permitting direct connection. The transceiver also includes an RF mute function to reduce power consumption and broadband noise emissions.

Features - Benefits

- **High gain and compression**
 - allows for high system gain for N-LOS
- **Embedded microprocessor control**
 - guarantees performance
- **Unique VCom design**
 - lowers cost without performance reduction
- **Automatic transmit RF mute**
 - reduces power consumption
 - eliminates noise accumulation
- **Fully weatherized enclosure**
 - allows installation to be either indoor or outdoor



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br_tr700b_01 (Nov 2003)

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SPECIFICATIONS — VCom TR700B

700 MHz Subscriber Transceiver

TRANSMITTER

IF Input Frequency	36 to 42 MHz
RF Output Frequency	710 to 716 MHz
Linear Output Power	+24 dBm at RF port
Output P1dB	+27 dBm at RF port
Spectral Mask	FCC CFR 47 Part 27.53
Gain	20 ± 2 dB at 23°C
Gain Flatness (Frequency Response)	± 1.0 dB over 710 to 716 MHz
Phase Noise	<-87 dBc/Hz @ +/- 10 kHz
Spectral inversion	No spectral inversion
IF Level for RF Activation	-45 dBm maximum
RF Activation/Mute Response Time	<2 microseconds

RECEIVER

Frequency	740 to 746 MHz
Gain	24 ± 2 dB at 23°C
Gain Flatness (Frequency Response)	± 1.0 dB over 740 to 746 MHz
Noise Figure	<5 dB typical, 6.0 dB maximum

RF PORT

RF Connector (to antenna)	F female, 75 ohms
RF Return Loss	2:1 (transmit and receive RF bands)
RF Spurious Emissions	FCC CFR 47 Part 27

IF PORT

IF Connector	F female, 75 ohms
DC Supply Voltage	+18 to +28 VDC (+24V nominal)
DC Power Consumption	10W maximum
IF Return Loss	2:1 (transmit and receive RF bands)

GENERAL

Frequency Stability	± 20 kHz (-30 to +60°C)
EMC	FCC Part 15
Operating Ambient Temperature	-40 to +60°C
Size	4.9" x 6.8" x 1.1" (12.4 x 17.1 x 2.7 cm)
Mounting	Pole mount, 1" to 1.75" diameter pole
Weight	0.5 kg

The DOCSIS™ acronym belongs to CableLabs®



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