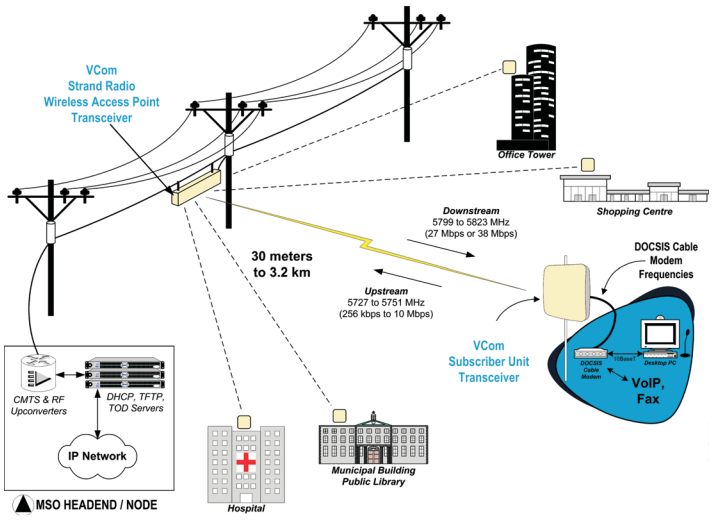
The VCom **AP5857** strand radio system wirelessly extends the CATV HFC network into underserved and hard to reach areas. Operating in the 5.8 GHz unlicensed UNII band, the system provides a transparent full-duplex link for DOCSIS™ service with the same 64 QAM/256 QAM (downstream) and QPSK/16 QAM (upstream) signals that are used on the wired network. The AP5857, working in conjunction with the VCom TRI5758, significantly enhances market penetration of broadband wireless DOCSIS™ services while minimizing the infrastructure investment and maintaining advanced services.



Product Features

- Wirelessly extend CATV HFC networks to provide broadband wireless DOCSIS™ services to areas outside the reach of the wired plant
- Strand mount design with fully weather-proof enclosure for quick and easy integration into the outdoor CATV HFC network
- Supports SNMP management for remote control as well as local control via RS-232 interface for on site configuration and monitoring
- Internal demodulator/remodulator ensures excellent downstream signal, independent of CATV downstream signal quality
- Incorporates a number of features to control upstream ingress, protecting current wired customers and ensuring network integrity, such as:
  - Automatic upstream muting
  - Remote monitoring of upstream levels
  - Control of upstream gain and muting

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Distributed by:

br_ap5857_05 (Oct 2005)

THE VCOM AP5857
STRAND RADIO SYSTEM

Specifications — VCom AP5857 Strand Radio System

Access Point
AP5857

Downstream

Transmit RF Output Frequency Range	5799 to 5823 MHz
Transmit EIRP	+15 to +28 dBm
IF Input Frequency Range	91 to 857 MHz
IF Input Level Range	0 to +20 dBmV per channel
Downstream Modulation	64QAM, 5.06 MSym/sec or 256QAM, 5.36 MSym/sec
Downstream Flatness	1 dB p-p over 5 MHz, typical

Upstream

Receive RF Input Frequency Range	5727 to 5751 MHz
Noise Figure (at RF connector)	6 dB max at max gain
Image Rejection	90 dB minimum
IF Output Frequency Range	18 to 42 MHz
Gain Range	36 ± 2 dB to 76 ± 2 dB at mid band
IF Level	17 to 50 dBmV
Gain Flatness (frequency response)	± 0.5 dB over 3.2 MHz, 2 dBpp full band
Spectral Inversion	No spectral inversion
Return Loss (IF)	13 dB: 5 to 42 MHz and 88 to 857 MHz

General

Upstream Ingress Mitigation	Automatic upstream IF mute Upstream gain control Upstream mute control via remote access Upstream power detector
IF Connector	F female, 75 ohms
Power Requirements	35 to 90 VAC, 60 Hz
Power Consumption	27 W maximum
Management	Remote and local status monitoring and control SNMPv1.1 remote access RS232 command line local craft interface
Operating Temperature Range	-40 to +60 °C
Antenna	Integrated: 60° horz. & 30° vert. beamwidth
Downstream Link Margin (line of sight)	16.5 dB (64QAM, 1 mile); 3.8 dB (256QAM, 2 miles)
EMC Compliance	FCC CFR 47, Part 15, Subpart B FCC Part 15 subpart E, section 15.401 Industry Canada RSS-210 6.2.2 (q1) LELAN devices
Configurations	Strand mount, utility pole mount, pipe mount (options STRAND, POLE, PIPE)
Size	60.2 x 22.3 x 12.4 cm (23.7 x 8.8 x 4.9")
Weight	7.1 kg (15.6 lbs)

Subscriber Unit
TRI5758 (with option AP)

Downstream

RF Input Frequency	5799 to 5823 MHz
IF Output Frequency	540 to 564 MHz
Gain (Integrated)	36 dBi ± 2 dB
Gain Flatness (Frequency Response)	± 1.5 dB full range ± 0.5 dB any 6 MHz range
Gain Stability Over Temperature	± 2.0 dB
Noise Figure	6.0 dB typical, 7dB max
Image Rejection	90 dB minimum
Discrete Spurious (at IF port)	-80 dBm between 540 and 564 MHz -50 dBm from 5 MHz to 540 MHz and from 564 MHz to 860 MHz
Phase Noise (IF)	<-85 dBc/Hz @ 10 kHz typical
Spectral Inversion	No spectral inversion

Upstream

IF Input Frequency	18 to 42 MHz
RF (upstream) Output Frequency	5727 to 5751 MHz
Gain (Integrated)	26 dBi ± 2 dB
Gain Flatness (Frequency Response)	± 1 dB full band ± 0.5 dB over any 3.2 MHz band
Gain Stability Over Temperature	± 2.0 dB
Linear Output Power	+5 dBm into antenna (16 QAM, QPSK)
Spurious (at transmit port)	-40 dBm 9 kHz to 21.4 GHz
Phase Noise	< -85 dBc/Hz @ 10 KHz typical
Spectral Inversion	No spectral inversion
Return Loss (IF)	10 dB in transmit and receive bands
IF Level for RF Activation	+ 5 dBmV
RF Activation/Mute Response Time	<2 microseconds

General

Integrated Flat Panel Antenna	
Gain	23 dBi
Beamwidth	9.0 degrees
Polarity	Vertical or horizontal
Cross Polarization Isolation	20 dB
Front/Back Ratio	30 dB
IF Connector	F female, 75 ohms
DC Supply	18 to 24 VDC, 12W max.
Operating Temperature	-40°C to +60°C
Size	30.5 x 30.5 x 7.5 cm (12 x 12 x 3")
Mounting	Pole mount 1" to 2.5" dia. pole or wall mount with 90 deg pol, az and el adjustment
Weight	2.7 kg max.
Part Number	TRI5758, option AP

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