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Blonder Tongue

BT-QAM-PRO Stock No. 4229

Service ✓
Efficiency ✓
Quality ✓
Reliability ✓

Test & Measurement Equipment

BT-QAM-PRO
QAM/8VSB/Analog TV Analyzer

The BT-QAM-PRO is an economical feature packed test instrument for analyzing CATV QAM and Broadcast 8VSB digital channels, as well as NTSC analog channels.

This compact instrument is designed with field service technicians in mind, and provides many of the features that are typically only found in much higher priced units. The BT-QAM-PRO comes complete with a soft water resistant case and a micro USB charging/PC cable.

Features

- MER, aBER, bBer, Noise Margin & Level Measurements
- Spectrum Display
- Constellation Display
- Barscan Display
- Data Logger
- Custom Memory Plans
- Leakage/Ingress Measurements

Measurement & Spectrum Analysis

- Frequency Range: 5 MHz to 1,000 MHz (Channels T7 to 158)

- 75 Ω (interchangeable "F" connector)
- Power Range: -50 dBmV to 40 dBmV
- Spectrum Display with Variable Span, Automatic Reference Level, Peak and Hold Modes
- Quality FAIL - MARGINAL - PASS: Measuring the quality and the power up to 140 CHs in blocks of 8 Digital or Analog channels simultaneously
- Barscan: TV analog and digital bars scan from 10 to 100 channels
- Fully Automatic Operation

Ordering Information

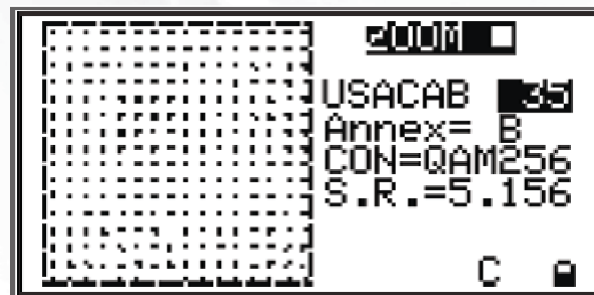| Model	Stock #	Description
BT-QAM-PRO	4229	QAM/8VSB/Analog TV Analyzer

Specifications & Display Screens

Measurements & Spectrum Analysis

Frequency Range:	5 MHz to 1,000 MHz
Input Impedance:	75 Ω (Interchangeable "F" Connector)
Power Range MEAS.:	-50 dBmV to 40 dBmV (10 to 100 dBµV); 60 dBmv (120 dBµV) with ext. attenuator

General

Dimensions (W x D x H):	6.3" x 1.4" x 3.75" (160mm x 34mm x 95mm) - Meter Only
Weight:	1.1 lbs. (500 g)
USB Micro:	For battery charge and PC interface for SW up-grade and memory plan management.
Battery:	Rechargeable Li-Po battery pack, 3 hour duration
Supplies:	Padded transport bag and Micro/USB cable

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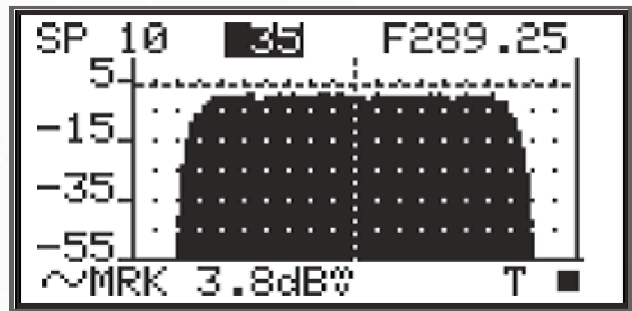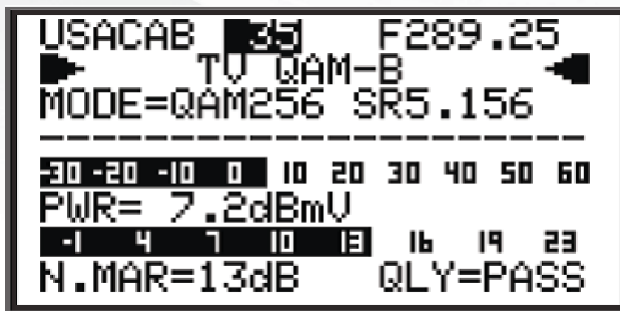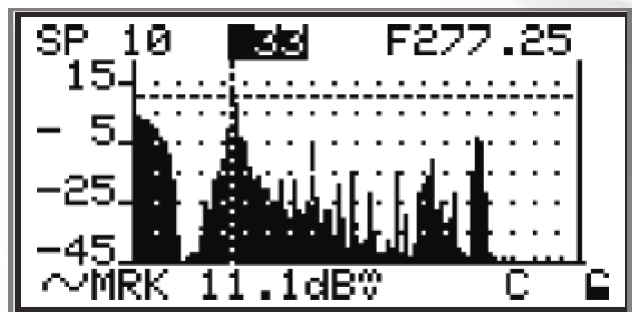
Related Products

Model	Stock #	Description
BTPRO-1000	4230	QAM/8VSB/Analog Signal Analyzer
	4230 RK	Signal Analyzer with Pro:Idiom™ Key Recovery Option
MTSA-PRO	3726	MPEG Transport Stream Analyzer; ASI/RF/IP to USB

BTPRO-1000

QAM/8VSB/Analog Signal Analyzer

The BTPRO-1000 is a versatile CATV test instrument for measuring both digital and analog CATV and Broadcast TV signals. Robust and easy to use, BTPRO-1000 provides hours of operating time from its high capacity battery. The instrument comes complete with a soft carrying case, AC main and automotive chargers.

An optional Pro:Idiom™ Key Recovery feature is available for Hospitality applications that employ Pro:Idiom™ television sets. The option consists of a built-in frequency agile QAM modulator that connects directly to an affected Pro:Idiom™ TV to provide new encryption key information.

Another powerful feature the RK option provides is the ability to test TV codec capabilities on both Pro:Idiom and standard TV sets. This useful tool allows service providers to easily determine the TV video and audio decoding capability.

Features

- QAM/8VSB/NTSC Measurements
- Extended frequency range of 4-1000 MHz
- MER, aBER, bBER, Noise Margin and Level/Power measurements plus Spectrum Analysis
- Automatic quality analysis: FAIL-MARGINAL-PASS
- Auto Seek & Store Function; an essential feature for creating custom memory channel plans. Scans receivable signals, determines signal type (QAM,8VSB or analog) and stores only those channels having signal levels above user defined values
- Ingress and Leakage Modes
- Data Logger Function: Steps through each channel in the "Active" memory plan and stores all related measurements

- Graphics Display
- Alpha-numeric keypad

Optional TV Key Recovery for Hospitality Pro:Idiom™ Systems (RK Option)

- PI Restore and PI Key Test (PI encrypted color bar test pattern) functions
- Clear QAM test signals used for TV compatibility testing in the following formats:
  - MPEG-2 video with AC3 Audio
  - MPEG-2 video with MPEG-2 Layer 1 Audio
  - MPEG-4/H.264 with AC3 Audio
  - MPEG-4/H.264 with EAC3 Audio

Ordering Information

Model	Stock #	Description
BTPRO-1000	4230	QAM/8VSB/Analog Signal Analyzer
	4230 RK	Signal Analyzer with Pro:Idiom™ Key Recovery Option

Specifications

Level Measurement & Spectrum Analysis

Freq. Range:	TV, CATV & Radio 4-1000 Mhz
Freq. Resolution:	25 kHz
RF Input Impedance:	75 Ω (interchangeable "F" connector)
Dynamic Range:	-59 to +65 dBmV
Meas. Resolution:	0.1 dB
Level Meas. Accuracy:	1 dB typ. (2 dB max)
A/V Ratio:	up to 22 dB, +/-1.5 dB (2 dB max)
C/N Ratio:	up to 45 dB +/-1.5 dB Max; 45-50 dB
Resolution Filter	+/- 2 dB
Bandwidth:	100 kHz @-3 dB
Custom Channel Plans:	25 (199 Ch. Per Plan)

Power & Digital Measurements

Frequency Band:	4-1000 MHz
Power Measurement:	-45 to 65 dBmV
BER Measurement:	(Pre) bBER up to 1 x 10-9
	(Post) aBER up to 1 x 10-9
MER Measurement:	Up to 40 dB (1 dB Typ., 2 dB Max)
Constellation Display:	16-32-64-128-256 QAM

Ingress & Spectrum Measurements

Frequency:	5 - 65 MHz
Level:	-55 dBmV to 65 dBmV
Accuracy:	+/- 2 dB
BW:	100 kHz @-3dB

Leakage Measurements

Frequency Range:	115 -140 MHz
Resolution:	25 kHz
Antenna Type:	Selectable

Pro:Idiom™ Key Recovery Option

RF Output	
Connector:	1x "F" Female
Modulation:	QAM 64 or 256 (user selectable)
Standard:	ITU-T J.83 Annex B
Channel Range:	CATV 2 to 158, Broadcast 2 to 69
Output Level:	20 dBmV

General

Dimensions (H x W x D):	8.5" x 5.0" x 2.4" (215 x 125 x 60 mm)
Power Supply:	Built in NiMh rechargeable battery, external power supply
Battery Duration:	4 Hours
PC Interface:	USB
Front Panel:	Alpha numeric keypad
Power Save:	TFT backlight timer, brightness adj

Pro:Idiom™ Key Recovery (RK Option)

```
      PROIDIOM MENU
PLAN    : Cable
CHANNEL : 2
MODE    : QAM64
COMMAND : Restore
SET PARAMETERS?
SEND COMMAND?
STATUS  : Ready
```

CATV Channels 2 to 158
Broadcast Channels 2 to 69
QAM 64B or 256B

Pro:Idiom™ Options:

Restore (Re-Key)
Key Test (PI-encrypted color bars)

Codec Test Signals:

MPEG-2 Video w/ AC3 Audio
MPEG-2 Video w/ MPEG-2-Layer1 Audio
MPEG-4/H.264 w/ AC3 Audio
MPEG-4/H.264 w/ EAC3 Audio

Pro:Idiom TV

Digital TV (Unknown Codecs)

BTPRO-7000
HD Tablet/Touch Signal Analyzer

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The BTPRO-7000 is a professional HD Tablet/Touch Analyzer with a frequency range of 5 to 1250 MHz. The analyzer features a 7 inch diagonal color screen, is compact in size and lightweight. It is ideal for analyzing and logging 8VSB, QAM and analog television or radio signals in the lab or out in the field.

The BTPRO-7000 CM8FO adds a fiber optic receiver as well as an 8x4 DOCSIS 3.0 cable modem to the instrument. Displayed information includes frequency power, modulation type and quality parameters of eight (8) downstream and four (4) upstream channels. The cable modem mode can provide a ping report, as well as IP information received from the CMTS.

The fiber option also can display direct optical power measurements up to +7 dBm. The optical receiver offers a broadband RF output, that when looped back into the BTPRO-7000 RF input, shows the standard RF measurements and optic modulation index (OMI).
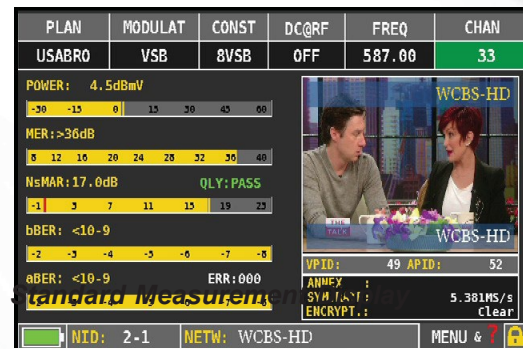
Features

Measurements:

- MER, aBER, bBER, EVM, noise margin, level/power, real time spectrum analyzer and constellation display
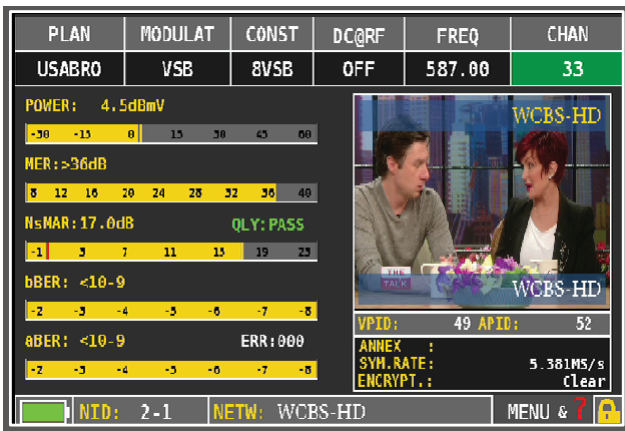
CATV Measurements:

- DOCSIS downstream, INGRESS mode, LEAKAGE mode, BAR SCAN and TILT
- TV and CATV tuner, extended band, 5-1250 MHz
- Auto discovery system automatically detects and selects analog and digital 8VSB/QAM TV signals in both Measurement and Spectrum modes
- Spectrum in real time, fast and super-fast with memory peak
- Detects, measures and displays video of MPEG 2/4 and H.264 HD programs
- All measurements, program lists, A/V PIDs, NET ID, virtual channel number, settings and pictures are on one screen
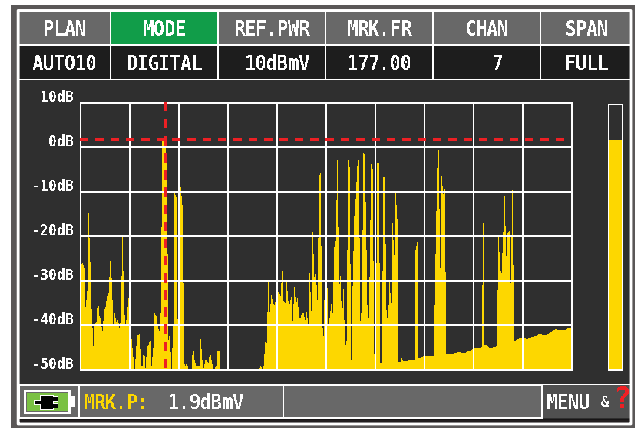
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- Automatic quality analysis: FAIL-MARG-PASS
- Auto memory, Manual memory and Datalogger functions
- Help function automatically identifies all the signals with digital modulation
- Bar scan TV and CATV function from 10 to 100 channels on one screen
- Audio decoding of AAC and AC3
- Battery test function, to regenerate and measure the batteries and calibrate the battery indicator
- Optional DOCSIS 3.0 8DS x 4US modem
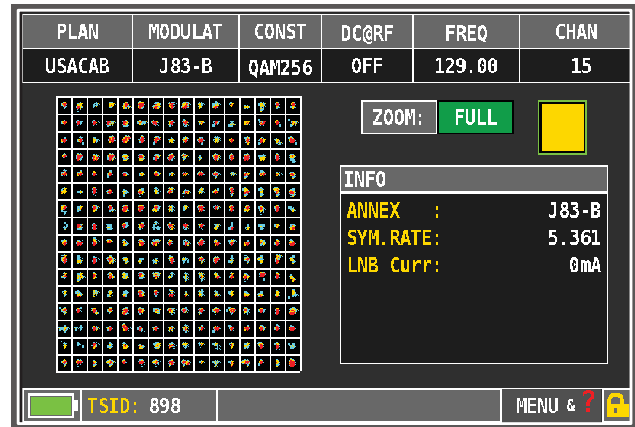- Fiber Optic option provides optical power, OMI and detected RF measurements.

Ordering Information

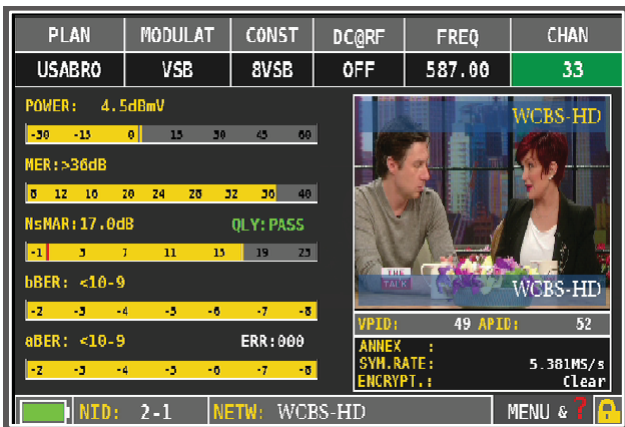| Model	Stock #	Description
BTPRO-7000	4231	HD Tablet/Touch Signal Analyzer
	4231 CM8FO	HD Tablet/Touch Signal Analyzer with Cable Modem & Fiber Optic Options

Display Screens

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Standard Measurement Display

Standard Measurement Display

DOCSIS Display (Opt. CM8FO)

Spectrum Display

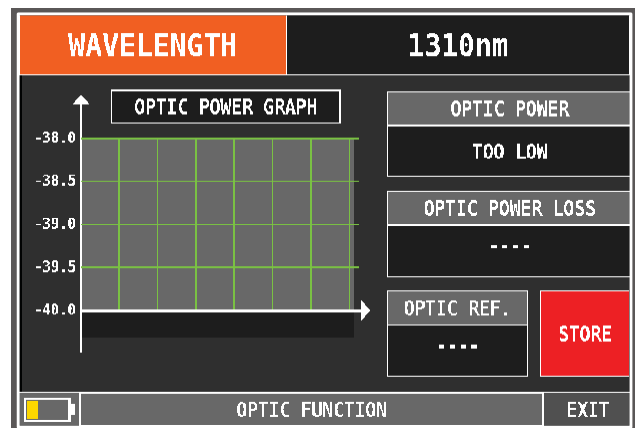*Spectrum Display*

Fiber Power Measurement (Opt. CM8FO)

Specifications

General

| Dimensions (W x D x H):	9.5" x 1.6" x 5.5" (240mm x 40mm x 140mm)
Weight:	3.5 lbs. (1.6 kg)
Display:	7" TFT touch display, 16:9, high resolution
Battery:	LI-ION-POLIMER 4A battery with 4 hour battery capacity
Supplies:	Padded transport bag, AC and vehicle battery chargers

BTPRO-8000S

Professional Sat., TV, CATV & Optical Analyzer

The BTPRO-8000S is a professional HD Tablet/Touch Analyzer with a frequency range of 4 to 2610 MHz. The analyzer features a 7-inch 16:9 color display touchscreen, is compact in size, and lightweight.

The BTPRO-8000S is ideal for analyzing and logging in the lab or out in the field - HD/SD QPSK/8PSK Satellite, COFDM, QAM, NTSC, DVBS/S2 Broadcast, as well as Fiber Optic, and Wi-Fi signals.
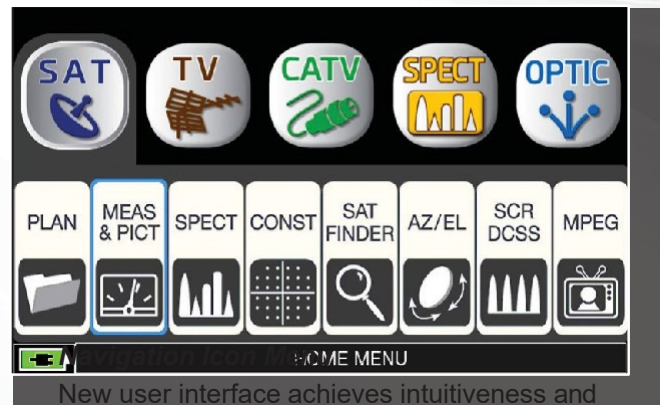
New user interface achieves intuitiveness and allows the fast functions and measurements needed with less clicks.
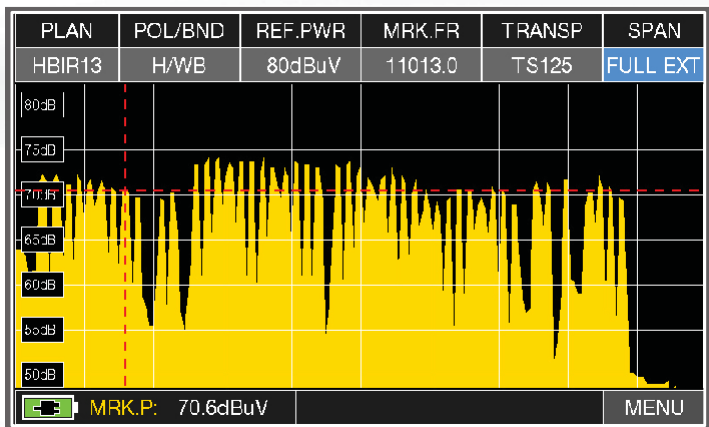
Features

- AutoDiscovery System automatically detects and selects analog and digital COFDM/QAM TV signals in both Measurement and Spectrum modes
- Help Function automatically identifies all the signals with digital modulation - SAT, TV, and CATV
- Digital Measurements include Digital Power, MER, BER, PER, LDPC, BCH, Noise Margin, MER vs Carrier
- Automatic Assistant provides Signal Quality analysis, Channel Scan memorization
- Barscan TV & CATV Function tests from 10 to 100 channels on one (1) screen
- Buzzer & Noise Margin provided via real time graph
- USB on the go for long term logging and storage
- Remote Monitoring and Control capability
- Memory Functions supported - Auto, Manual, and Logger

Ordering Information

Model	Stock #	Description
BTPRO-8000S	4232 S	HD Tablet/Touch Signal Analyzer

Measurement Display Screens

PLAN	POL/BND	REF.PWR	MRK.FR	TRANSP	SPAN
HBIR13	H/WB	80dBuV	11013.0	TS125	FULL EXT

MRK.P: 70.6dBuV   MENU

SAT FINDER

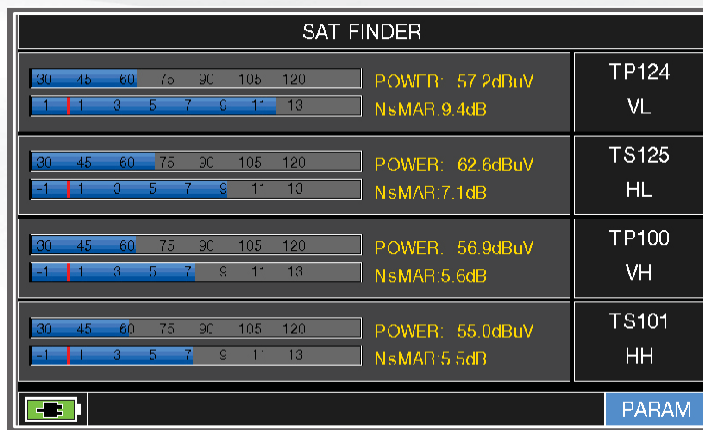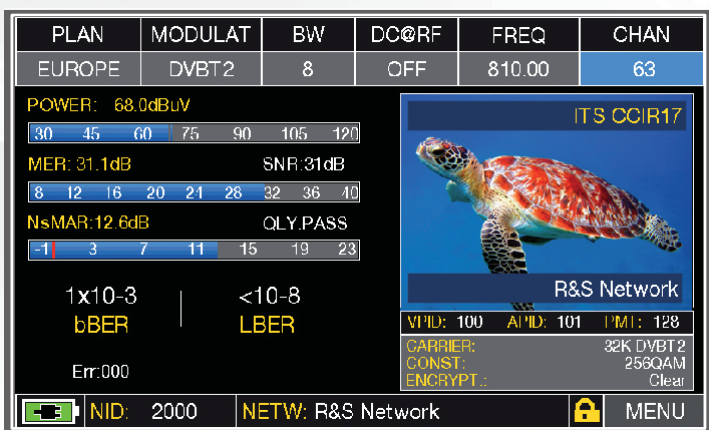| | POWER: 57.2dBuV / NsMAR:9.4dB | TP124 VL |
	POWER: 62.6dBuV / NsMAR:7.1dB	TS125 HL
	POWER: 56.9dBuV / NsMAR:5.6dB	TP100 VH
	POWER: 55.0dBuV / NsMAR:5.5dB	TS101 HH

PARAM

Wide Band Measure and Spectrum

Compatible with newer systems, the Wide Band LNB is capable of measuring full band of 230 - 2340 MHz.

Satellite Finder

Users can simultaneously check the quality of up to four (4) satellite transponders, and check the correct function of the LNB in all polarities.

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
EUROPE	DVBT2	8	OFF	810.00	63

POWER: 68.0dBuV
MER: 31.1dB   SNR:31dB
NsMAR:12.6dB   QLY.PASS
1x10-3   <10-8
bBER   LBER
Err:000

ITS CCIR17
R&S Network
VPID: 100   APID: 101   PMT: 128
CARRIER: 32K DVBT2
CONST: 256QAM
ENCRYPT.: Clear

NID: 2000   NETW: R&S Network   MENU

PLAN	MODULAT	BW	DC@RF	FREQ	CHAN
AUTO 1	DVBT&H	8	OFF	690.00	48

ZOOM: FULL

INFO
CARRIER: 8K DVB-T
CONST: 64QAM
GUA.INT.: 1/4
Hp/Lp : 3/4 3/4
HIER. : NO
LNB Curr: 0mA

TSID: 512   CID: 5035 (0x13AB)   MENU

Measure and Picture

MPEG-2/4 SD & HD picture with Program List, Audio Video PIDS, LCN, Video Bit Rate all on one screen.
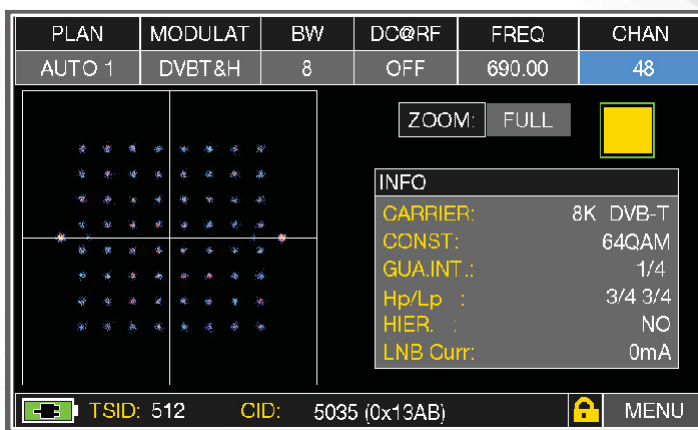
Constellation Diagram

For Satellite, TV, and CATV signals.

Specifications

Input / Power

Connectors	
RF IN:	75 Ohm, "F" Female
OPTIC:	SC
Frequency Range	
Satellite Tuner:	930-2610 MHz, Extended Band
TV and CATV Tuner:	4-1250 MHz, Extended Band
Input Impedance:	75 Ohm (interchangeable "F" connector)
Power Range	
Satellite:	30-130 dBµV (-78.75 to 21.25 dBm)
TV:	28-130 dBµV (-32 to 70 dBmV)

General

Dimensions (W x D x H):	10.04 x 1.6 x 5.12 in. (255 x 41 x 130 mm)
Weight:	3.09 lbs (1.4 kg)
Display:	7" TFT touch display, 16:9, high res.
Battery:	Li-Po battery pack, 2 hour duration
USB PC Interface:	For storage memory stick;
Supplies:	Power supply & Battery charger 12 VDC – 1A
Housing:	Metal box and padded transport bag

MTSA-PRO

MPEG Transport Stream Analyzer

The MTSA-PRO is a versatile compact portable device used to capture, analyze and/or generate MPEG ASI transport streams.

The MTSA-PRO features a DVB-ASI input/output, an RF input and a USB interface to connect to a PC. Powerful, feature rich PC software is included to provide professionals the must-have tools necessary for analyzing MPEG equipment and related networks.

New software release includes support of HEVC (H.265), in addition to existing MPEG-2 and H.264.

QAM/8VSB RF In

ASI In

ASI Out

IP In (Using a PC)

USB (Communication)

Features

- Real time analysis via RF/ASI/IP input & TS file
- Single DVB-ASI input and single DVB-ASI output adapter for USB (half duplex)
- MPEG TS analysis and capture with HEVC support
- USB 2.0, bus powered, no power supply required
- ATSC, DVB-C, DVB-T and OpenCable DTV standards compliant
- ETSI TR 101 290 Priority with real-time 4 stage error monitoring reporting and error logging.
- Diagnostic and verification of MPEG designs
- PCR & PTS analysis, arrive time graphing, measurement display and jitter analysis
- HEVC Codec support (selectable decoding options based on operating system)
- Subtitle support

- Closed Caption Decoding (CEA 608/ CEA 708)
- Triggered recording
- Data rate analysis
- Table and packet views
- SI/PSI & PSIP view and interval analysis
- CAS View: ECM and EMM repetition rate and update time
- PES header analysis
- Real-time A/V decoding
- Modulation Error Rate (MER)
- Received Signal Strength Indicator (RSSI)
- SCTE-35 marker detection
- File loopback feature for continuous replays
- RF input scan feature identifies active channels

Ordering Information

Model	Stock #	Description
MTSA-PRO	3726	MPEG Transport Stream Analyzer; ASI/RF/IP to USB

Specifications

Input

ASI/SMPTE-310M	
Connectors:	1x BNC; 75 Ω
Standard:	DVB-ASI
Bitrate:	0~108 Mbps (in 1bps step)
Mode:	188/192/204/208 bytes packet mode

RF Demod	8VSB, QAM64B, QAM256B
Connector:	1xF 75 Ω
Freq Range:	57-1000 MHz
Level Min:	-15 dBmV QAM256B
	-20 dBmV QAM64B
	-30 dBmV 8VSB

Output

ASI/SMPTE-310M	
Connectors:	1x BNC; 75Ω
Standard:	DVB-ASI SMPTE-310M
Bitrate:	0~108 Mbps (in 1bps step)
Mode:	188/192/204/208 bytes packet mode

General

Dimensions (W x D x H):	6.06 x 3.89 x 1.12 inches (154 x 100 x 29 mm)
Product Weight:	0.5 lbs (227 kg)
Power:	USB 2.0 powered; no power supply required
OS Supported	Windows 7

Software

TS Input:	ASI, SMPTE-310M, File, IP (UDP/TS or UDP/RTP/TS), RF
TS Out:	0~108Mbps (in 1bps step)
Analysis Mode:	188/192/204/208 bytes packet mode
7 analysis Window Tab:	Service, PID, Table, Service View, Bit-rate, TR 101 290, Table History
Closed Caption	
Real-time Decoder	

Recommended System Requirements: CPU better than Intel Core i3; more than 2 GB RAM; Windows 7

Related Products

Model	Stock #
BTPRO-8000S	4232 S

Description

Professional Satellite, TV, CATV & Optical Analyzer