Tresent Technologies™

IPQ1000
Media Stream Analyzer

IPQ1000
Handheld MPEG analyzer optimized for ease of use

The IPQ1000 is a handheld MPEG transport stream analyzer focused on making video over IP more intuitive and easier to diagnose. Quick touchscreen selection of source data from ASI or IP can be decoded and displayed on the LCD screen. Data is also available as MPEG tables in a tree view. Bandwidth is measured by PID, program, and stream. The IPQ1000 contains a comprehensive alarm engine based on the ETSI TR-101-290 and ATSC-A/78 standards.

An MPEG2 / H.264 decoder and Dolby D decoder provide audio and video to the internal LCD touchscreen and speakers for quick verification of your audio / video source.

Dual Ethernet ports for video over IP allows the device to be inserted in line with a suspected problem device. The IPQ1000 will identify all IP traffic by source IP address, destination IP address and destination port number.
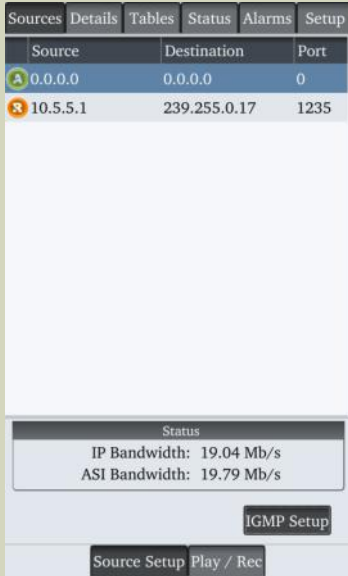
Features:

- Portable / Handheld design for easy troubleshooting in the field
- ASI ind IP inputs
- DVB, ATSC, DigiCipher II
- MPEG2 / H.264 Video decoder to verify contents on the LCD screen
- CEA-608 CEA-708 Closed Captioning
- PTP IEEE1588 display with network scan
- Alarms on all streams simultaneously
- can monitor both ASI and IP streams at the same time
- Auto discovery of all transport streams on both ASI and IP interfaces (no specific IP setup necessary)
- The device utilizes a 5" touch screen for its graphical interface to make setup and configuration more recognizable to video professionals.
- Unique hardware accelerated design allows for multi-stream alarm evaluation ATSC A/78 and ETSI TR-101-290.
- Internal rechargeable battery provides a runtime of over 5 hours under typical use.
- Updatable via the USB port
- NTP client to determine STT accuracy
- Dolby AC3 decoder
- AAC decoder
- Internal solid state data storage (256GB) for capture and playback
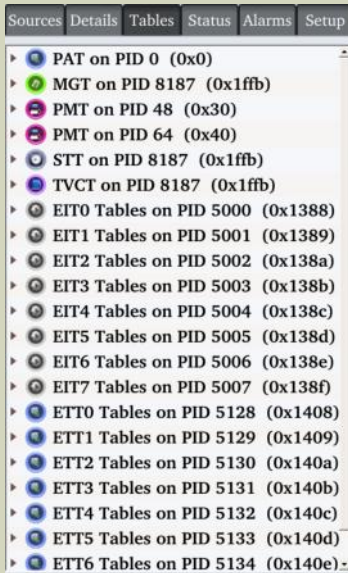- Carrying Case

Warranty

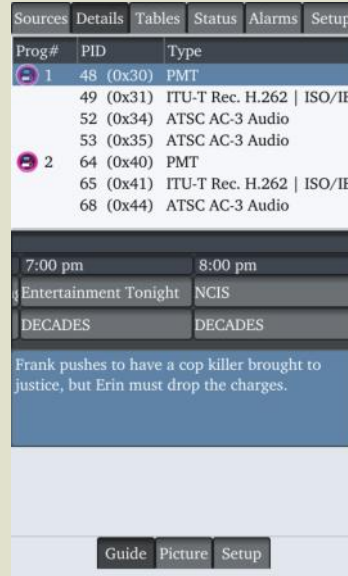- Standard 2 year Tresent Technologies™ warranty, parts and labor

Sources Tab:

The Source Display lists all sources discovered by the IPQ1000. Select the source you want to view on the other tabs by touching the line item you are interested in. When selected, the source will be highlighted as seen here. The bandwidth for the interface (ASI or IP) can be seen at the bottom of the screen. Each source represents a separate transport stream that can be evaluated in the following tabs.
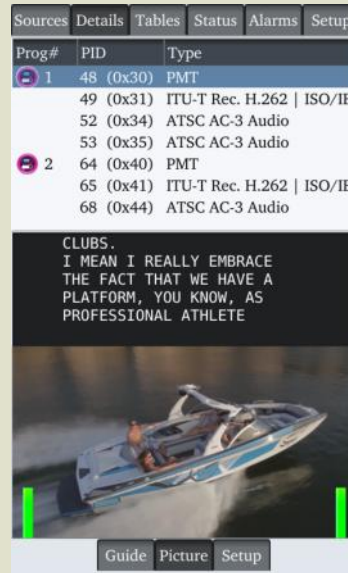
Details Tab:

The Details Display lists all available programs in the source selected in the sources tab. The bottom part of this display contains a second tab bar where you can choose to display an electronic program guide or the picture of the selected program.

Guide Tab:

The IPQ1000 can show a guide generated from the tables. This display will show the channel name, events for each channel in their respective time slot, and the details of each event can be displayed by selecting the event of interest. The details will be displayed under the guide in the info box.

Tables Tab:

The Tables Display lists all tables contained in the selected transport stream. Each table is expandable to list the contents of each table. Just touch anywhere on the table of interest to expand the table. The color of the table will change to indicate that an alarm has triggered for that particular table.

Picture Tab:

The picture can be display by selecting the program you want to view in the program list above the picture.

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Bw Tab:

| Sources | Details | Tables | Status | Alarms | Setup |

Table	PID	BW(Mb/s)	UpdateRate
PAT	0 (0x0)	0.015	95
MGT	8187 (0x1ffb)	0.040	90
PMT1	48 (0x30)	0.005	380
PMT2	64 (0x40)	0.003	379
STT	8187 (0x1ffb)	0.040	864
TVCT	8187 (0x1ffb)	0.040	289
EIT0	5000 (0x1388)	0.012	89
EIT1	5001 (0x1389)	0.000	504
EIT2	5002 (0x138a)	0.006	2005
EIT3	5003 (0x138b)	0.000	2004
EIT4	5004 (0x138c)	0.006	2004
EIT5	5005 (0x138d)	0.006	2005
EIT6	5006 (0x138e)	0.006	2004
EIT7	5007 (0x138f)	0.000	3003
ETT0	5128 (0x1408)	0.000	4664
ETT1	5129 (0x1409)	0.000	2998
ETT2	5130 (0x140a)	0.000	2998
ETT3	5131 (0x140b)	0.000	2398
ETT4	5132 (0x140c)	0.000	2665
ETT5	5133 (0x140d)	0.000	2398
ETT6	5134 (0x140e)	0.000	2398

BW   PCR   PTP

The Bw (bandwidth) Display lists all tables as well as PIDs found in the transport stream. Each item listed contains a bandwidth measurement. In addition, all tables list an update rate. This is an average of the last 10 times the table has been received. The bandwidth is displayed in units of Mb/s (megabits per second) and the Update Rate is in units of ms (milliseconds)

PCR Tab:

| Sources | Details | Tables | Status | Alarms | Setup |

PID	Type	Value	Max
48 (0x30)	Prog# 1 PMT		
49 (0x31)	PCR PID		
	PCR jitter(ns)	13	13
	PCR accuracy(ns)	-1	-1
	PCR Freq Err(Hz)	-12	-12
	PCR rep(ms)	33	34
64 (0x40)	Prog# 2 PMT		
65 (0x41)	PCR PID		
	PCR jitter(ns)	13	13
	PCR accuracy(ns)	-1	-1
	PCR Freq Err(Hz)	-12	-12
	PCR rep(ms)	33	36

☑ 10 mHz   ☐ 100 mHz   ☐ 1 Hz   Reset

BW   PCR   PTP

The PCR Display shows jitter, accuracy, frequency error, and repetition rate for all PCR PIDs in the stream. Filters can be selected between 10mHz, 100mHz, and 1Hz. All measurements are based on TR101-290 specification

PTP Tab:

| Sources | Details | Tables | Status | Alarms | Setup |

PTP Status

gm Present: true
gm ID: b4b52f.fffe.632201
gm IP Address: 10.5.5.2
gm MAC Address: b4:b5:2f:63:22:01
Offset: 1389.0
Path Delay: 59369.0
Current Time: 16 Nov 2015 16:58:44

PTP Network

☐ Master   ☐ Slave   ☑ All

ID: 70b30d.fffe.503002
    IP Address: 10.5.5.236
    MAC Address: 70:b3:0d:50:30:02
    Master Capable: False
    Version: 2
ID: 70b3d5.fffe.03000b
    IP Address: 10.5.5.198
    MAC Address: 70:b3:d5:03:00:0b
    Master Capable: False
    Version: 2
ID: 70b3d5.fffe.030012
    IP Address: 10.5.5.230

BW   PCR   PTP

The PTP Display shows all pertinant information on PTP contained on the network. Shows the grandmaster presence, ID and it's IP and MAC address. In addition the IPQ1000 scans the network to display all PTP masters and slaves including IP and MAC address.

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Setup Tab:

The Status Display lists general status of the IPQ1000.

Battery Status:

The Battery Status bar indicates an estimate for the time to charge or discharge the battery depending on the presence of the external power supply.

System Status:

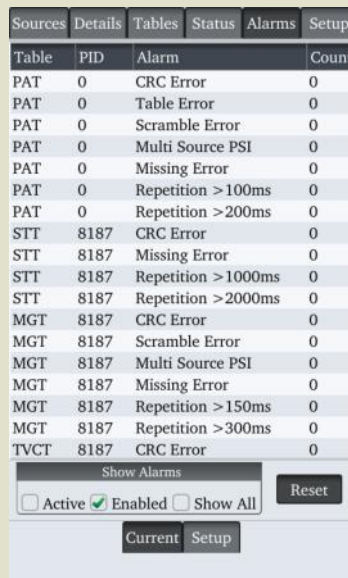The Status section displays some unit setting and also contains the setup for IP address, NTP server settings, an about box for version numbers, and the update dialog for software updates.

Storage / LCD Status:

The Storage section displays the amount of internal storage that has been consumed. The LCD backlight brightness can be adjusted using the LCD Backlight slide bar.

CPU Status:

The CPU Usage indicator gives a general idea of how much of the CPU capacity is being used.

Alarms Tab:

The Alarms Display allows setup of the alarms as well as displays the active alarms. The alarms are based on the ATSC-A78 specification. Alarms are available for tables as well as the overall transport stream. Alarms include checks for syntax and repetition of tables, CRC, continuity, and inter table consistency errors.

Current Tab:

The Current Tab displays all active alarms (alarms that have exceeded their limits since the last time the alarm reset button was pressed)

Setup Tab:

The Setup Tab lists all alarms and allows them to be enabled.

Clear All:

the Clear All button will disable all alarms.

Set All:

the Set All button will enable all alarms.

ATSC-78:

The ATSC-78 button will set all alarms to the ATSC-A78 specification. In addition, individual alarms can be selected by pressing the Ena (enable) check-box.