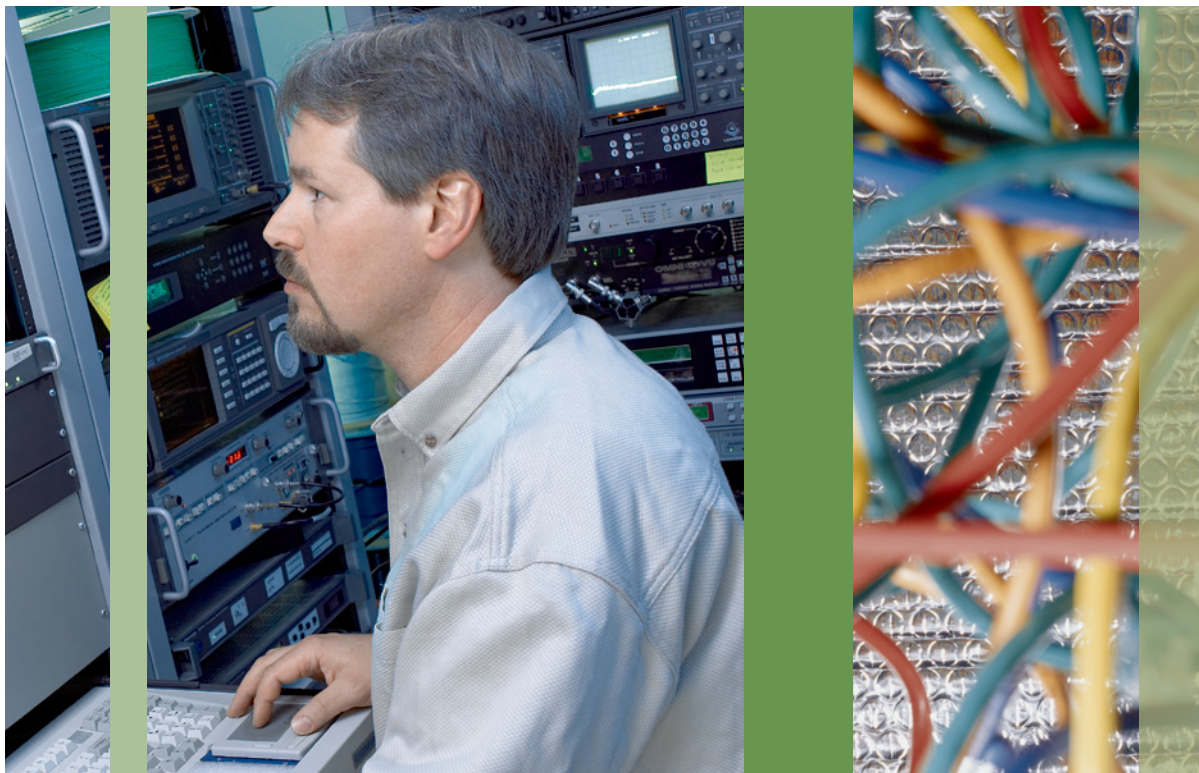


MPEG-2 Transport Stream Poster

Includes ATSC Program and System Information
Protocol (PSIP) Tables



Contact Tektronix:

ASEAN / Australasia (65) 6356 3900
Austria* 00800 2255 4835
Balkans, Israel, South Africa and other ISE Countries +41 52 675 3777
Belgium* 00800 2255 4835
Brazil +55 (11) 3759 7627
Canada 1 (800) 833-9200
Central East Europe and the Baltics +41 52 675 3777
Central Europe & Greece +41 52 675 3777
Denmark +45 80 88 1401
Finland +41 52 675 3777
France* 00800 2255 4835
Germany* 00800 2255 4835
Hong Kong 400-820-5835
India 000-800-650-1835
Italy* 00800 2255 4835
Japan 81 (3) 6714-3010
Luxembourg +41 52 675 3777
Mexico, Central/South America & Caribbean 52 (55) 56 04 50 90
Middle East, Asia and North Africa +41 52 675 3777
The Netherlands* 00800 2255 4835
Norway 800 16098
People's Republic of China 400-820-5835
Poland +41 52 675 3777
Portugal 80 08 12370
Republic of Korea 001-800-8255-2835
Russia & CIS +7 (495) 7484900
South Africa +27 11 206 8360
Spain* 00800 2255 4835
Sweden* 00800 2255 4835
Switzerland* 00800 2255 4835
Taiwan 886 (2) 2722-9622
United Kingdom & Ireland* 00800 2255 4835
USA 1 (800) 833-9200

*** If the European phone number above is not accessible,
please call +41 52 675 3777**

Contact List Updated 10 February 2011

For Further Information

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit www.tektronix.com



Copyright © 2012, Tektronix. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks or registered trademarks of their respective companies.

03/12 EA/FCA-POD

21W-15020-4

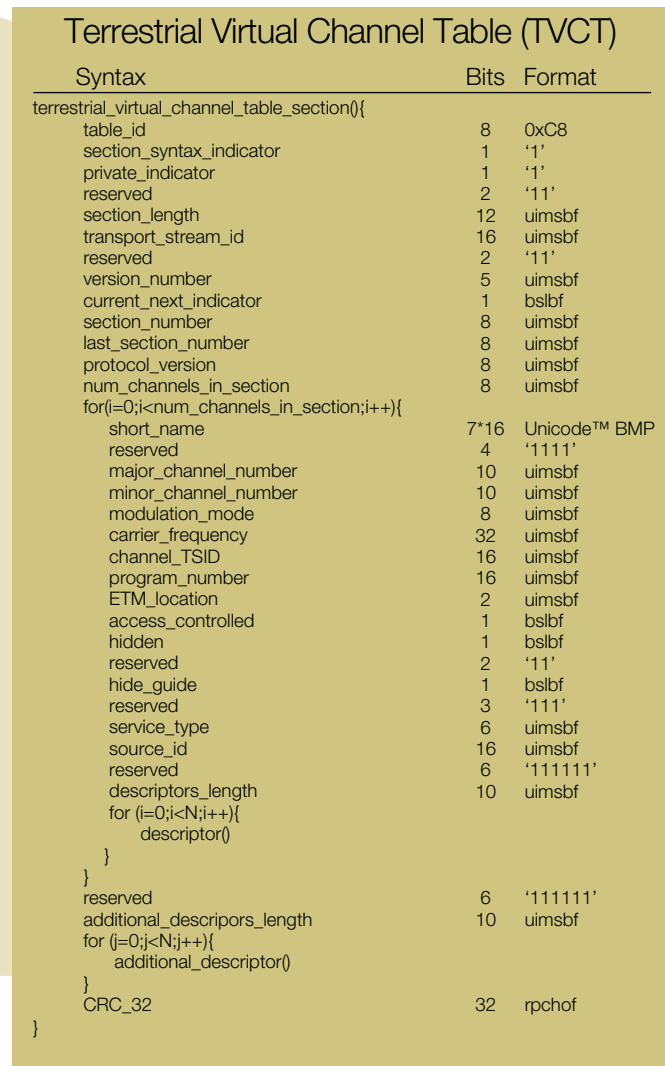
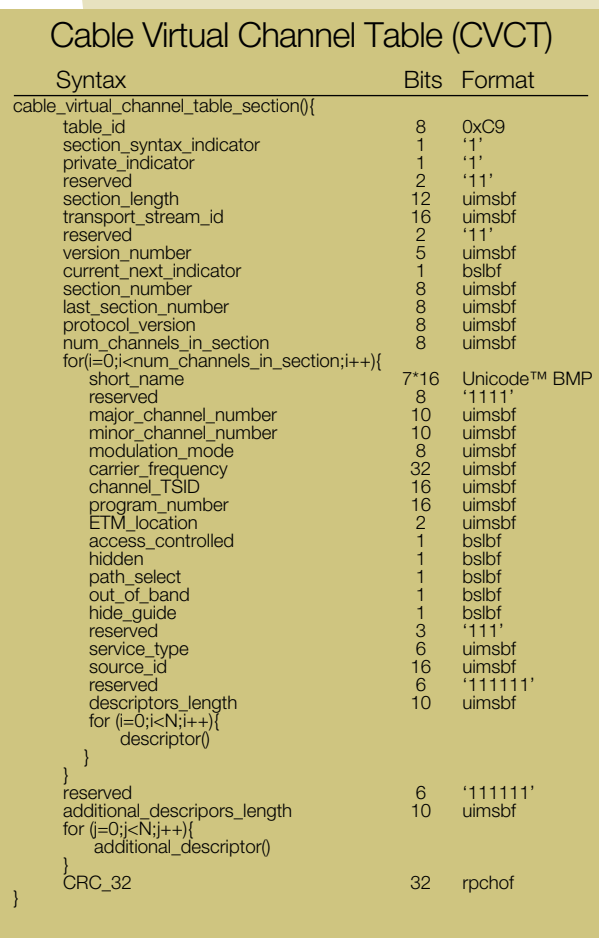
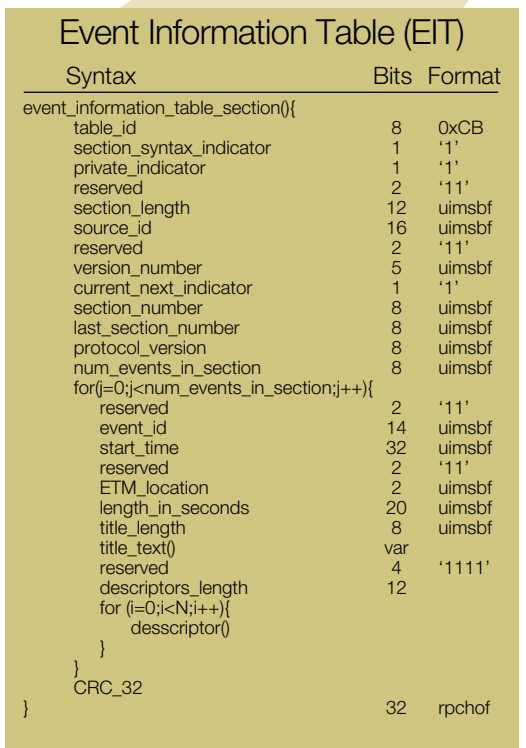
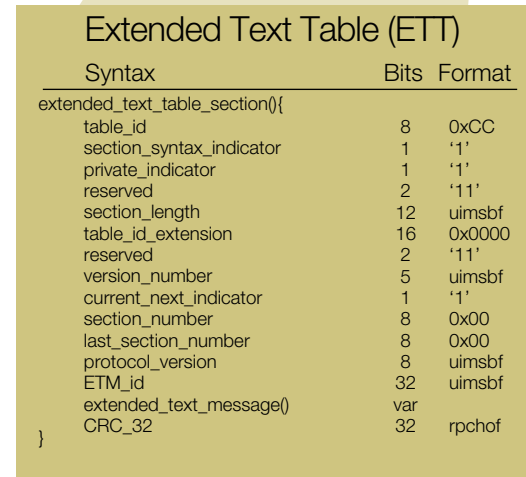
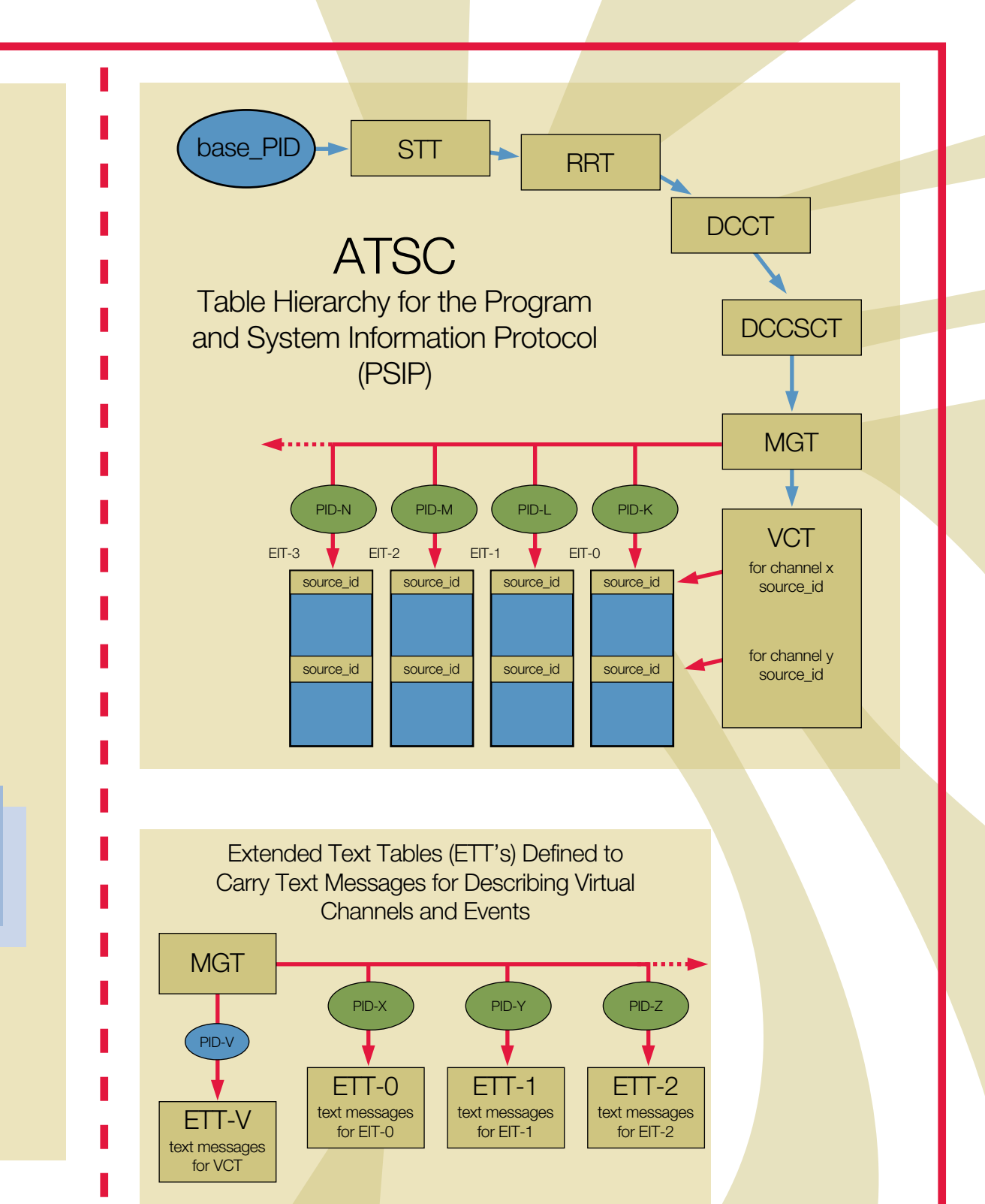
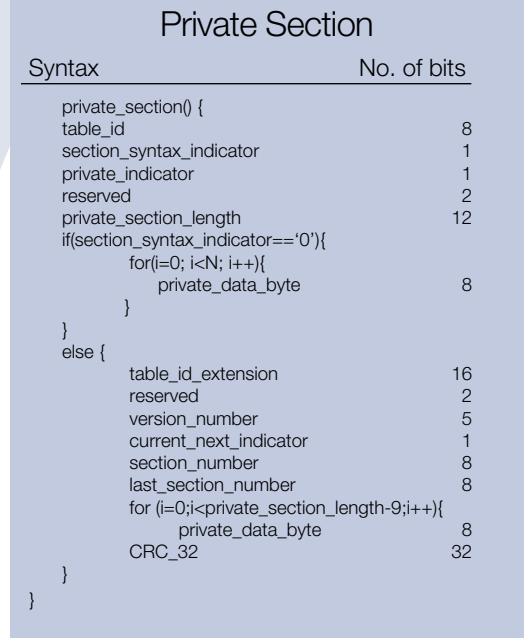
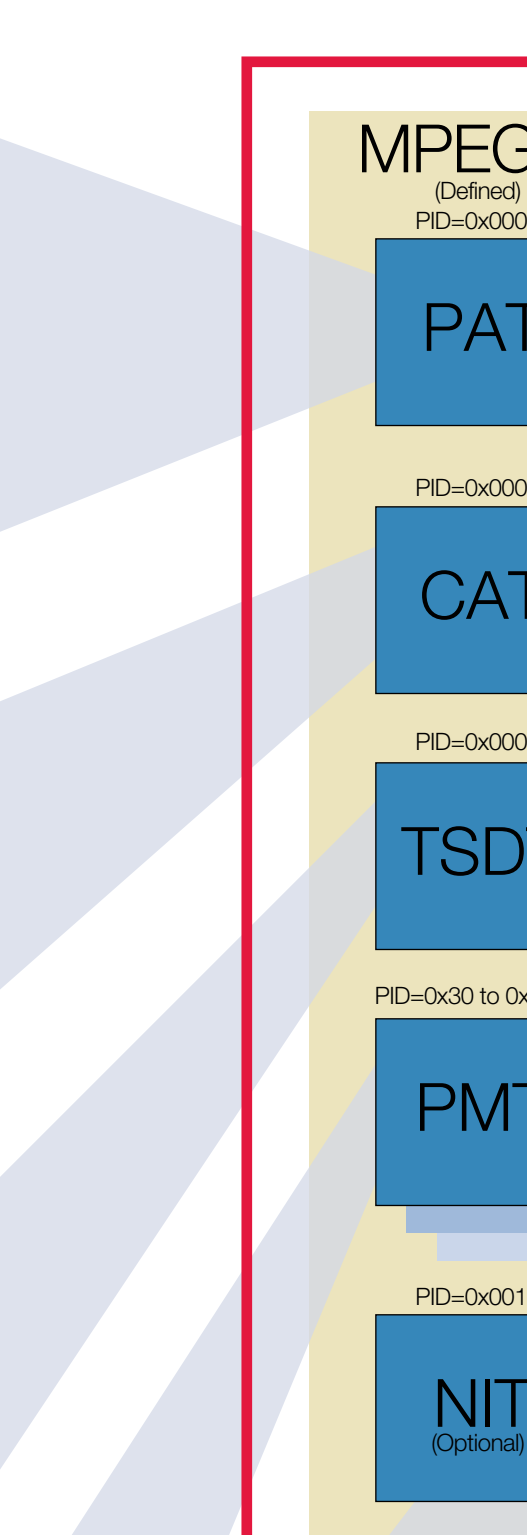
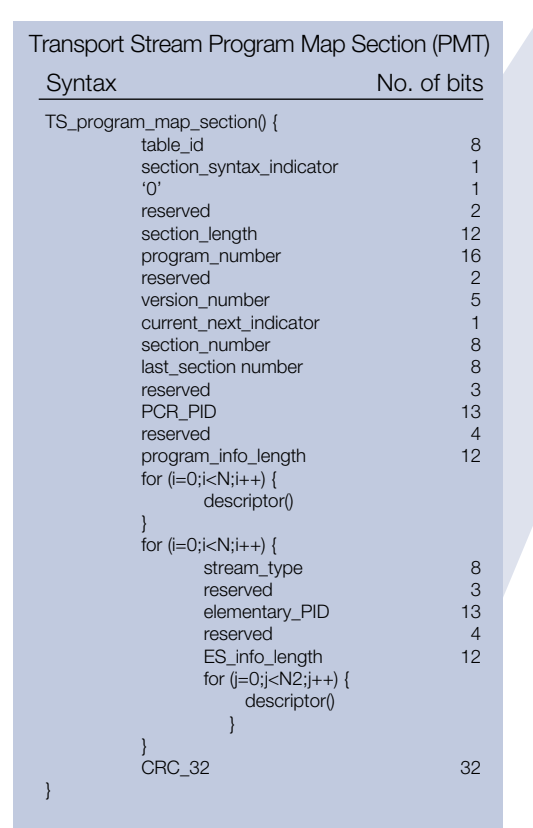
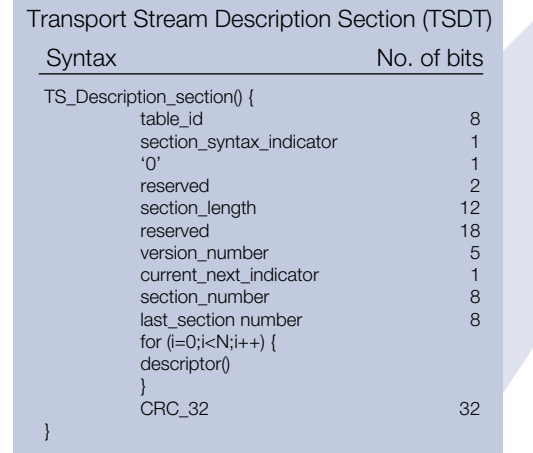
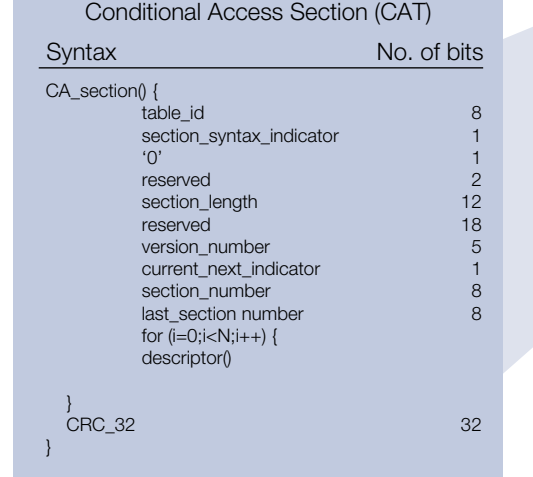
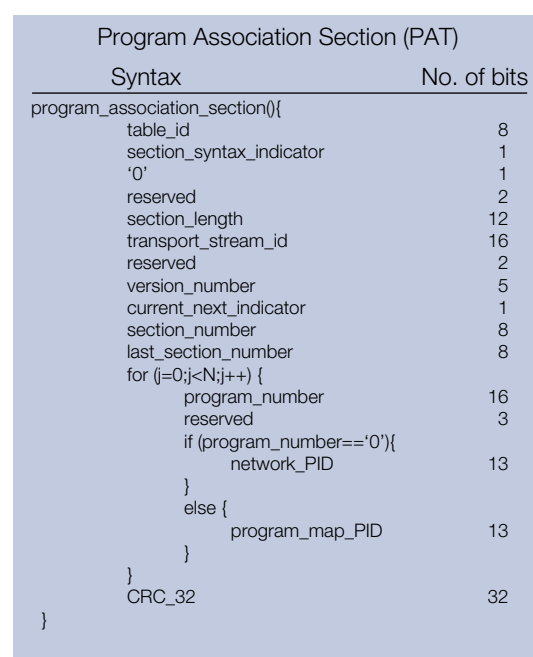
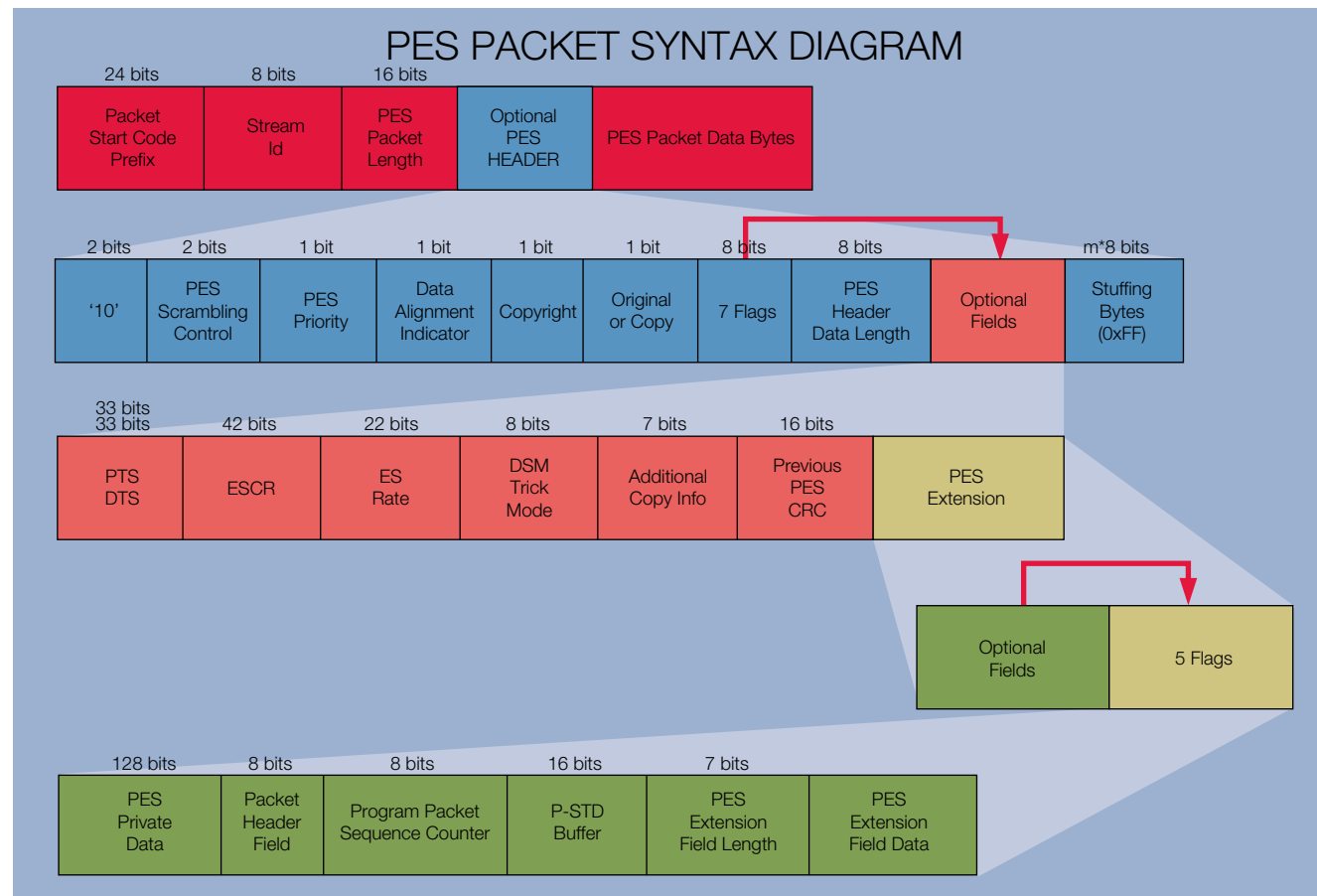
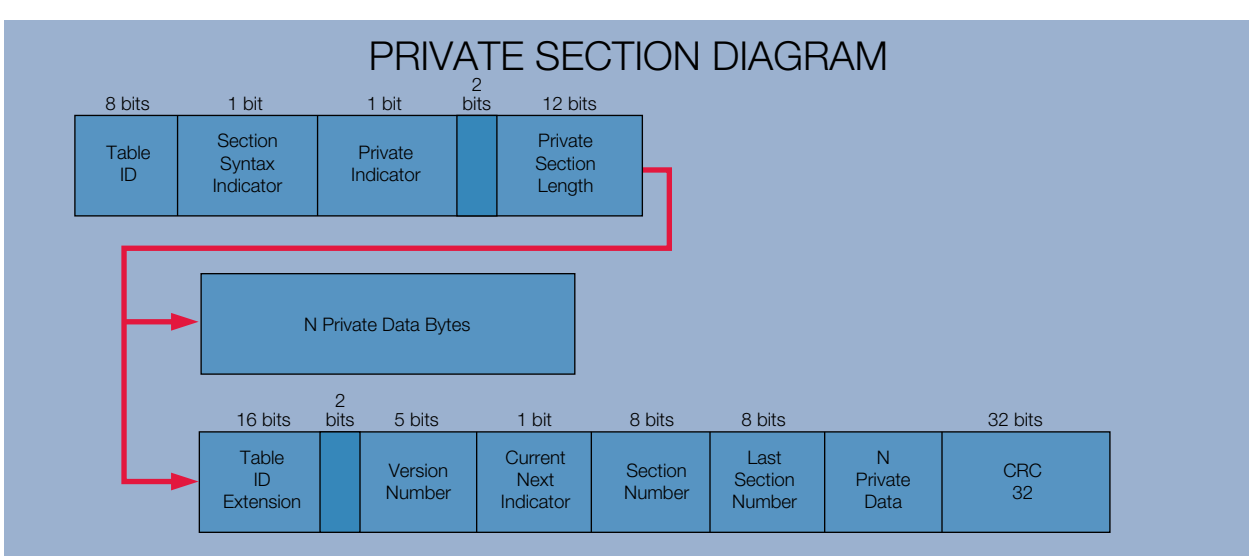
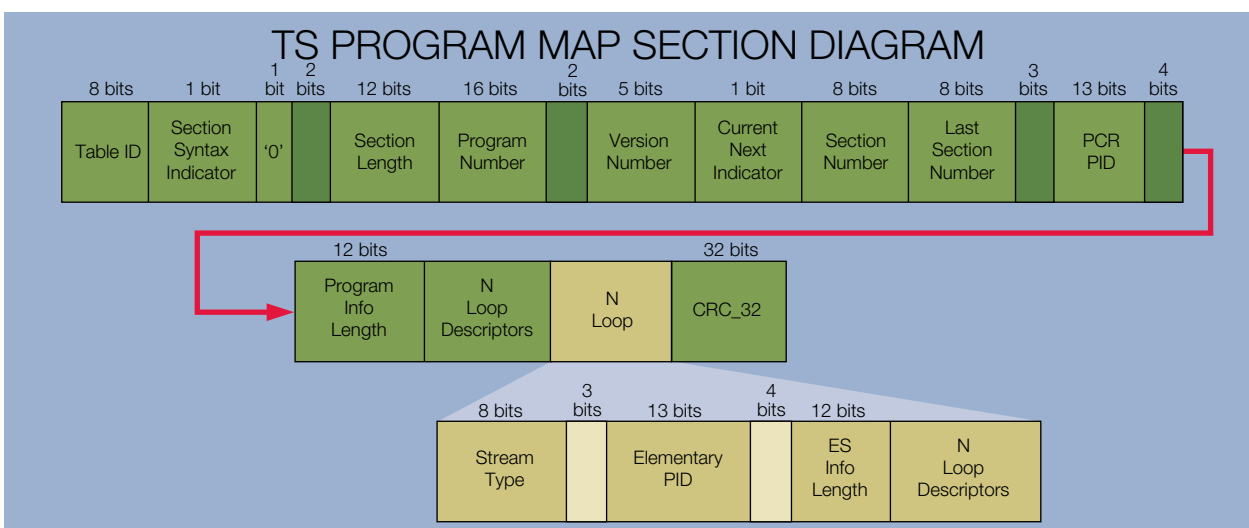
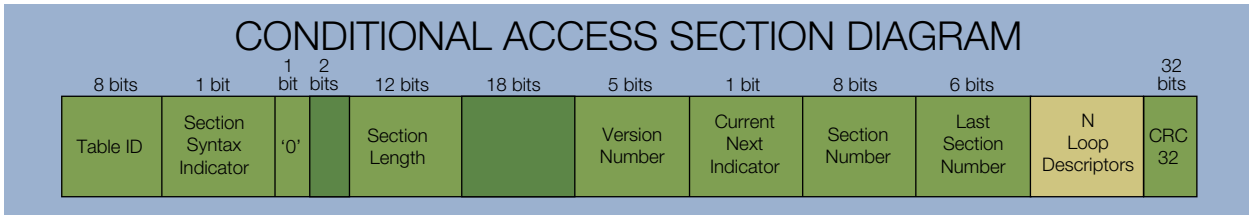
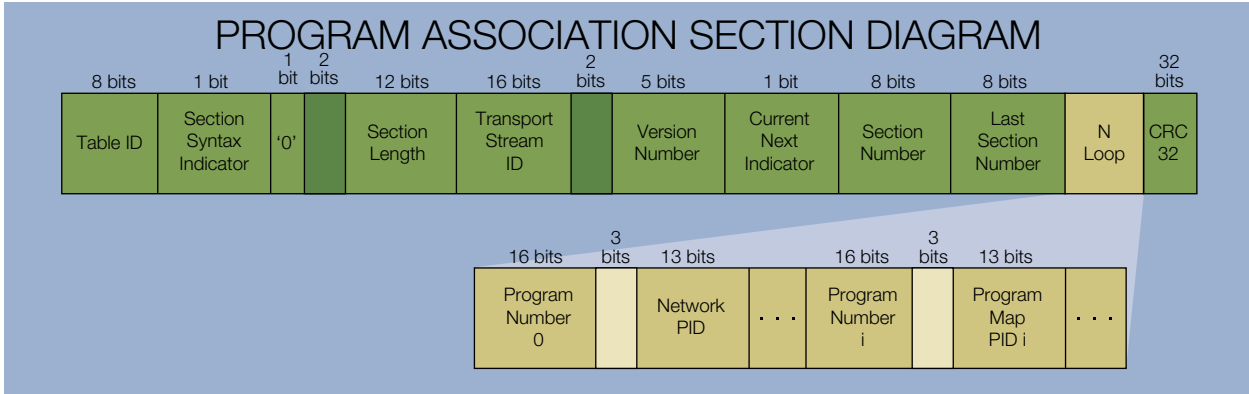
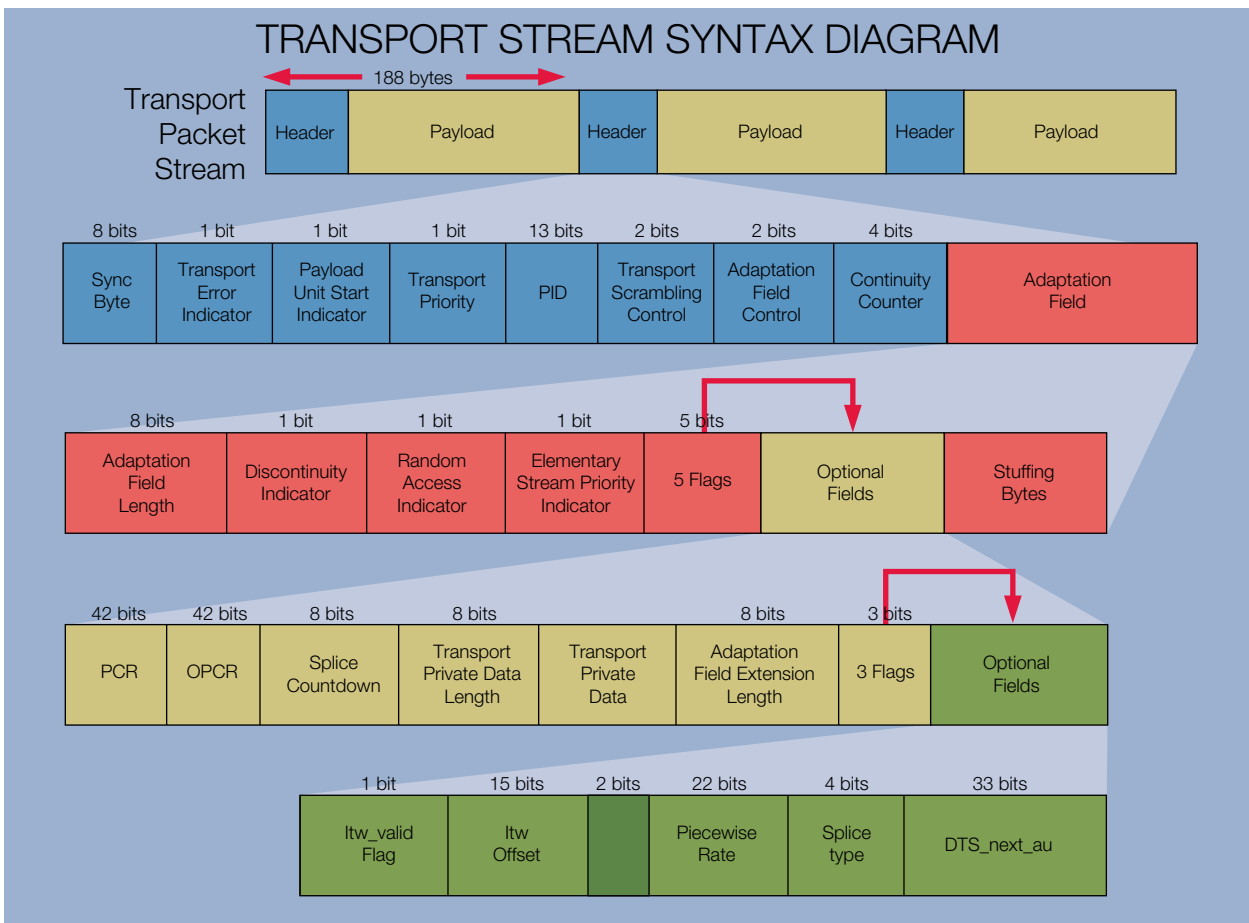
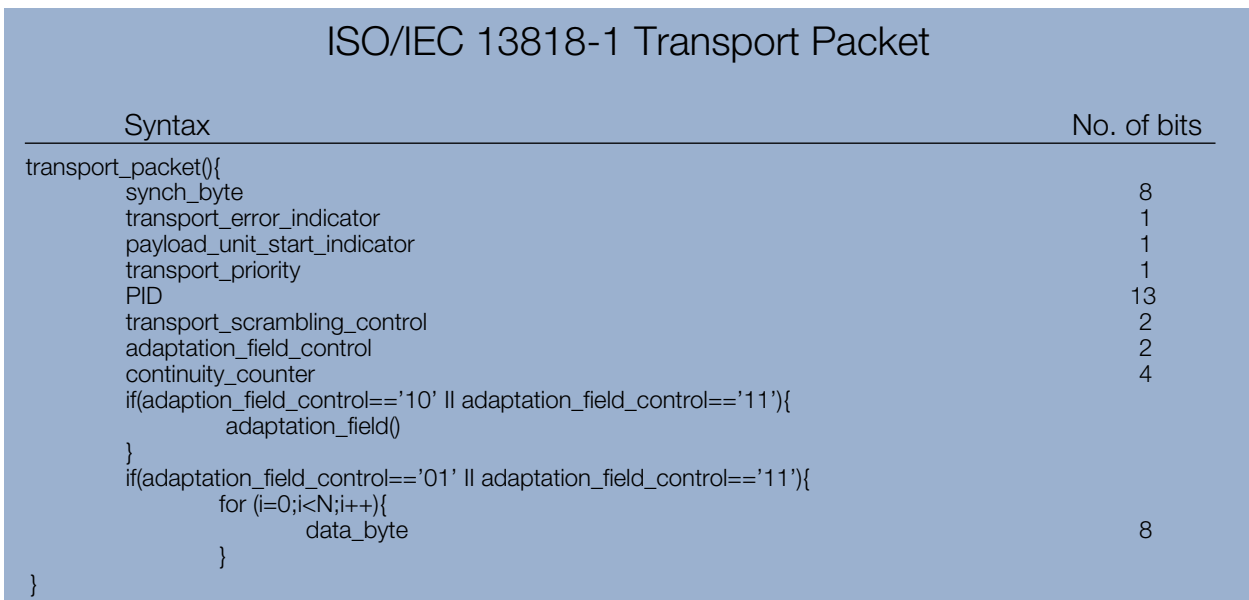
Tektronix®



MPEG-2 Transport Stream Poster

ISO/IEC 13818-1 International Standard

Advanced Television Systems Committee (ATSC)
Program and System Information Protocol (PSIP) for Terrestrial Broadcast and Cable (Doc. A/65 and A/69)



ISO/IEC 13818-2 Video Levels and Profiles						
High	4:2:0 1920x1152 80 Mb/s I/P/B		4:2:2 1920x1088 300 Mb/s I/P/B		4:2:0, 4:2:2 1920x1152 100 Mb/s I/P/B	
	4:2:0 1440x1152 60 Mb/s I/P/B				4:2:0, 4:2:2 1440x1152 80 Mb/s I/P/B	
Main	4:2:0 720x576 15 Mb/s I/P	4:2:2 720x576 15 Mb/s I/P/B	4:2:2 720x608 15 Mb/s I/P/B	4:2:0 720x576 15 Mb/s I/P/B	4:2:0, 4:2:2 720x576 15 Mb/s I/P/B	
	4:2:0 352x288 4 Mb/s I/P/B		4:2:0 352x288 4 Mb/s I/P/B			
Low						
Level	Simple	Main	4:2:2 Profile	SNR	Spatial	High
Profile						

Syntax	Bits	Format
doc_selection_code_table_section()		
table_id	8	0xd04
selection_syntax_indicator	1	"1"
private_indicator	1	"1"
reserved	2	"11"
length	12	umstrf
table_id_extension	16	umstrf
reserved	2	"11"
version_number	5	umstrf
current_index_indicator	1	
selection_number	8	0x00
last_selection_number	8	0x00
protocol_version	8	0x00
selection_categories, defined for(i=0; i<selection_categories, defined+1)	8	umstrf
selection_category_code	8	umstrf
selection_category_name_length	8	umstrf
selection_category_name_text()		
reserved	6	"111111"
options_length (for i=0; i<N-1; i) (descriptors)	10	umstrf
reserved		
additional_descriptors_length (for i=0; i<N-1; i) _additional_descriptors()	6	"111111"
reserved	10	umstrf
CRC_32	32	rpchof

Table Type	PID	Max Interval
PAT	0x0	100 ms
CAT	0x1	100 ms
TSDT	0x2	100 ms
MGT	0x1FBB	150 ms
TVCT	0x1FBB	400 ms
CVCT	0x1FBB	400 ms
HTT	0x1FBB	1000 ms
HTT	0x1FBB	60000 ms
PMT	ALL	400 ms
ET0	ALL	500 ms
ET1	ALL	3000 ms
ETI2-3	ALL	60000 ms

Stream Type Assignments	
Value	Description
0x00	ITU-T 1 ISO/IEC reserved
0x01-0x7F	As specified in Table 2.29 (Stream type assignments) of ISO/IEC 13818-1
0x80	[Used in other systems]
0x81	ATSC A/53 audio
0x82-0x84	[Used in other systems]
0x85	UPD (ATSC A/57 Program/Episode/Version identification)
0x86-0xBF	Reserved
0xC0-0xFF	User Private

Table ID Value (Hex)	Tables	PID
	ISO/IEC 13818-1 Sections:	
0x00	PROGRAM ASSOCIATION TABLE (PAT)	0
0x01	CONDITIONAL ACCESS TABLE (CAT)	1
0x02	TS PROGRAM MAP TABLE (PMT)	per PAT
0x03-0x0F	[ISO Reserved]	
	User Private Sections:	
0x40-0x0F	[User Private]	
	Other Documents:	
0x0C-0x0B	[ATSC coordinated values which are defined in other standards]	
	PSIP Tables:	
0x07	MASTER GUIDE TABLE (MGT)	0x1FFB
0x08	TERMINIST VIRTUAL CHANNEL TABLE (VCT)	0x1FFB
0x09	CABLE VIRTUAL CHANNEL TABLE (CVCT)	0x1FFB
0x0A	RATES REGION TABLE (RRT)	0x1FFB
0x0B	EVENT INFORMATION TABLE (EIT)	per MGT
0x0C	EXTENDED TEXT TABLE (ETT)	per MGT
0x0D	SYSTEM TIME TABLE (STT)	0x1FFB
0x0E-0x02	[ATSC coordinated values which are defined in other standards]	
0x03	DIRECTED CHANNEL CHANGE TABLE (DCCCT)	0x1FFB
0x04	DIRECTED CHANNEL CHANGE SELECTION CODE TABLE (DCCSCT)	0x1FFB
0x05-0x06	[ATSC coordinated values which are defined in other standards]	
0x07-0x08	[Used in other systems]	
0x09-0x0F	[Reserved for future ATSC use]	

Tables defined in the "PSIP Standard", and any created as user extensions to it are considered "private" with respect to ISO/IEC 13818-1. Table types 0x00 through 0x0F are user defined (outside the scope of the "PSIP Standard").

Abbreviations	
ATSC	Advanced Television Systems Committee
BMP	Basic Multilingual Plane
babf	bit serial, left bit first
CAC	Conditional Access Table
CRC	Cyclic Redundancy Check
CVCT	Cable Virtual Channel Table
DTV	Digital Television
EIT	Event Information Table
EPG	Electronic Program Guide
EMM	Entitlement Management Message
ETT	Extended Text Message
ETS	Extended Text Table
GPS	Global Positioning System
MGT	Master Guide Table
MPAA	Motion Picture Association of America
MPEG	Moving Picture Experts Group
MT	Media Transport
NVOD	Network Video On Demand
OOB	Out of Band
PAT	Program Association Table
PCR	Program Clock Reference
PES	Packetized Elementary Stream
PI	Packet Identifier
PMT	Program Map Table
PSP	Program and System information Protocol
PTS	Physical Transmission Channel
SCTE	Society of Cable Telecommunications Engineers
SCTE	System Information
SMPTES1310M	Synchronous Serial Interface for MPEG-2 transport streams at 19.392656 and 38.785317 Mbps
STD	System Target Decoder
SIT	System Time
rschot	remainder polynomial coefficients, highest order first
RTS	Rating Report Table
TS	Transport Stream
TS2DT	Transport Stream Description Table
TVCT	Terrestrial Virtual Channel Table
unicode	Unicode™
UTC	Coordinated Universal Time
unsig16	unsigned integer, most significant bit first
VCT	Virtual Channel Table. Used in reference to either TVCT or CVCT

