



XMRADIO[®] SDARS SERVICE LAYER & SOURCE DECODER

DATA BRIEF

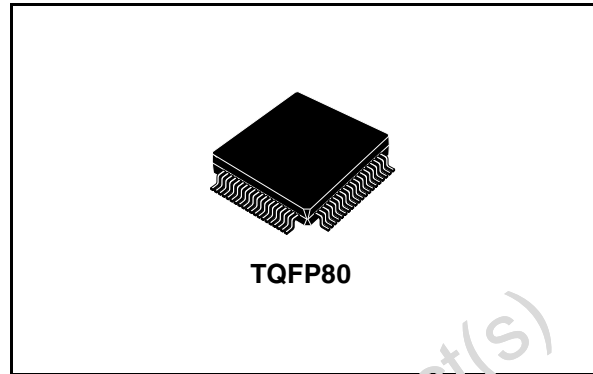
Features:

Functions

- XMRADIO service layer demultiplexing
- Channel auxiliary data management
- Conditional access control
- Service components extraction
- Service components decryption
- High quality audio decoding with data rate from 24Kbps to 96Kbps
- High quality speech decoding with data rate from 4Kbps to 16Kbps
- 44.1 and 32KHz sampling frequencies supported
- Synchronization error detection with sw indicators

Peripherals

- High speed serial input interface (Pcbitstream Interface)
- Fully programmable serial PCM Output interface
- IEC958 output (S/PDIF)
- Data output port interface



- Conditional access processor interface (I²C Master).
- RS232 RX & TX interfaces
- Embedded system PLL
- Embedded audio PLL

Low Power technology

- 1.8V 0.18µm technology
- 3.3V capable I/Os

Control

- I²C Slave Control
- Device address: 1011100

Order codes

Part number	Op. Temp. range, °C	Package	Packing
STA450A	-40 to +85	TQFP80	Tube
STA450A13TR	-40 to +85	TQFP80	Tape & reel

1 Description

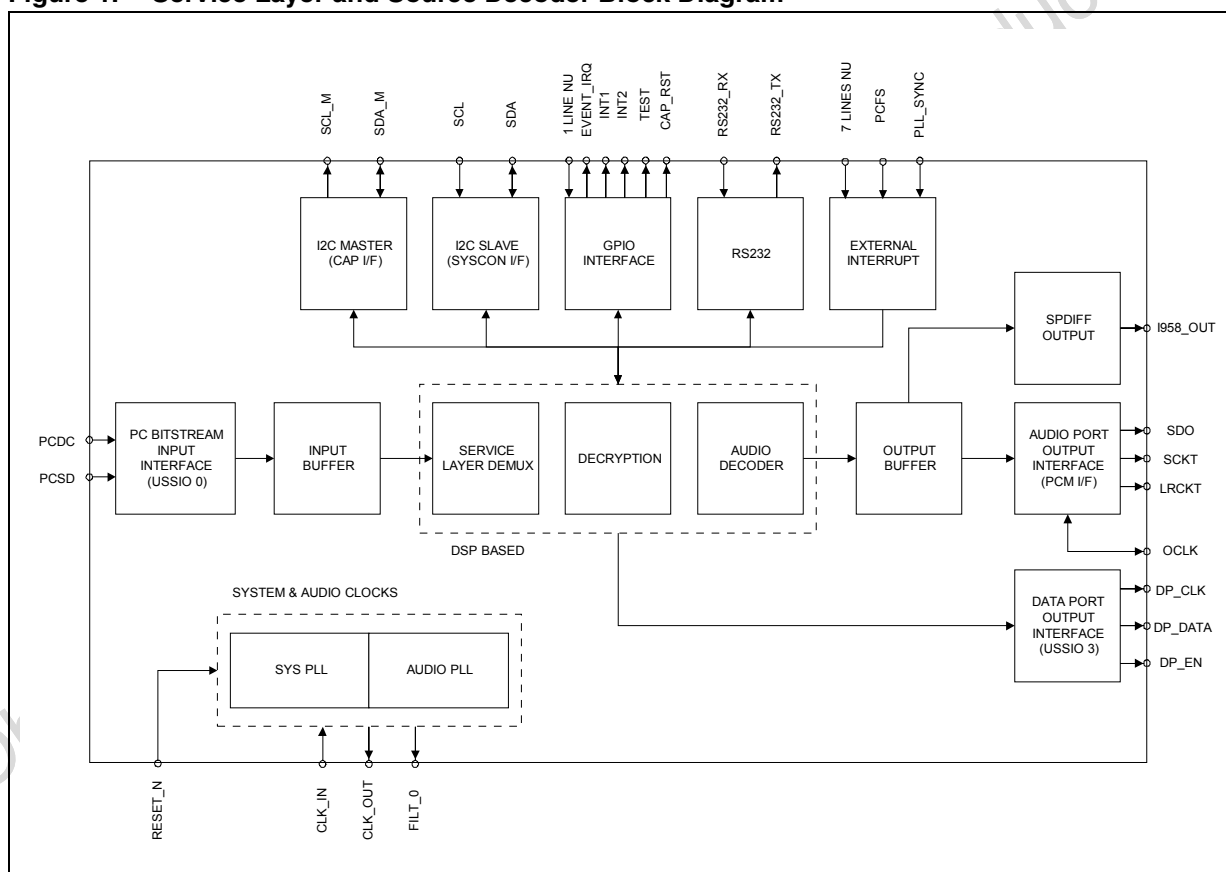
The STA450A is designed for digital radio receivers compatible with the XMRadio SDARS System and integrates all the functions needed to perform the Service Layer and Source Decoding:

- Bitstream Synchronization
- Service Layer (SL) Demultiplexing
- Auxiliary Data Management
- Conditional Access (CA) Control
- Service Components Extraction
- Service Components Decryption
- Audio and Voice Decoding

The extracted Audio and Data are made available through different interfaces:

- I2S Audio Output
- S/PDIF Output
- Data Output Port

Figure 1. Service Layer and Source Decoder Block Diagram

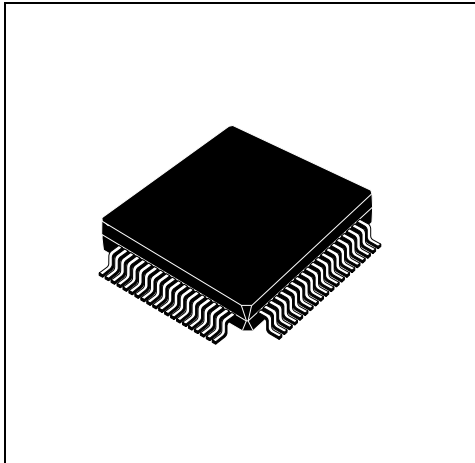


2 Package information

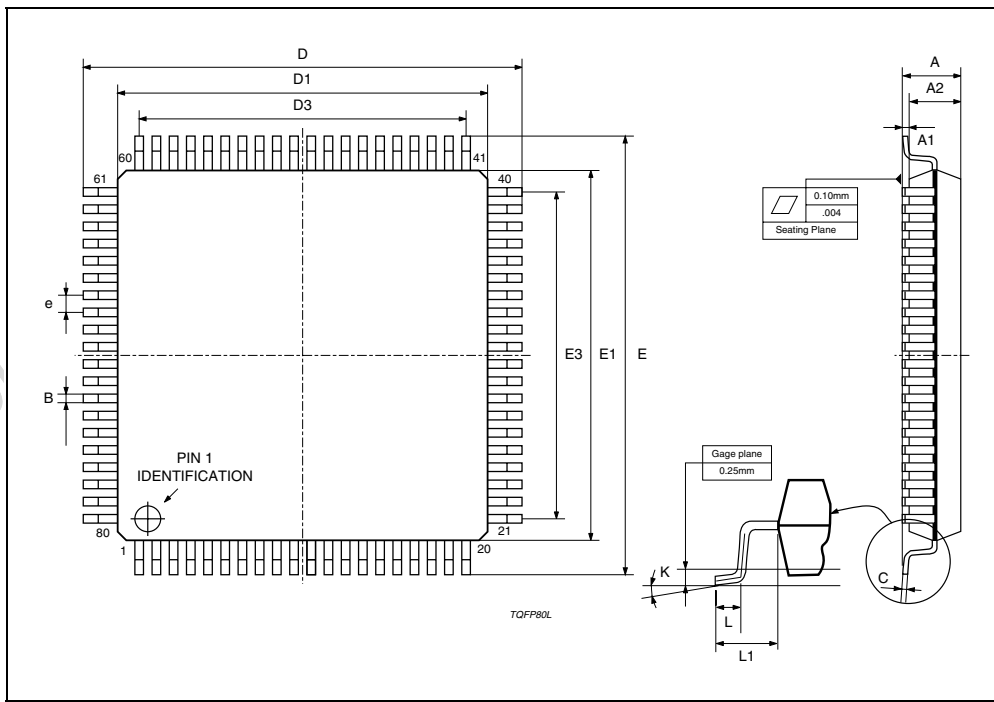
Figure 2. TQFP80 Mechanical Data & Package Dimensions

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			1.60			0.063
A1	0.05		0.15	0.002		0.006
A2	1.35	1.40	1.45	0.053	0.055	0.057
B	0.22	0.32	0.38	0.009	0.013	0.015
C	0.09		0.20	0.003		0.008
D		16.00			0.630	
D1		14.00			0.551	
D3		12.35			0.295	
e		0.65			0.0256	
E		16.00			0.630	
E1		14.00			0.551	
E3		12.35			0.486	
L	0.45	0.60	0.75	0.018	0.024	0.030
L1		1.00			0.0393	
K	3.5°(min.), 7°(max.)					

OUTLINE AND MECHANICAL DATA



**TQFP80
(14x14x1.40mm)**



3 Revision history

Date	Revision	Changes
10-Oct-2005	1	Initial release.

Obsolete Product(s) - Obsolete Product(s)

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