

# Si4693 Data Short

## Low-Power, High-Performance AM/FM HD Radio™ Baseband Processor

The Si4693 HD Radio™ radio processor provides significant advances in size, power consumption, and performance to enable HD Radio reception in automotive infotainment systems and car radios as well as in high-end audio/video receivers and pro-audio systems. It is designed to work with the high-performance automotive Si479x families of AM/FM radio tuners.

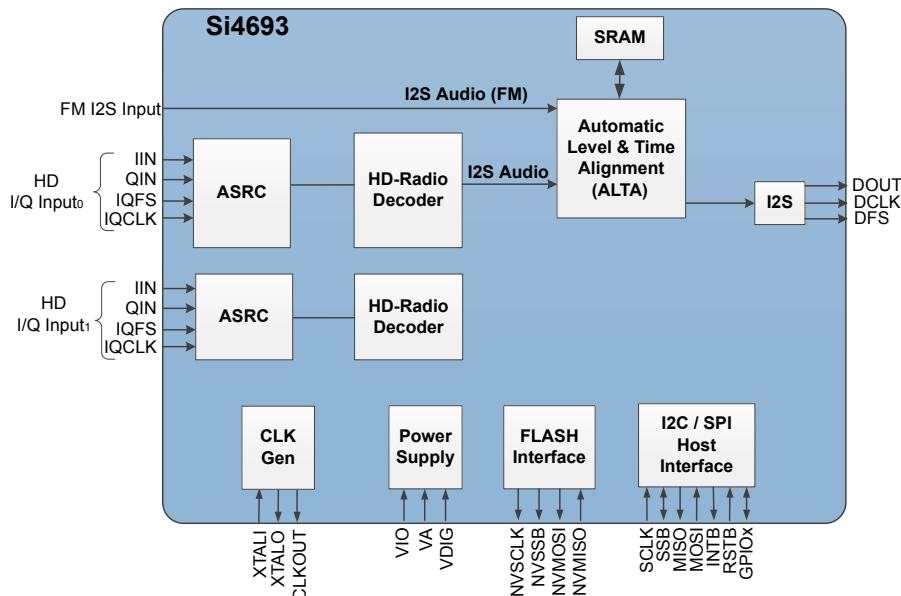
The Si4693 HD Radio processor supports the iBiquity and NRSC-5 standards for FM In-Band-On-Channel (IBOC) and AM IBOC digital radio broadcasting. The processors support Station Information Service (SIS), Service Information Guide (SIG), Program Service Data (PSD), IBOC multicasting, and HD Radio digital audio.

### Applications

- Aftermarket car radio systems
- OEM automotive infotainment systems
- OEM automotive PND docking systems

### KEY FEATURES

- Dual AM/FM HD Radio channel decoder
- Complete dual on-chip HDC audio source decoder
- FM HD1, HD2, HD3 multicast support
- Automatic Time and Level Alignment
- Station Information Service (SIS) support
- Program Service Data (PSD)
- Advanced Application Services (AAS) Payload for data applications
- No external RAM required for channel decoding
- Flash memory interface for application program load
- On-chip crystal oscillator
- Reference clock input
- SPI, I2C control interfaces
- LGA 72-pin, 10x10x1 mm
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- Pb-free/RoHS compliant
- AEC-Q100 qualified



## 1. Pin Descriptions

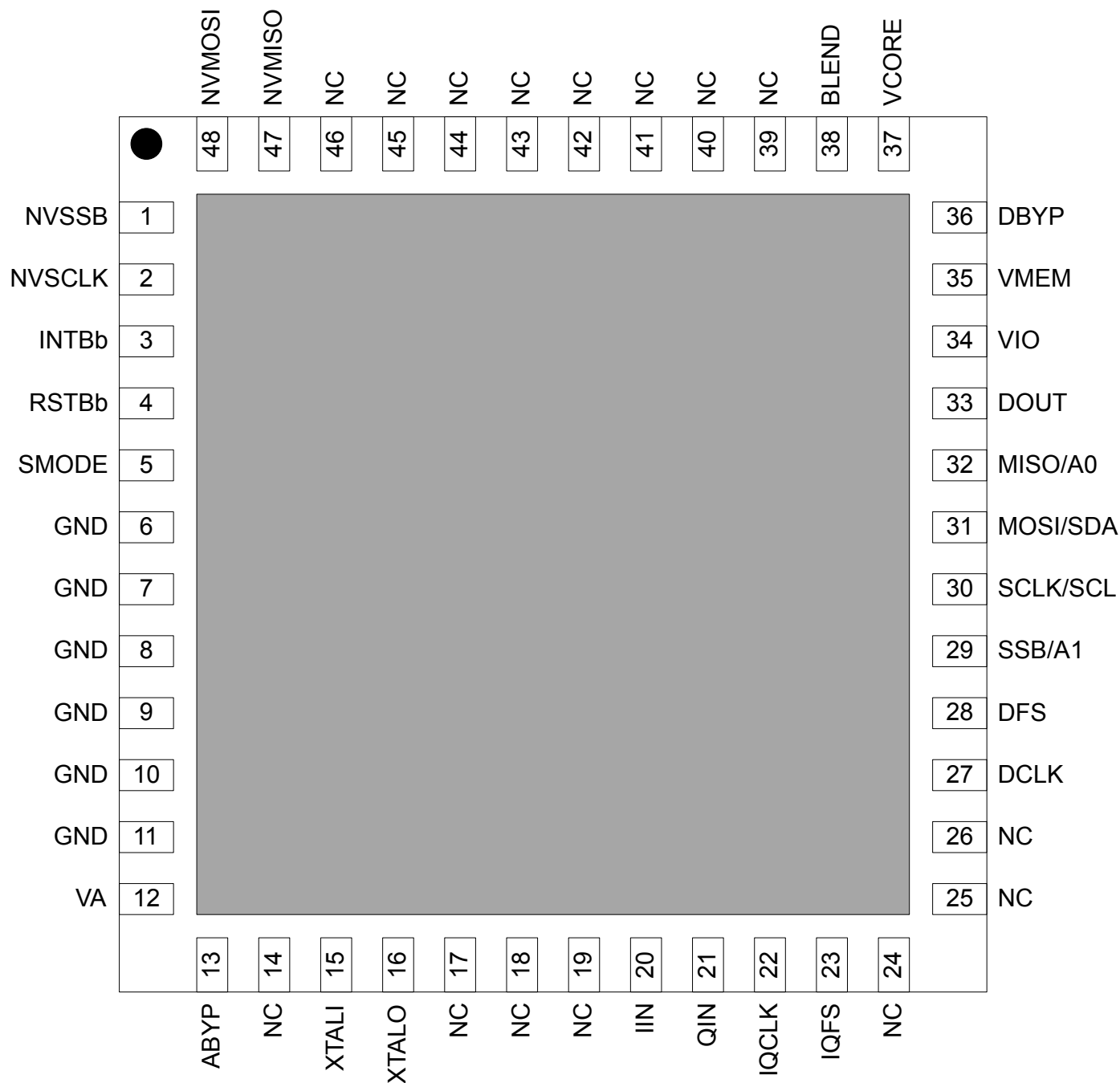


Figure 1.1. Si4693 Pinout Diagram

## 2. Package Outline

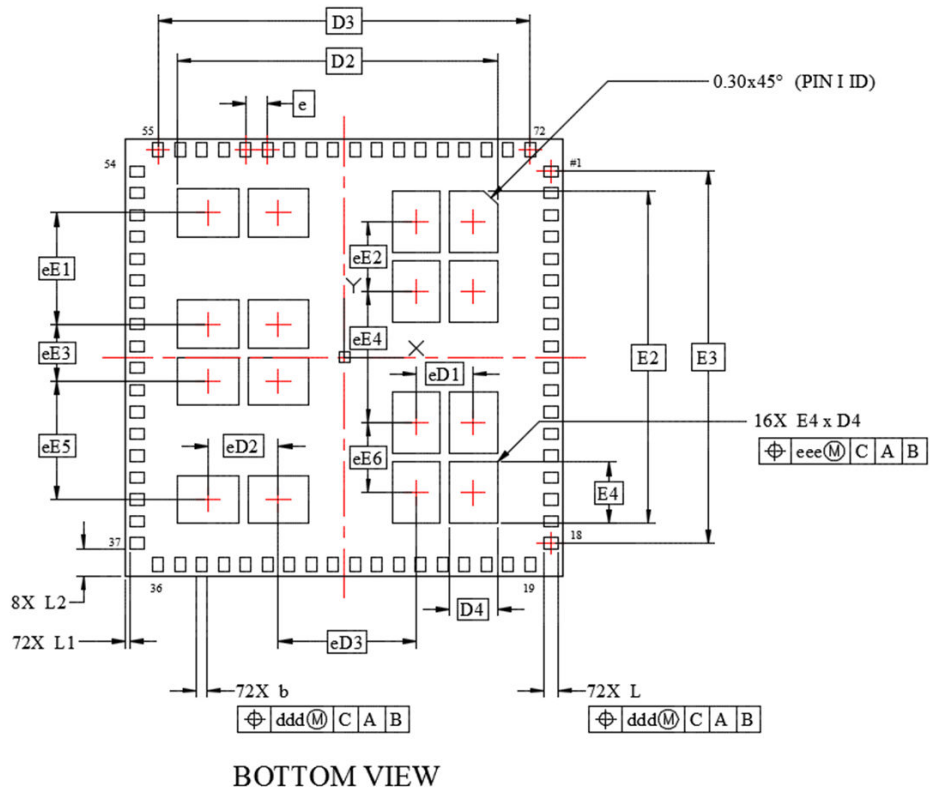
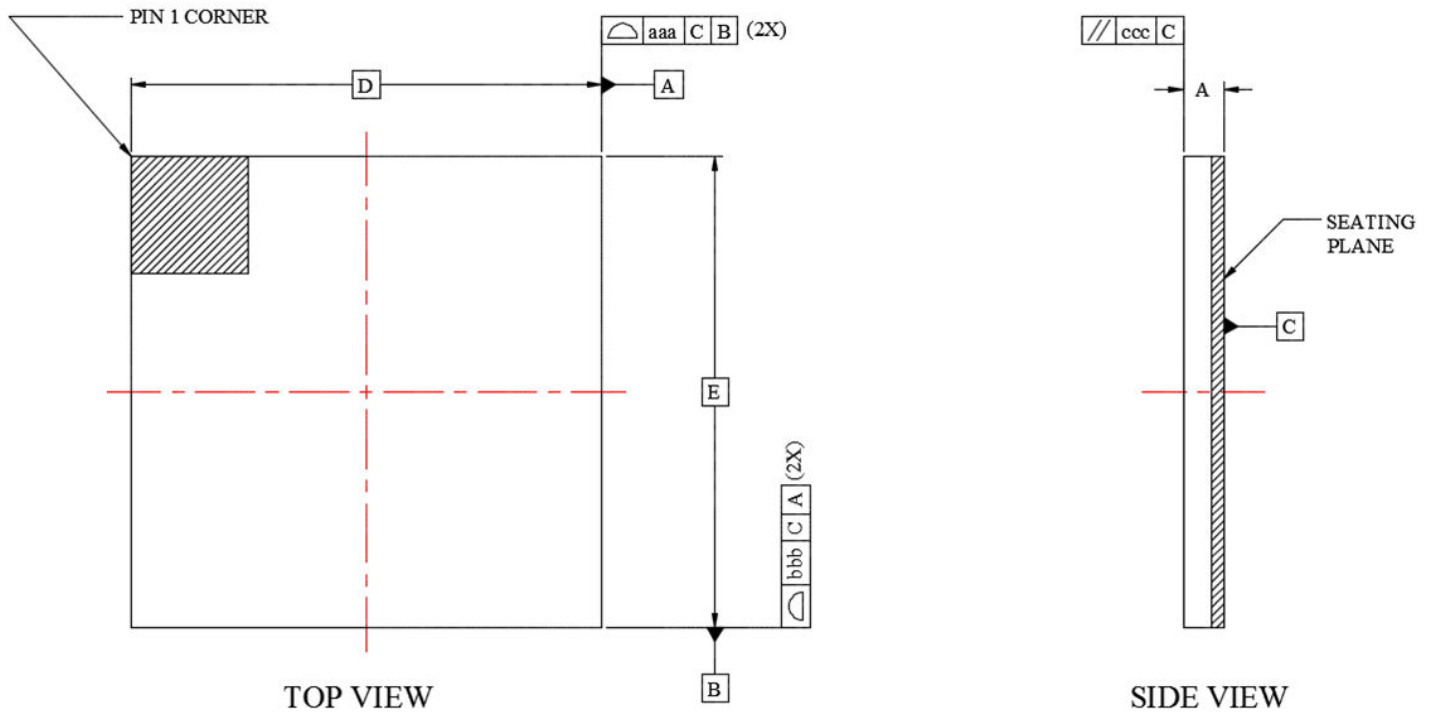


Figure 2.2. 10 x 10 mm 72-Pin LGA

Table 2.1. Package Dimensions

Dimension	Min	Nom	Max
A	1.00	1.08	1.20
b	0.15	0.25	0.35
D	10.0 BSC		
D2	7.20	7.30	7.40
D3	8.50 BSC		
D4	1.00	1.10	1.20
e	0.50 BSC		
E	10.0 BSC		
E2	7.50	7.60	7.70
E3	8.50 BSC		
E4	1.30	1.40	1.50
L	0.225	0.325	0.425
L1	0.05	0.10	0.15
L2	0.575	0.625	0.675
eD1	1.30 BSC		
eD2	1.60 BSC		
eD3	3.15 BSC		
eE1	2.55 BSC		
eE2	1.60 BSC		
eE3	1.30 BSC		
eE4	3.00 BSC		
eE5	2.70 BSC		
eE6	1.60 BSC		
aaa	0.10		
bbb	0.10		
ccc	0.10		
ddd	0.10		
eee	0.10		

**Note:**

1. All dimensions shown are in millimeters (mm) unless otherwise noted.
2. Dimensioning and Tolerancing per ANSI Y14.5M-1994.
3. This drawing conforms to the JEDEC Solid State Outline MO-220.
4. Recommended card reflow profile is per the JEDEC/IPC J-STD-020 specification for Small Body Components.



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