Si470X FM Receiver Products Overview

Silicon Labs Broadcast Audio Products

- Hundreds of FM Rx, FM Tx, FM Rx/Tx, and AM/FM Rx design wins shipping world wide
- Broad portfolio of granted and pending domestic and
- international patents
- International presence and local support in all major markets
- Rapidly expanding portfolio of solutions targeting all digital and analog audio broadcast markets

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Silicon Labs Broadcast Audio

- Highly successful product family
  - Hundreds of design wins shipping
  - >100MU units shipped
- Broad portfolio of granted and pending domestic and international patents
- International presence and local support in all major markets
- Rapidly expanding portfolio of solutions targeting most digital and analog audio markets

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FM Receiver Generation 1 (Si4702/03)

- Highly successful product
  - 0-10 MU shipped in first year
  - Adopted world wide in all Tier 1, 2, and 3 targeted accounts
- Patented digital low-IF architecture
  - Most highly integrated, smallest FM receiver
  - Most flexible, best performing portable solution available

Design-win
SEMC w950i

Design-win
Moto w375

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Si4702/03 Broadcast FM Radio Receiver

- Broadcast radio receiver IC
  - FM stereo receiver (76 to 108 MHz)
  - 3 x 3 mm QFN package
  - Si4703 adds RDS/RBDS decoder
- Highly integrated solution
  - Minimal external components
  - Easy-to-use implementation
- CMOS process technology
  - Enables breakthrough digital integration
- Best-in-class performance
  - Superior audio quality and reception

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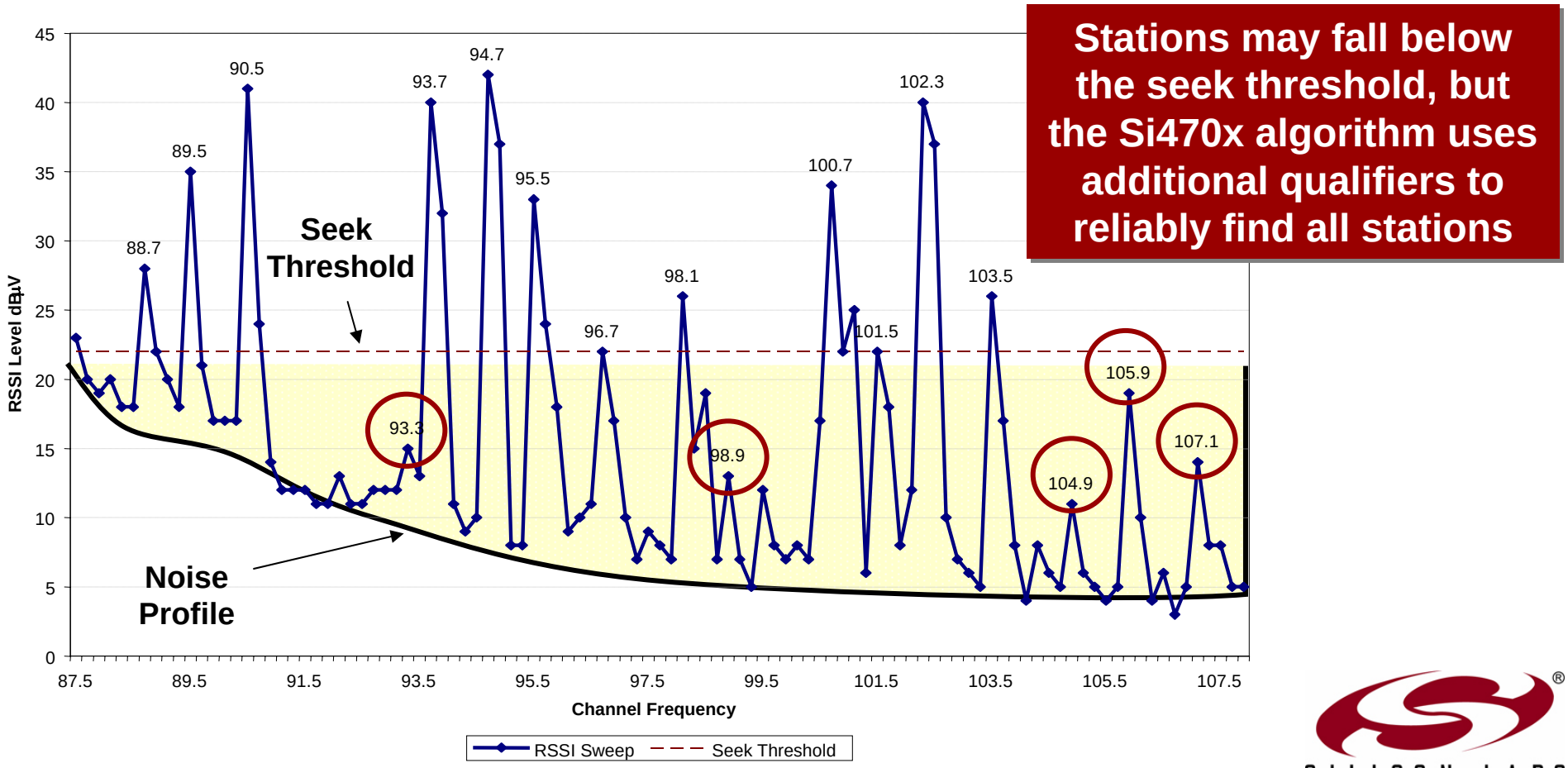
Superior, Proven Seek Performance

- Si470x products have excellent, proven seek performance
- Better user experience with more stations found



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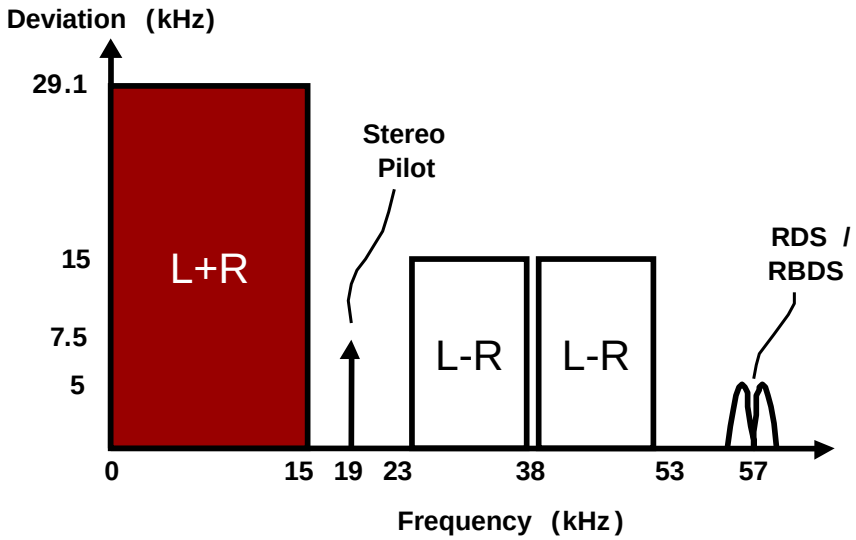
Pin-Compatible RDS Solution

- Millions of Silicon Labs' RDS devices tested, adopted, and shipped worldwide
- Pin-compatible, drop-in enhancement
  - Si4703 adds RDS/RBDS
- RDS adoption increasing
  - FM w/ RDS ~ MP3 experience
  - GPS & navigation applications using traffic data

R·D·S
RADIO DATA SYSTEM

FM Modulated Signal w/ RDS



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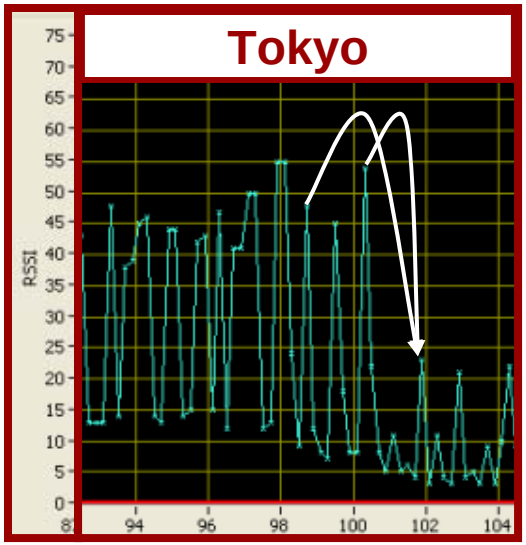
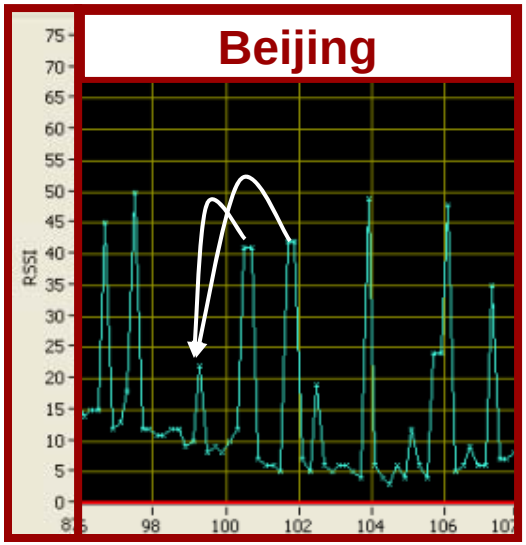
Unmatched Interference Performance





- Selectivity – Essential in an urban environment
  - Ability to receive weak signals with large adjacent† or alternate‡ blockers
- IP3 – Important in an urban environment
  - Ability to receive weak signals with strong intermod products
- Real-world FM environments show highly likely scenarios for good IP3 and selectivity

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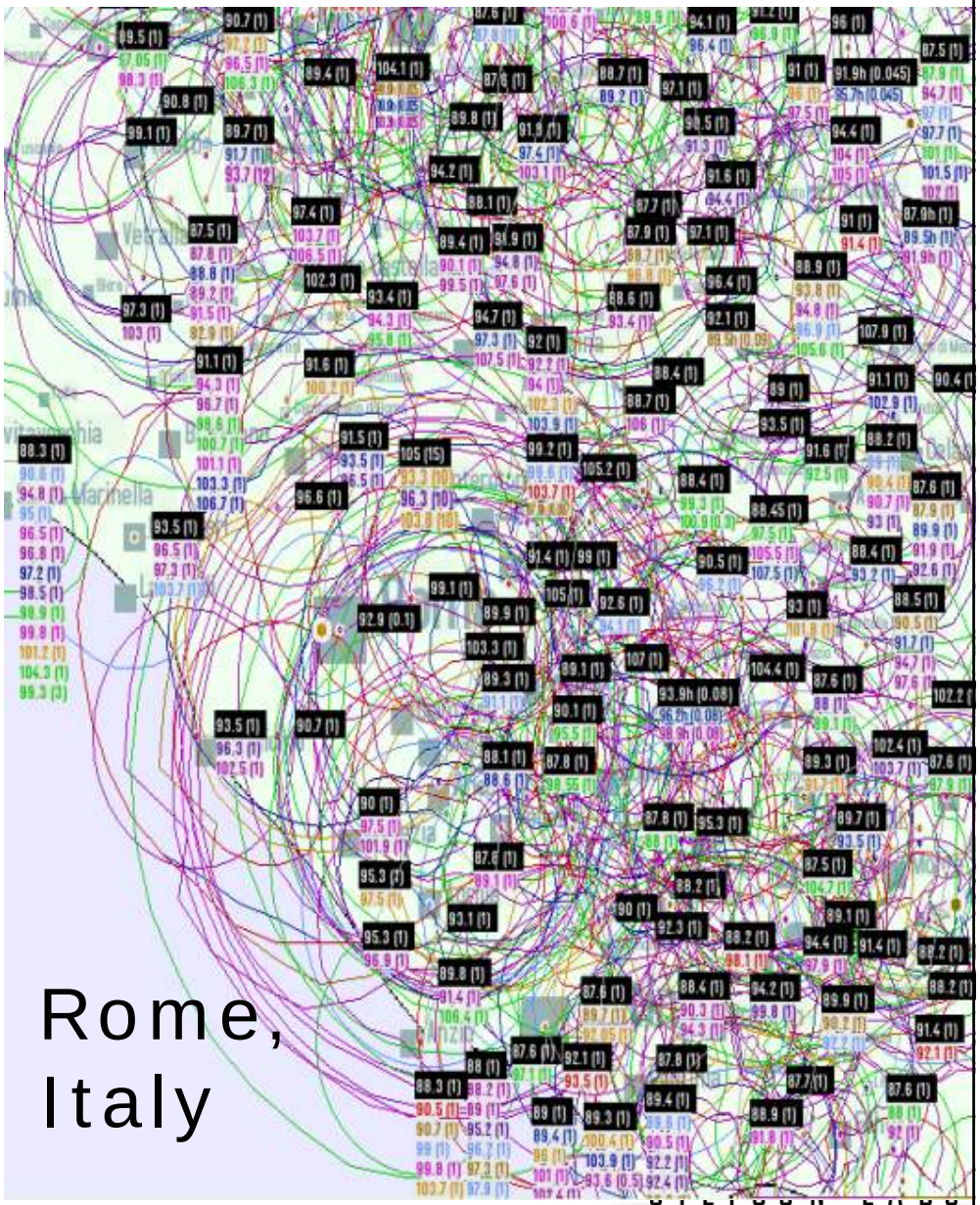
Selectivity is Important in Urban Areas

- Urban areas are problem centers for selectivity
- Multiple stations, transmitters results in more adjacent channels
  - www.fmscan.org
  - Note overlapping coverage of FM Radio stations in the map
- Over 3.5 Billion people live in urban areas



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Si4704/05 – Advanced FM Receiver

- Built on proven CMOS FM Rx solutions
  - Protected with dozens of international patents
  - Over 100 MU of this family shipped (CMOS)
  - Patented digital low-IF architecture
  - 3 x 3 x 0.55mm 20 pin QFN, minimal BOM
  - Worldwide FM Band support (64~108MHz)
- Unique and patented embedded antenna support for “antenna free” device casings
- I2S/PCM for digital audio out and FM recording (Si4705)
- Enhanced RDS for dedicated FM data traffic monitoring (AF, TMC)
- In mass production with designs shipping

Mitsubishi - D905i

Tianyu E75
w/ embedded antenna

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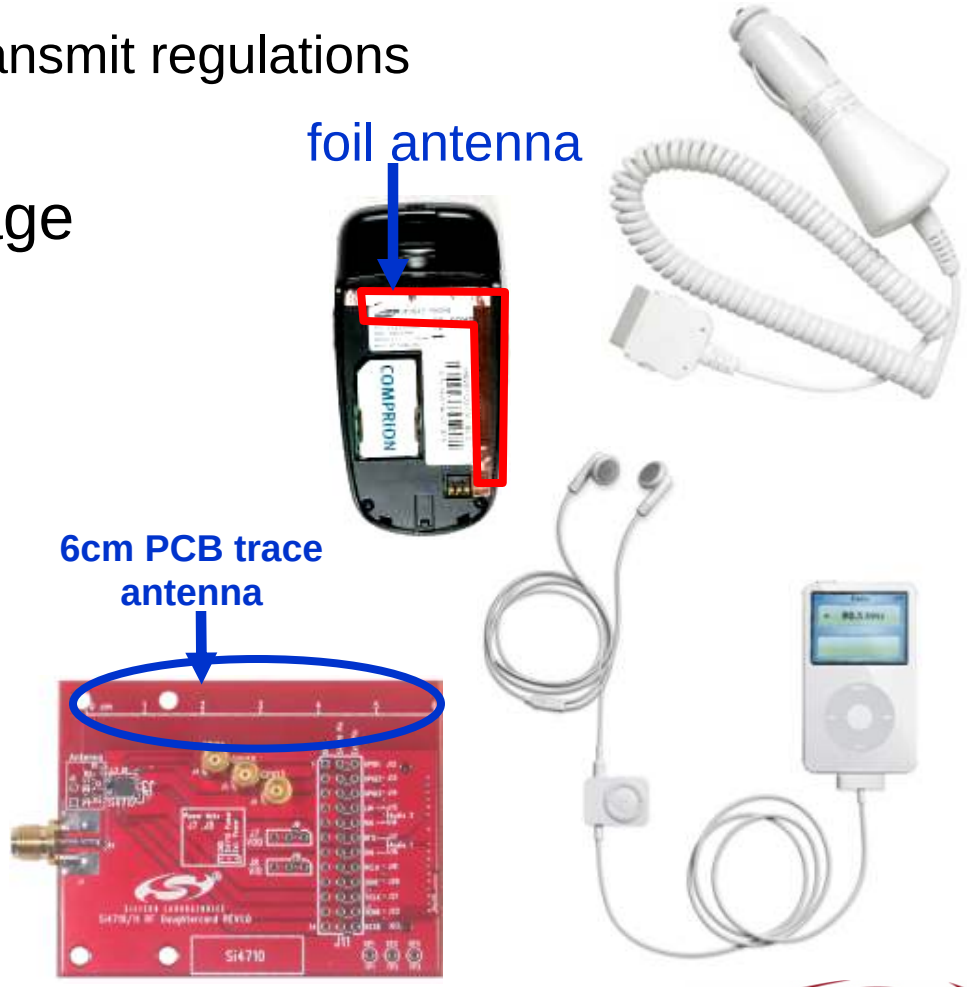
Si4704/05 Antenna Flexibility

- Precise output voltage control
  - Used to meet government transmit regulations
- Programmable output voltage
  - Enables multiple antennas
- Antennas
  - PCB trace antennas
  - Wire antennas
  - Loop antennas
  - Headphone antennas
  - Charger cable antennas



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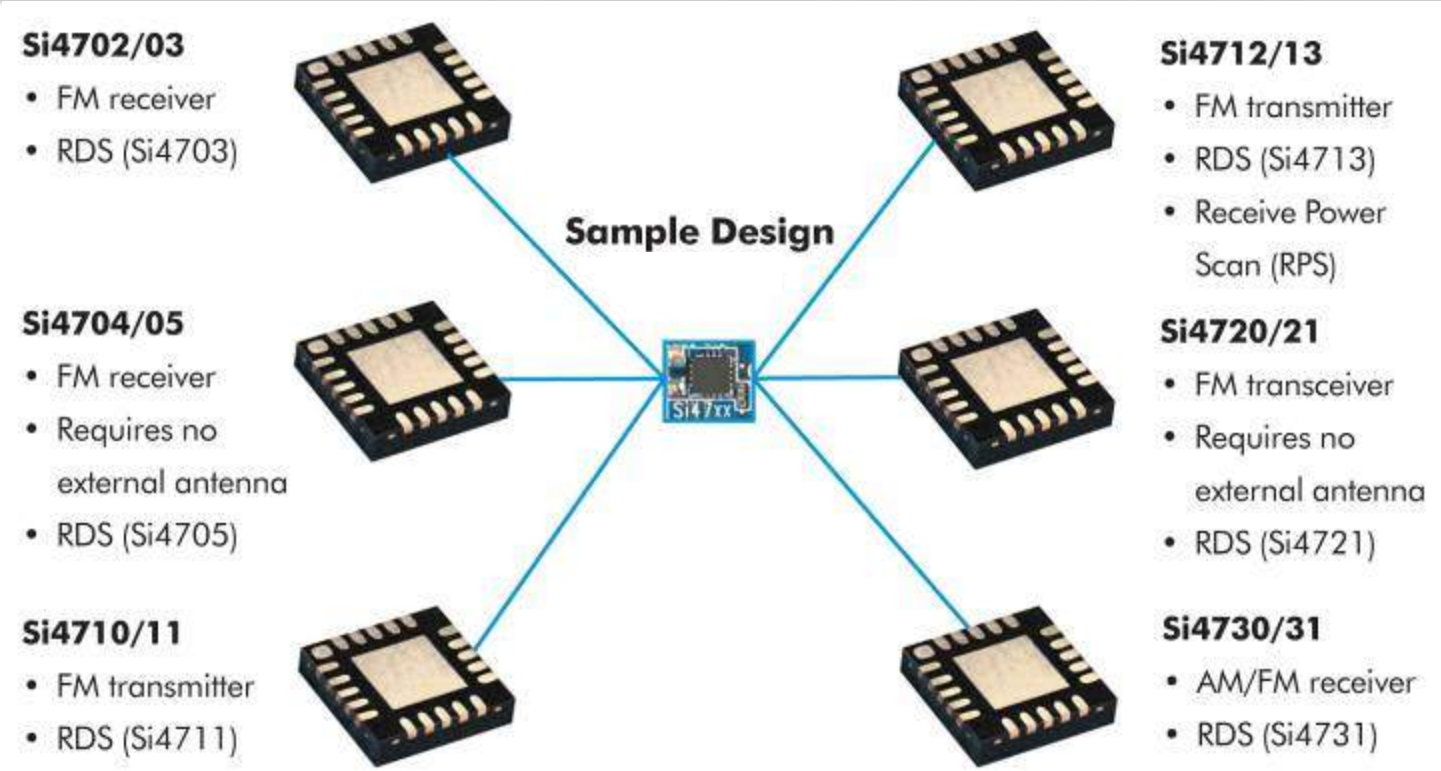
Gen 1 & Gen 2 Are Lay-out Compatible



- Portfolio of products offering unmatched flexibility
- Features can be “dropped-in” for product differentiation

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Product Selector Guide

Part	RDS	RPS	FM	TX	AM	SW	WB	SAME	PCM
Si4702			✓						
Si4703	✓		✓						
Si4704			✓						
Si4705	✓		✓						✓
Si4706	✓+								
Si4707							✓	✓	✓
Si4710				✓					✓
Si4711	✓			✓					✓
Si4712		✓		✓					✓
Si4713	✓	✓		✓					✓
Si4720			✓	✓					
Si4721	✓		✓	✓					✓
Si4730			✓		✓				
Si4731	✓		✓		✓				✓
Si4734			✓		✓	✓			
Si4735	✓		✓		✓	✓			✓
Si4736			✓		✓		✓		
Si4737	✓		✓		✓		✓		✓
Si4738			✓				✓		
Si4739	✓		✓				✓		✓

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