



Silicon Vision
Innovative IC Solutions



ESI-TRX401

Low power ISM radio transceiver
433MHz/868MHz/915MHz



www.si-vision.com

APPLICATIONS

- Smart Cities
- Metering systems
- Home automation
- Wireless PC peripherals
- Remote keyless entry
- Industrial control
- Sensor networks
- Home security & alarm
- Toy control
- Tire pressure monitoring
- Health monitors
- Tag readers
- Low bit-rate communication systems

FEATURES

- FSK/GFSK modulation
- Frequency range: 400 – 960 MHz
- -110dBm sensitivity @ 19.2kbps
- Transmit power range: -10 – +15 dBm
- Ultra low power consumption
15 mA @ Receive 32 mA @ 13 dBm Transmit
- Data rate up to 200 kbps
- Supply voltage range: 1.9 – 3.6V
- Ultra low power OFF/Standby modes
- Automatic Frequency Calibration (AFC)
- Antenna diversity & TR switch control
- Fully integrated VCO, PLL synthesizer and loop filter with on-chip crystal oscillator
- On-chip channel select filter with auto-tuned and programmable bandwidth
- Data slicer with self-adjusting threshold and 2 peak detectors
- Temperature range: -40 – +85 °C
- Integrated SPI interface (r/w) access
- Low BOM
- 6 x 6 mm small VQFN-44/32 package

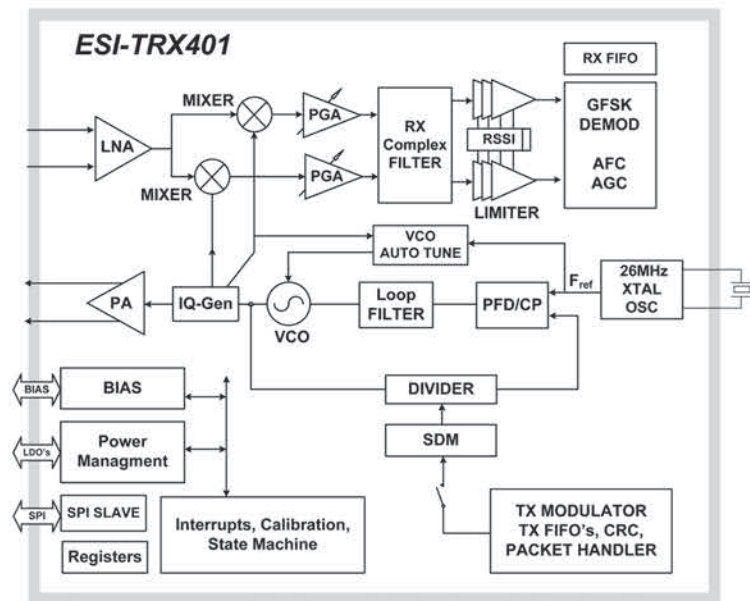


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Silicon Vision, Inc. **ESI-TRX401** device is a fully integrated single-chip radio transceiver operating on 433MHz/868MHz/915MHz ISM frequency bands, compatible with IEEE 802.15.4g standard. Transmitter output power ranges from -10 to +15 dBm, while receiver sensitivity is -110 dBm at 19.2kbps data rate.



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The device is highly integrated and requires only a few external components. The extreme low current consumption in receive, transmit and power down mode, with the wide supply voltage range makes ESI-TRX401 the ideal choice for small, battery driven applications, like Automatic Meter Reading (AMR), alarms and security systems, home automation systems and telemetry systems.

Additionally, ESI-TRX401 includes various fast foreground and background automatic self calibration algorithms to ensure optimal performance and minimum testing time. The automatic calibration engine includes: (AFC) Automatic frequency correction, VCO Auto-Tuning, automatic RX-Filter bandwidth calibration & tuning, TX Filter auto tune, automatic RSSI calibration algorithms in addition to offset cancellation loop.

HEADQUARTERS

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