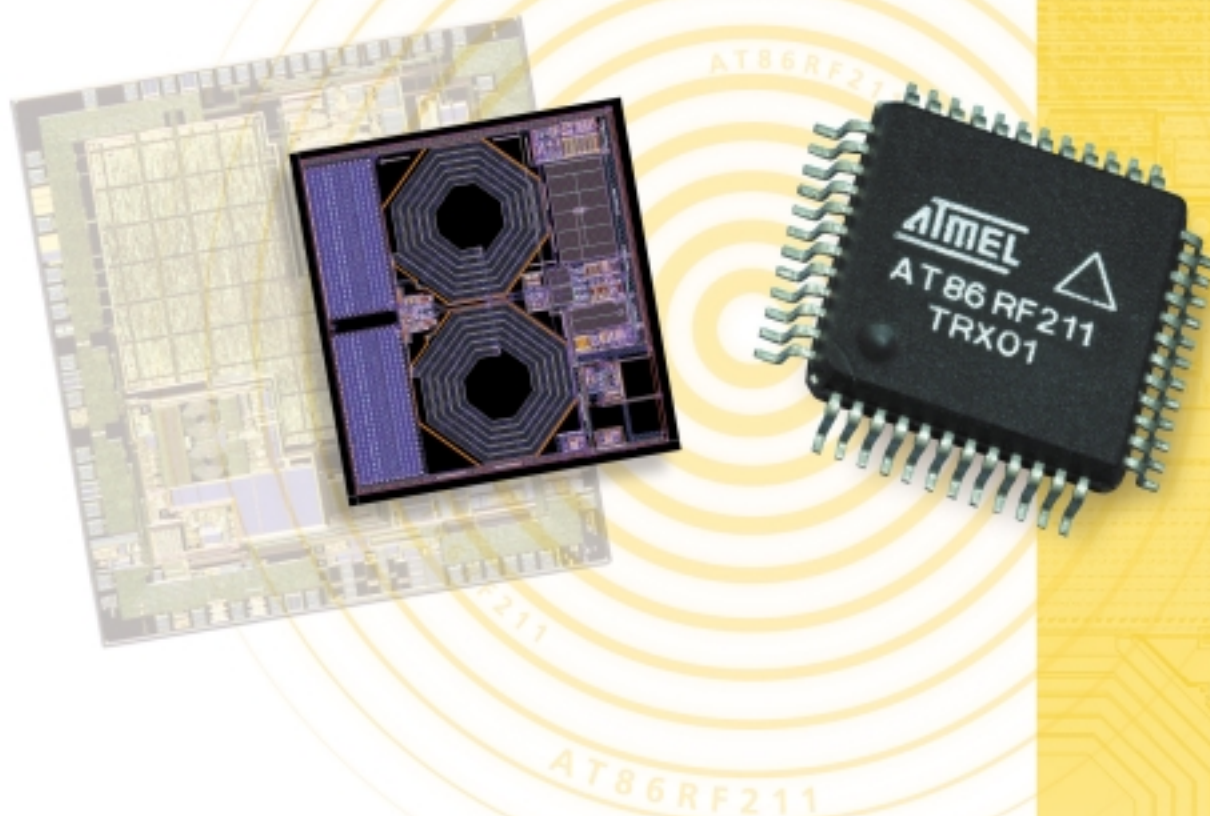


AT86RF211

SmartRF™

WIRELESS DATA TRANSCEIVER



- ISM bands from 400 MHz to 930 MHz.
- FSK modulation; fully integrated demodulator.
- Up to 14 dBm output power; 8 power levels digitally selectable.
- High sensitivity: -100 dBm @ 9600 bps.
- Data rate up to 50 Kbits/s (with clock recovery output).
- Power saving features: "power-down" mode, "sleep" mode, stand-alone "wake-up" procedure.
- Fully integrated VCO and synthesizer.
- Fine, digital tuning of the carrier frequency (200 Hz steps).
- Fast frequency shifts (<50 μ s for a 100 kHz shift) for efficient implementation of "frequency hopping" systems.
- Fast RX to TX toggle time: < 200 μ s.
- Integrated RX/TX switch.
- Easy configuration and control through dedicated registers, including digital RSSI and battery voltage readout (100% digital interface).

ATMEL Headquarters

Corporate Headquarters
2325 Orchard Parkway
San Jose, CA 95131
Tel: (408) 441-0311
Fax: (408) 487-2600

Europe

ATMEL SarL
Route des Arsenaux 41
Casa Postale 80
CH-1705 Fribourg
Switzerland
Tel: (41) 26-426-5555
Fax: (41) 26-426-5500

Asia

ATMEL Asia Ltd.
Room 1219
Chinachem Golden Plaza
77 Mody Road Tsimshatsui
East Kowloon
Hong Kong
Tel: (852) 2721-9778
Fax: (852) 2722-1369

Japan

ATMEL Japan K.K.
9F, Tonetsu Shinkawa Bldg.
1-24-8 Shinkawa
Chuo-ku, Tokyo 104-0033
Japan
Tel: (81) 3-3523-3551
Fax: (81) 3-3523-7581

ATMEL operations

ATMEL Colorado Springs
1150 E. Cheyenne Mtn. Blvd.
Colorado Springs, CO 80906
Tel: (719) 576-3300
Fax: (719) 540-1759

ATMEL Rousset
Zone Industrielle
13106 Rousset Cedex
France
Tel: (33) 4 42 53 60 00
Fax: (33) 4 42 53 60 01

ATMEL Smart Card ICs
Scottish Enterprise Technology
Park
East Kilbride, Scotland G75 0QR
Tel: (44) 1355-803-000
Fax: (44) 1355-242-743

ATMEL Grenoble
Avenue de Rochepleine
BP 123
38521 Saint-Egreve Cedex
France
Tel: (33) 4 76 58 30 00
Fax: (33) 4 76 58 34 80

• E-mail : smartrf@atmel-grenoble.com

• Web Sites : www.atmel.com
www.atmel-grenoble.com



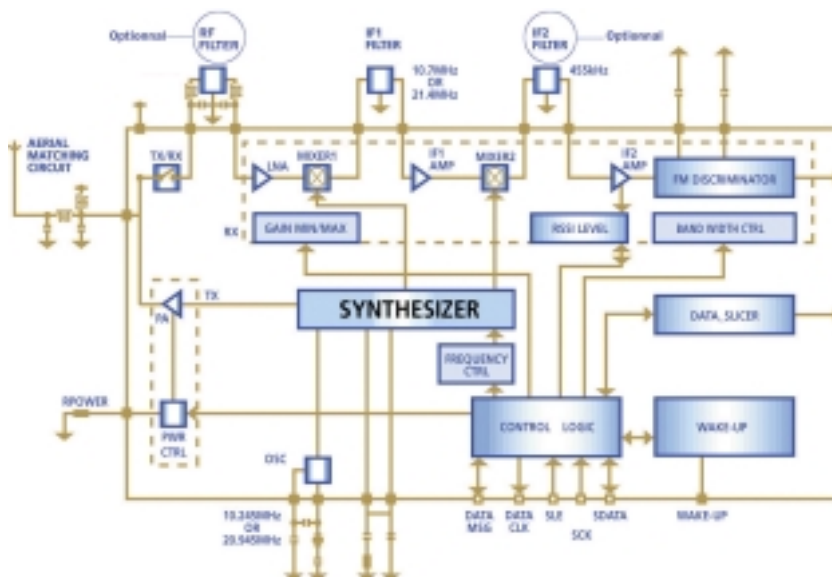
© Atmel Corporation 2001

The AT86RF211 (aka : TRX01) is a single chip transceiver dedicated to low power wireless applications, optimized for licence free ISM band operations from 400 MHz to 930 MHz. Its flexibility and unique level of integration makes it a natural choice for any system related to telemetry, remote controls, alarms, radio modems, Automatic Meter Reading, handheld terminals, high-tech toys ...

The AT86RF211 makes bidirectional communications affordable for these applications: secured transmissions with hand-shake procedures, new features and services...

The AT86RF211 can easily be configured to provide the optimal solution for your application: choice of external filters vs technical requirements (bandwidth, selectivity, immunity, range,...), software protocol (single channel, multiple channel, FHSS...).

The AT86RF211 is also well adapted to battery operated systems as it can be powered with only 2.4V. It also offers a "wake up" receiver feature, to save power by alerting the associated microcontroller only when a valid inquiry is detected.

AT86RF211 block diagram**Evaluation tools**

A Development Kit (433, 868 or 915 MHz) including :

- 2 stand-alone devices, incl. AT86RF211 Daughter Board, antenna, AVR motherboard + all tools to build YOUR stand-alone application very quickly : batteries, LCD, In System Programming, prototyping area...
- a remote light measurement demo.
- 1 dongle (+ PC software) for immediate evaluation of RF performances and direct access to AT86RF211's registers.
- 1 CD-ROM incl. software functions (C-code), a User Guide, presentations...
- 3 samples of AT86RF211.

The RF daughter board is available as a separate item (delivered with antenna & documentation).



Front & back side of the Development Kit

Daughter board