

SPC200c

Powerline Physical Layer Processor



Features

- Raw data rate of 224 Mbps
- 2 – 30 MHz frequency range
- Supports up to 256 nodes
- Multiband OFDM with independant modulation per carrier
- MAC layer based on TDMA and CSMA/CA
- Transparent bridging and spanning tree (802.1D)
- QoS (802.1p), VLAN (802.1Q)
- Embedded authentication (802.1x)
- V1, V2c SNMP Agent
- Power supply: 1.2V for the core and 3.3V for the I/O
- Operating Range: -40°C <=> +85°C
- Package: BGA256, 1mm pitch, 17mm body
- ARM based CPU core (ARM926EJ)
- Ethernet and extended synchronous application interfaces
- 1 X UART, 8-bit GPIO user interfaces
- Debug support including embedded ICE with JTAG interface
- Complies with 2004 FCC PLC regulations and all CE mark standards

The SPC200c Powerline Physical Layer Processor enables Access & In-Home broadband communication over any wire (electrical powerlines, coaxial cables...).

Patented and designed by SPiDCOM Technologies, it is the optimised cost & size version of the mass produced SPC200-e.

Access & In-Home Applications

The SPC200c chip supports any broadband service such as:

- To-the-home broadband Internet and VoIP, Video on Demand, IPTV
- Whole in-house HDTV and digital audio streaming, basic LAN connections, online games...

These broadband applications can be done over any wire (such as electrical wires and coaxial cables).

Innovative PHY Layer based on multiband OFDM

The SPC200c chip implements an innovative digital signal processing based on multiband OFDM which is patented by SPiDCOM Technologies.

The PHY layer allows management of the global transmit power and the power spectrum density mask. This allows interference mitigation with flexible frequency notching and relative power management. Access to carrier modulations and Forward Error Correction ensure the most robust communication possible on each subband.

Flexible AFE

The implementation of HF filtering, digital conversion and power amplification for the AFE (Analog Front End) can be optimised separately for each type of application as needed, using low-cost discrete standard components.

Robust MAC Layer Implementation

The MAC layer provides a mechanism, based on TDMA and CSMA/CA, with prioritisation and automatic resending for reliable delivery of Ethernet packets over a large number of nodes (up to 256).

Bridging is implemented using transparent bridging, VLAN tagging (802.1Q), embedded authentication (802.1x), spanning tree (802.1D) and prioritisation (802.1p).

The standard based QoS (802.1p) implementation provides bandwidth management for multimedia applications including voice, data, audio and video. Privacy and minimizing broadcast domains is ensured using VLAN (802.1Q).

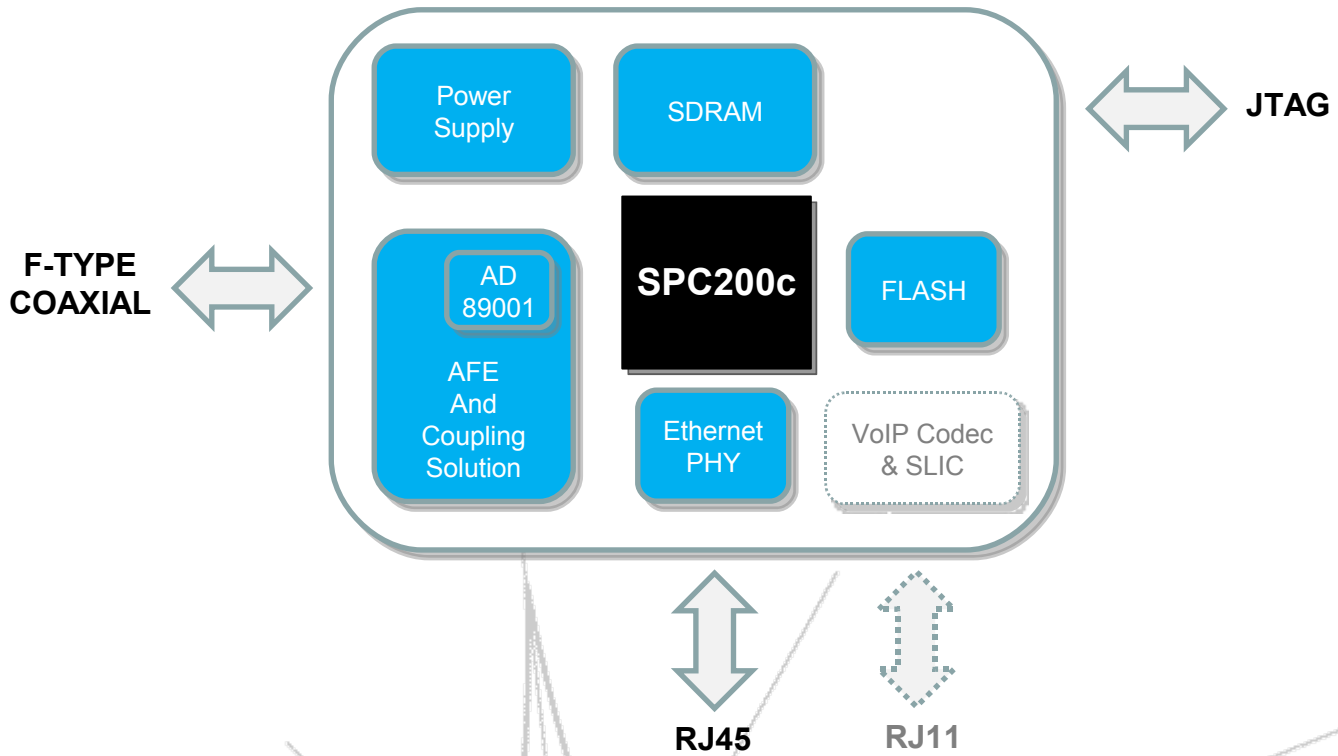
Remote Management

Products based on SPC200c chip are fully manageable and upgradable. Network management can be implemented through SNMP, Telnet, FTP or HTTP. Any NMS of the market can be used.

System Integration

Along with SPC200c chip, SPiDCOM provides a range of reference designs, technical documentation, Linux-based firmware and technical support: we truly assist the work of product designers for a quick time-to-market.

Typical Application: EoC Modem



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About SPiDCOM Technologies

SPiDCOM Technologies is a fabless semi-conductor company.

We specialize in integrated circuits and Linux-based software bundles for broadband Access & In-Home networks applications over any wire (powerline, coax, phone line).

Our solutions are proprietary & HomePlug AV standard based. We provide them to OEM/ODM manufacturers for original products.

With Headquarters in France (Paris), subsidiaries in China (Beijing) and Serbia (Belgrade), and a coming office in the USA, SPiDCOM is fully committed to the worldwide powerline communication market.

SPiDCOM Technologies is contributor member of the HomePlug Powerline Alliance, chairs the HomePlug Europe Group, and actively participates to the standardisation efforts inside the major international regulatory bodies (ETSI, IEEE and ITU).

