SCR200c-ETH

Ethernet over Coaxial Cable Bridge Reference Design

Features

- SPC200c chip
- Low power consumption (<0.5 Watt)
- 224 Mbps raw data rate over coaxial cable and distances up to several km
- Coexists with existing CATV analog and digital signaling
- Splitter jumping possible for room to-room coverage
- 10/100BaseT Fast ETH interface with auto-MDIX for ease of use
- F-type coaxial connector
- Easy to manufacture 4-layer PCB
- Complete manufacturing kit for easy production and fast time-to-market
- No driver required: works with Windows, MAC, Linux, and Unix
- Multicast via IGMP snooping
- Supports 64 nodes by default; 256 nodes possible
- VLAN ensured privacy (802.1Q)
- QoS (802.1p) for time critical applications (e.g. VoIP, VoD)
- V1, V2c SNMP agent for remote management
- Works with both 120V and 240V AC environments
- Complies with all current UL/FCC regulations and CE mark standards

The SCR200c-ETH, SPiDCOM's Ethernet over Coaxial Cable Bridge Reference Design, provides a low-cost 224 Mbps solution for digital communications over existing coaxial cable networks, with a fast time-to-market.

High-Speed Networking over Existing Coaxial Cables

The SCR200c-ETH is the ideal solution for Service Providers looking for robust, reliable and cost-effective Ethernet over Coax applications.
The SCR200c-ETH has plenty of bandwidth available for streaming video signals, providing high-speed Internet access and VoIP services. This is done by using existing coaxial cables; all the while coexisting with standard broadcast TV signals.

Commercial networks for MDU/MTU, offices, apartments, hotels, warehouses, etc., can easily be deployed using the SCR200c-ETH. The embedded SNMP agent allows remote management of all the Ethernet over Coax bridges in the network. The agent is compatible with SPiDCOM's remote management software called SPiDMonitor.

Low-cost Solution

Based on SPiDCOM SPC200c chip, the Reference Design has an optimized BOM (bill of materials) with a limited number of components and a simple to manufacture 4-layer PCB.
The SPC200c chip power consumption is very low and no heatsink is needed.

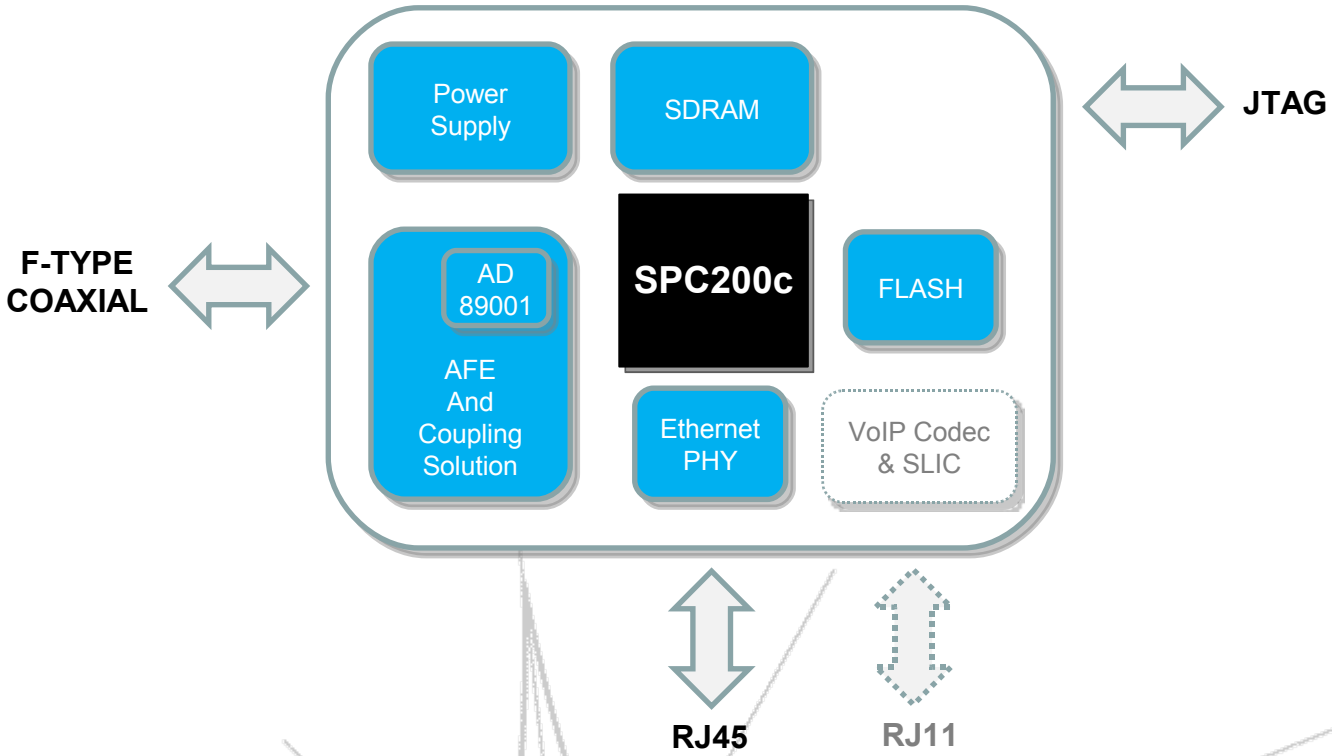
Fast Time-to-Market

The Reference Design provides all the hardware, software and manufacturing documentation required to begin immediate production of an Ethernet over Coax bridge. The package includes a CD with schematics, BOM, Gerber, PCB layout files as well as a monitoring utility: SPiDMonitor. This remote control application runs on Windows, MAC, Unix, and Linux operating systems; it provides an user friendly way to configure devices based on SPiDCOM Technologies' solution.
The design of the SCR200c-ETH has been thoroughly validated for compliance to EMC and other global product regulations allowing manufacturers to minimize their time-to-market.

Standards Based

SPiDCOM supports real multicast through IGMP snooping: video stream is sent once to all the users, optimizing the bandwidth .
Coax-to-Ethernet and Ethernet-to-Coax bridging is implemented using IEEE standard transparent bridging and spanning tree algorithms (802.1D). This allows large, complex and redundantly linked LANs to be built using coaxial cable networks.
The equally standards based Quality of Service (802.1p) implementation provides bandwidth management for multimedia applications including voice, data, audio and video.
Privacy and minimizing broadcast domains is ensured by using VLAN (802.1Q).

SCR200c-ETH Block Diagram



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 broadband communication market.

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

Headquarters
137 Avenue General Leclerc
92 340 Bourg La Reine - FRANCE
Phone: +33 1 41 87 91 90
Fax: +33 1 41 87 91 91
Email: info@spidcom.com

SPiDCOM Beijing
RM.709
VanPalace, Chaoyang District
Beijing 100020 - CHINA
Phone: +86-10-6561 0909
Fax: +86-10-6561 0505
Email: info@spidcom.com

SPiDCOM Eastern Europe
Omladinskih Brigada 88
B1500
11070 Belgrade – SERBIA

www.spidcom.com