CAMBridge

Autonomous DVB-CI descrambling module for professional IRDs

The CAMBridge is a self-contained hardware module which adds Pay-TV descrambling to existing IRDs.

Self contained design
The CAMBridge provides an interface for two CAMs, each working on one MPEG transport stream. The ASIC is in charge of communicating with the CAMs and routing the MPEG streams, while the micro-controller runs a full CI stack. The CAMBridge is able to parse SI/PSI tables, gathering information directly from the transport streams to drive the CAMs. By means of a simple serial port protocol, the IRD instructs the CAMBridge which programs to descramble and everything else is handled automatically.

Professional features
The CAMBridge is designed to provide a stable and reliable descrambling solution for professional IRDs. Unlike solutions based on consumer-grade technology, it has been designed from the ground up to support multi-service descrambling and ensure long term stability. Our stack only uses static allocation to avoid memory leaks.

CAM behavior is monitored at three different levels:
- Command Interface responsiveness
- MPEG TS scrambling bits
- MPEG TS effective content

If any failure is detected, the faulty CAM is rebooted. If rebooting does not fix the problem an alarm is raised. The CAMBridge can detect special situations, such as a CAM upgrade, to avoid deadlocks. A «black-box/flight recorder» feature based on the CAMInspector technology records problematic CAM behavior in the field for off-line analysis.

The CAMBridge technology is available as:
- A ready-made hardware module for ease of integration
- A chip set for better mechanical integration, a more compact design, and cost effectiveness
- Licensed IP for integration in FPGAs and ASICs.

Features

Physical format
95x70mm PCB (just slightly bigger than PCCard connector)
24 pin 2.54mm header for TS and control

Electrical interface
2 x serial MPEG TS In 3.3V
2 x serial MPEG TS Out 3.3V
Serial TTL control 3.3V
Optional RS485 control (multi-drop capable for controlling several unit)
SD Card socket (flight recorder)
Ethernet interface (optional)

Control Protocol
Text based command protocol
Provided with ANSI C source code

DVB-CI Stack
Based on CAMaLot stack
Supports high level MMI interface
Supports load balancing for descrambling
Supports multiple services descrambling

CAM Monitoring
Monitor CAM responsiveness on Command Interface
Monitor status of MPEG TS bits in packets
Monitor content validity of MPEG Packet
Smart CAM reboot to allows CAM upgrade operation

To purchase a CAMBridge, or to find out more, contact us:
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