

SURFExpress/PCle

The SURFExpress/PCle™ is a RoHS-compliant single-lane, half-length, full height PCI Express form-factor DSP farm with multimedia processing capabilities. Providing two Gigabit Ethernet ports and a CT bus for additional TDM interfaces, the SURFExpress/PCle is designed to meet the requirements of VoIP enterprise-scale media servers, media gateways, 3G-324M video servers, MMSC content adaptation engines, and CTI applications. Optimized for mobile applications, the SURFExpress/PCle also provides convergence of audio, video and data across wireless and wireline networks.



Unique Flexible Design

The SURFExpress/PCle utilizes a highly innovative patent-pending design featuring the SURFDocker™ modular plug-in, which carries up to four pairs of mixed types of DSPs and supports a variety of configurations to meet the application developer's requirements. This paradigm allows varying types of DSPs to be assembled simultaneously on a single PCI Express carrier, including TI's C64x generation or any new C64 family member that is released to market. Up to four SURFDocker modules can be plugged into a single SURFExpress/PCle, for a total of eight DSPs per PCI Express board. This flexible and scalable hardware design results in a cost-effective solution providing reduced time-to-market.

Complete media processing package

The SURFExpress/PCle has been designed to support application development from prototype through production: the same board can be used for all stages of the development cycle.

- PCI Express (PCle) form-factor DSP farm with 2x Gigabit Ethernet ports and CT bus
- Complete media processing package for audio, video, modem and fax
- Flexible and scalable modular design supporting up to 8 TI C64x DSPs on board
- Enterprise-grade, field-proven and cost-effective solution saves resources and reduces R&D efforts
- Dedicated customer service, ensuring fastest time-to-market
- Built-in diagnostics provides easier troubleshooting and better application control
- Can be provided as a hardware-only solution for DSP-intensive applications

TARGET APPLICATIONS

SURFAce-112/PCI is ideal for the following communication platforms and multimedia applications:

- Media Server (MRF)
- Media Gateway
- Session Border Controller (SBC)
- 3G to IP Video Gateway
- IVR/IVVR
- iPBX
- IWF
- Voice/Video Conferencing
- Mobile Value Added Services (VAS)
 - Mobile TV
 - Mobile VOD
 - Video calling
 - Ringback tones

THE SURF SOLUTION ➤

The SURF solution supports multimedia applications based on an open, standards-based architecture. SURF's media processing software – SURFWare™ - provides the most comprehensive set of media processing capabilities available in the market. SURFWare™ also enables, through its open framework, capabilities proprietary applications to be embedded directly into the DSP framework. Multiple drivers and a variety of interfaces facilitate integration while built-in diagnostics provide easier troubleshooting and better application control.

SPECIFICATIONS >

FORM FACTOR	Single Lane PCI Express Up to 8 DSPs using 1-4 SURFDocker plug-in modules with 2 DSPs on each module (flexible support for 2, 4, 6 or 8 DSPs)
INTERFACES	Configurable interfaces to each DSP based on DSP type including Gbit Ethernet and PCI Express: <ul style="list-style-type: none"> • 2 x 1000Base-T Ethernet interface (RJ-45) • H.100 connector • E1/T1 interface supported using additional card All data and controls are passed to the DSPs via SURF proprietary high-speed interface
SIZE	PCIe 3/4 length, full height (full length with fan)
POWER	Up to 45W per fully populated board (up to 30W for fully-populated C6412)
JTAG	<ul style="list-style-type: none"> • DSP JTAG connector for DSP emulation • FPGA JTAG connector for FPGA booting and programming • Boundary-Scan JTAG
REGULATORY COMPLIANCE	EMC US: FCC part 15 class A with shielded telecom cables and STP Ethernet cables Canada: IEC5-003 with shielded telecom cables and STP Ethernet cables EU: EN55024:1998 A1: 2001/A2:2003; EM55022:1998 A1:2000/A2:2003, Class B with shielded telecom cables and STP Ethernet cables Safety US: UL Std No. 60950-1 Canada: CAN/CSA-22.2 number 60950-1-03 EN: 60950-1: 2001
OPERATING REQUIREMENTS	Operating Conditions Temperature: -0°C - 40°C (32°F - 104°F) Humidity: 20% to 80% (non-condensing) Storage -25°C - 85°C (-13°F - 185°F)
SOFTWARE SPECIFICATIONS - See SURFWARE Brochure	

ABOUT SURF COMMUNICATION SOLUTIONS >

SURF Communication Solutions (SURF) is an industry leader in high-capacity processing solutions for real-time multimedia communication systems and applications. Since 1996, SURF's products have delivered the integral technology behind many of the leading vendor's multimedia servers and gateways deployed to operators and service providers worldwide. SURF-powered multimedia applications are delivering value added services to millions of end-users every day. Today, SURF is ideally positioned to stimulate change in the way we communicate. The video-ready SURF solution supports multimedia processing including full video, voice and data IP to IP communications, as well as modem and fax over IP. It is a fully converged multimedia processing subsystem that integrates easily into media gateways and servers. Since there is no such thing as "one size fits all," the SURF offering is available as a solution platform or in various form factors or DSP chips affording unmatched density and optimal performance.