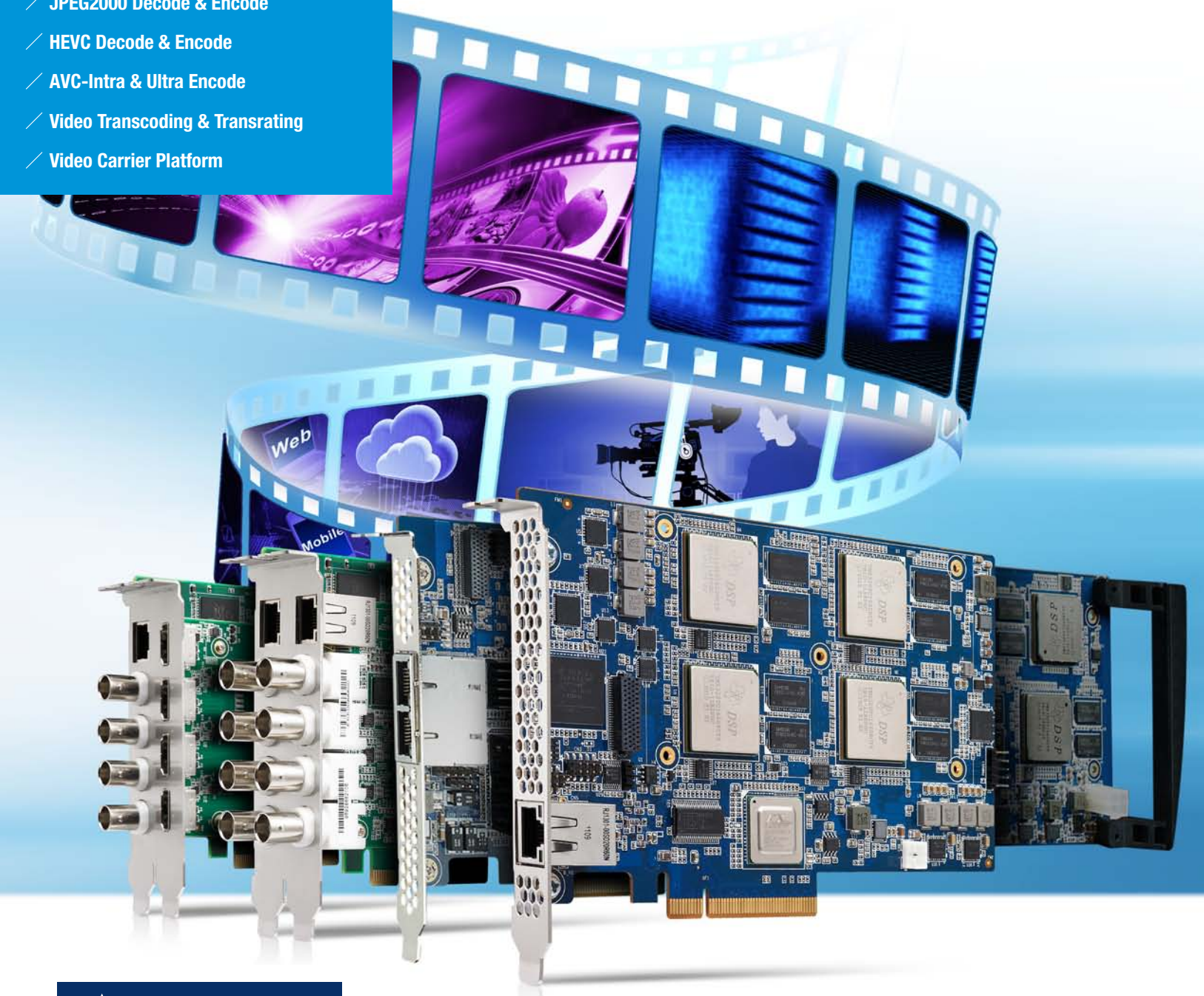
Accelerating Video Platform Evolution

Powered by Multi-Core Digital Signal Processors

- Multiple SDI/HDMI Video Acquisition & Encoding
- Video Wall & Multiviewer
- JPEG2000 Decode & Encode
- HEVC Decode & Encode
- AVC-Intra & Ultra Encode
- Video Transcoding & Transrating
- Video Carrier Platform



ADVANTECH

Enabling an Intelligent Planet

www.advantech.com

Accelerating Video Platform Evolution

About Advantech Video Processing Platforms

DSP-based Video Acquisition & Encoder Cards • Multimedia Processing Cards • Integrated Systems

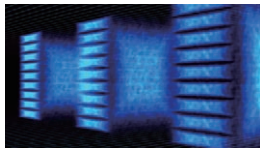
The proliferation of video in new applications and the emergence of advanced codecs with better efficiency, higher resolutions and flexible bitrates demand unprecedented video processing capabilities on the infrastructure side, yet also offer massive opportunities for the introduction of cutting-edge technologies that deliver higher channel density with greener power usage at lower cost.

Advantech, the worldwide market leader of industrial-grade computing solutions, has invested heavily in dedicated resources to develop the essential building blocks that enable the deployment of innovative and integrative video system infrastructure, including video acquisition, video encoding, video processing and video distribution. The fundamental technologies based on digital signal and media processors, x86 processors, networking processors and field-programmable gate-array devices, plus system-level integration, make Advantech products ideal for well-established codec processing (such as MPEG-2, H.264/MPEG-4 AVC, etc.) and new video standards including JPEG2000 codec, 4K/2K resolution, HEVC (High Efficiency Video Coding), and AVC-Intra/Ultra, amongst others. Video applications like transcoding, transrating, broadcasting, content creation, cinema projection, video conferencing and other usage models that require raw processing power for high-performance video and seamless system integration will benefit from Advantech's broad video offerings.

Video Acquisition

Video Encoding

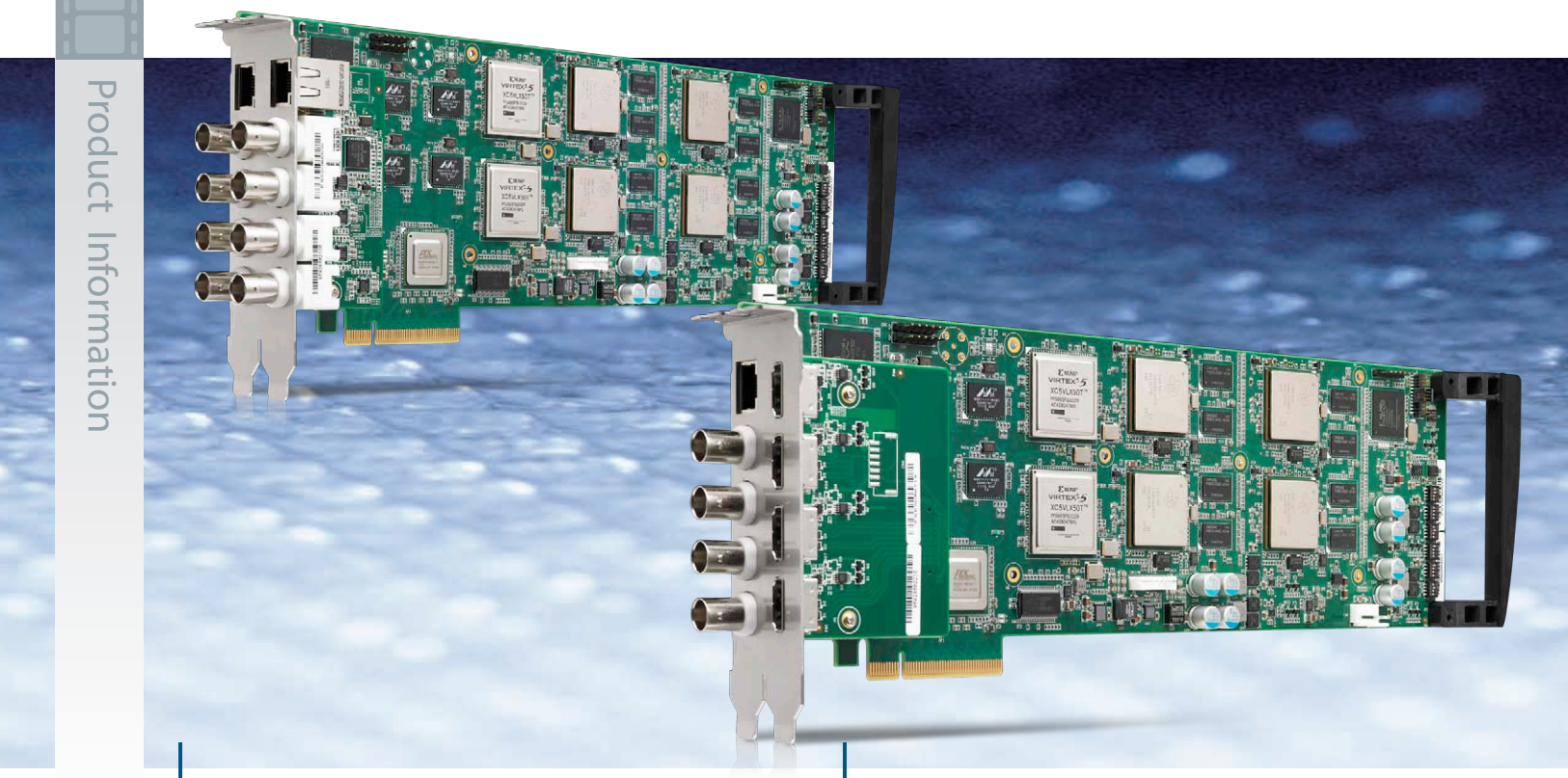
Video Processing



Video Distribution

Product Information

Video Acquisition & Encoder Cards



DSPC-8662

8-ch 3G-SDI PCIe Video Acquisition Card with SDK

DSPC-8662H

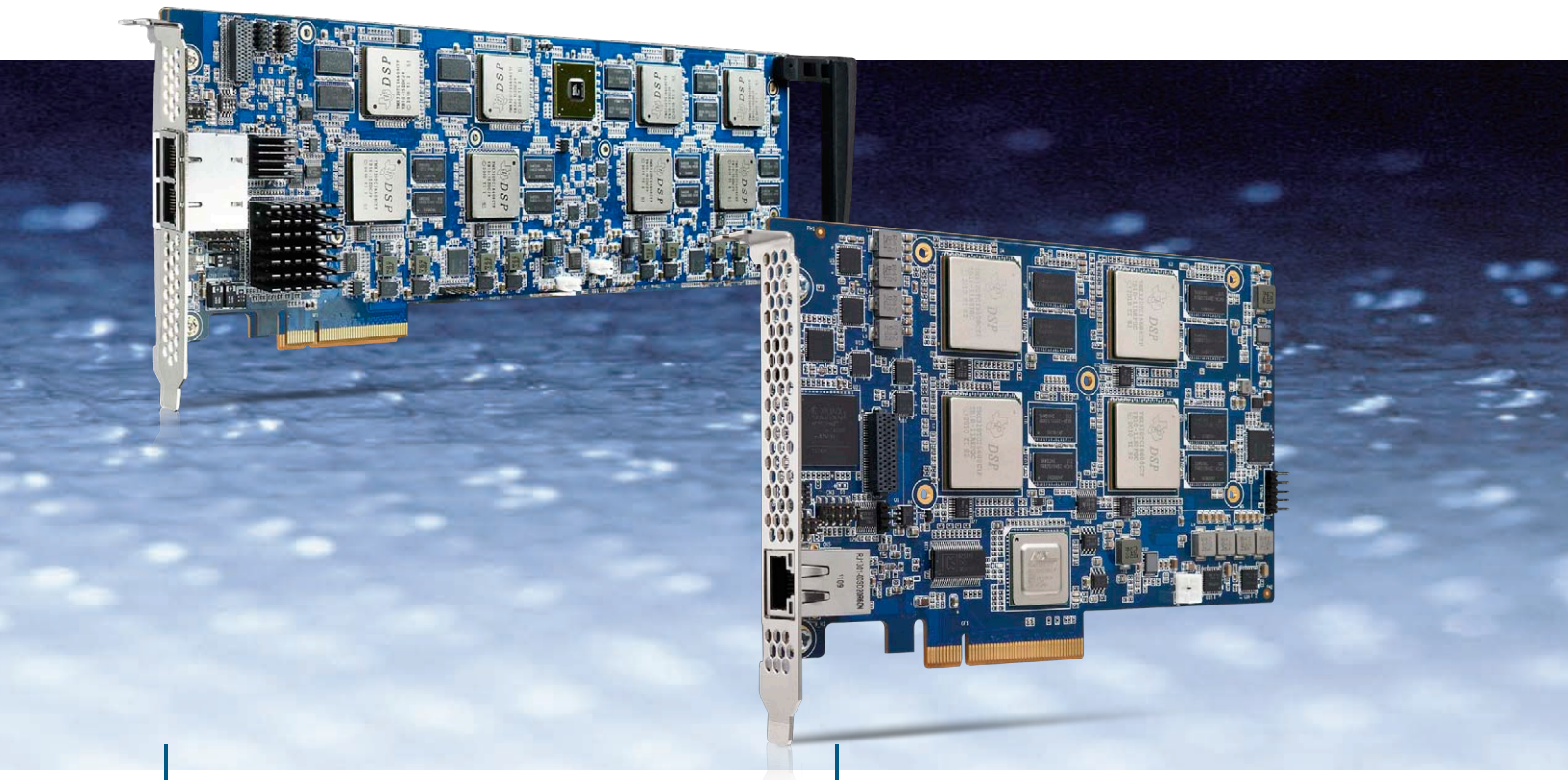
4-ch HDMI PCIe Video Decoder Card with 4-ch 3G-SDI Inputs and SDK

The DSPC-8662 adopts multiple sophisticated digital media processors, based on the TMS320DM8168 from Texas Instruments with supporting FPGA devices to perform video acquisition from 8-channel SDI-SD/HD/3G and ASI inputs. With the option of supporting 4-channel HDMI video outputs, the DSPC-8662 is highly versatile and able to address various video functions including acquisition, encoding, decoding, transcoding, video wall, multi-viewer and surveillance. The video coprocessors, digital signal processor (DSP) and ARM-based RISC processors built into the TMS320DM8168 orchestrate to deliver multiple 1080p60 Full High-Definition (FHD) video streams with 4:2:0 pixel samples. The DSPC-8662's compliance to standard PCI Express (PCIe) in a full-length form factor and the inclusion of Gigabit Ethernet support provide full interoperability with existing video carrier platforms employing PCIe expansion slots. Bundled with Linux and Windows® based sample software code, the DSPC-8662 facilitates the development, integration and deployment of highly-efficient, high-density video solutions.

8-ch Full-HD Video Acquisition and H.264 Encoding

48-ch D1 H.264 Decoding with quad HDMI outputs

Multimedia Processing Cards



DSPC-8682

Full-length PCI Express Card with 8 TMS320C6678 DSPs

DSPC-8681

Half-length PCI Express Card with 4 TMS320C6678 DSPs

The DSPC-8681 and DSPC-8682 are built upon 4 and 8 multi-core TMS320C6678 DSP devices from Texas Instruments respectively, with high-speed inter-DSP communications and high-bandwidth interconnection to the host. The half-length DSPC-8681 and full-length DSPC-8682 are able to perform at 1,024 and 2,048 GMAC (Giga Multiply-Accumulation operations per second) respectively, using the embedded C66x DSP cores inside the TMS320C6678 devices. This unrivaled raw computing power makes the DSPC-8681 and DSPC-8682 a perfect fit for advanced and complex video processing such as JPEG2000 for 2K/4K processing, AVC-Intra 50/100 and AVC-Ultra, deep-color pixel manipulation, HEVC/H.265 and motion-compensated temporal filtering whose visual effects rely heavily on the underlying hardware performance to fulfill new features never seen before.

JPEG2000 Transcoding

AVC Intra 100 Encoding

System Integration

DSP Carrier Platform

In addition to the video acquisition, encoding and processing add-on cards, Advantech also offers high-level system integration by leveraging its standard product offerings ranging from a wide selection of chassis, backplanes, single-board computers (SBCs), appliances and servers. Combined with Advantech's video cards, these integrated video platforms can be tailored and configured to meet a range of system requirements in terms of video channel density, power budget, physical dimensions and cost. Such near-turn-key solutions significantly reduce the time-to-market efforts for customers and also provide unparalleled video platforms to the market in a timely manner. The strong eco-system collaboration between Advantech and its software partners ensures that solutions for new and innovative video standards will also be addressed. Please contact your regional Advantech team for further information.

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Saude-São Paulo	55-11-5592-5355

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