



CG Media Boards

6060 PCI, 6565 PCI,
6565C CompactPCI,
6565E PCI Express
Board

[Datasheet](#)



The Sangoma CG Series Media Boards can be used to create powerful communications solutions for public telephone network, IP-only, and converged IP/circuit-switched environments by using these boards with NaturalAccess™ and globally deploying a broad range of telephony applications on a single platform.

The CG Series Media Boards provide full-duplex universal port capabilities, which can support a combination of tone detection/generation, echo cancellation, and voice compression, as well as trunking, fax, conferencing, and VoIP functions in a CompactPCI, or PCI Express slot. The universal port feature eliminates the need to use multiple specialized boards, provides single PCI, voice play/record, supported features, and significantly reduces the time spent on configuration and development. Because they support up to 16 PSTN trunks and are equipped with high-density Digital Signal Processors (DSPs), high-speed Power co-processors, and built-in IP capabilities, the CG Series Media Boards are an excellent option for a variety of applications call centers and announcement servers, to powerful, high-density service provider ring-back tone platforms and media servers.



Software-selectable T1 or E1 Digital Trunks

- Reduces total cost of ownership by increasing flexibility, reducing inventory, and simplifying the purchasing process and test effort

Dual Ethernet Interfaces

- Can be used either as two independent subnets or in automatic failover mode that switches traffic to an alternate interface without interrupting in-progress calls
- Allows support for both IP and TDM networks on a single platform, plus redundant IP configurations for high reliability

NaturalAccess Software

- Uses a consistent set of APIs throughout the CG Series Media Board product line, which support popular operating systems

From 1,064 to 12,768 MIPS for Media Processing*

- Allows developers to choose the most cost-effective board with the correct amount of processing power, whether an application is voice-only, is low-compute-intensive, or requires substantial DSP power

Full speed H.100/H.110 Bus with 4,096 timeslots

- Supports interoperability with other boards in open-architecture, high-capacity systems

64 ms Echo Cancellation Tail

- Provides high-quality audio and clarity

** Model dependent*

Technical Specs

Digital Interfaces

CG6565

- 0, 8 T1/E1
- Gigabit Ethernet

CG6565C

- 16 T1/E1
- Gigabit Ethernet

CG6565E

- 0, 2, 4, 8 T1/E1
- Gigabit Ethernet

CG6565C

- 1, 2, 4 T1/E1
- 100 Mbps Ethernet

Boards/System

- Application and server-dependent

Control Processor

CG6565, CG6565C, CG6565E

- PPC 7448; 867 MHz clock

CG6565, CG6565C, CG6565E

- PPC 405eP; 333 MHz clock

Control Processor Memory

CG6565, CG6565C/E CG6060

- 256 MB
- 128 MB

I/O Mapped Memory

CG6565, CG6565C, CG6060

- Memory mapped interface for efficient block data transfers

CG6565E

- N/A

Host Interface

Bus Compatibility

- CG6565 - PCI Local Bus: R2.3 or PCI-X R1.0b
- CG6565C - PCI Local Bus: R2.3 or PCI-X R1.0b, CompactPCI: PICMG 2.0, Rev. 3.0
- CG6565E - PCI Express Base R1.1, PCI Express CEM R2.0
- CG6060 - PCI Local Bus R2.2

Bus Mode

- PCI target and master mode operation

Bus Speed

- CG6565/CG6565C - 100/133 MHz PCI-X bus or 33/66 MHz PCI bus
- CG6565E - 2.5 Gbps per lane; 4 lanes
- CG6060 - DC to 66 MHz

Telephony Bus

- CG6565/CG6565E/CG6060 - ECTF H.100
- CG6565C - PICMG 2.5 / ECTF H.110

Hot Swap

- CG6565/CG6565E/CG6060 - EN/A
- CG6565C - PICMG 2.1, Rev. 2.0

OS Support Platform

- Windows, Linux, and Solaris.

Form Factor

- CG6565/CG6565E/CG6060 - PCI universal expansion board; Compatible with both 5.0 V and 3.3 V signaling environments
- CG6565C - PCI Express standard-height, full-length form factor

Board Dimensions

- CG6565 - 12.283 in. (31.2 cm) long, 4.2 in. (10.67 cm) high
- CG6565C - 9.187 in. (23.34 cm) long, 6.145 in. (15.61 cm) high
- CG6565E/CG6060 - 12.283 in. (31.2 cm) long 4.2 in. (10.67 cm) high

DSP

- TI TMS320C5441 quad core DSPs each running at 532 MIPS

Universal Port Capability

- IVR
- Vocoding: G.711, G.723.1, G.729a/b, G.726, AMR-NB, EVRC, iLBC
- Conferencing
- Echo Cancellation
- T.38; T/37
- Voice over IP

H.100/H.110 Bus

- Flexible connectivity between DS0 streams and H.100 bus
- Switchable access to any of 4,096 timeslots
- H.100 bus termination (switch enabled)
- 2,048 full-duplex connections to bus
- T- H.100 bus clock master or slave (software selectable)

IP Network Connectivity

Interfaces

- CG6565/CG6565E/CG6060 - Dual 10/100/1000 Base-T Ethernet RJ-45 connectors on connection panel
- CG6565C - Dual 10/100/1000 Base-T Ethernet RJ-45 connectors on RTM or PICMG 2.16 on backplane

Protocols

- RTP/RTCP, UDP, IP (v4 and v6), IPSec

PTSN Echo Cancellation

- Sangoma e256 ASIC, no DSP load
- Up to 64 ms per channel
- Selectable on a per channel basis
- > 18 dB of acoustic echo elimination
- Bi-directional automatic gain control
- Accelerated adaptive convergence
- Numerous tone disabling options
- > 34 dB echo return loss enhancement
- Intelligent double-talk detector
- Meets or exceeds G.164, G.165, G.168 (2000)

PSTN Network Connectivity

Digital Trunk Interface Connectors

- CG6565 - 8 trunks: MD0 miniRJ-21 connector
- CG6565C - 16 trunks: Two RJ-21 connectors on included CompactPCI rear transition module
- CG6565E - 2 trunks: Two RJ-48C connectors; 4 trunks: Two MD0 RJ-45 connectors, each with two trunks; 8 trunks: MD0 miniRJ-21 connector
- CG6060 - 1 trunk: One RJ-48C connector; 2 trunks: Two RJ-48C connectors; 4 trunks: Two MD0 RJ-45 connectors (each with two trunks)

Impedance

- CG6565/CG6565C - Software-selectable; 100, 120 ohm
- CG6565E/CG6060 - Software-selectable; 75, 100, 120 ohm

Telephony Interface DSX-1 T1

Interface

- ANSI T1.102, T1.403

Framing

- D4, ESF

Insertion/generation/extraction/detection

- ABCD bits

Line code

- AMI, B8ZS

Zero bit suppression

- Selectable B8ZS, no zero code suppression, zero code suppression

Alarm signal capabilities

- Yellow, Red, and Blue

Counts

- Bipolar violation, F(t) error, and CRC error

Robbed bit

- Selectable on a per-trunk basis

Loopback

- Per-channel and overall under software control. Automatic remote loopback with CSU option.

Telephony Interface CEPT-E1 G/703

Interface

- G.703 2048 kbps trunk interface

Framing

- CEPT G.703/G.704 Channel Associated Signaling

Telephony Interface CEPT-E1 G/703

CG6565

- 2.7 A max @ 3.3 V
- 2.9 A max @ 5.0 V
- 0.1 A max @ 12.0 V6

CG6565C

- .0 A max @ 3.3 V
- 4.5 A max @ 5.0 V
- 0.1 A max @ 12.0 V

CG6565E

- 3.3 A max @ 3.3 V
- 1.3 A max @ 12.0 V
- 25 W max

CG6565C

- 1.5 A @ 3.3 V
- 1.2 A @ 5 V