

## Open Services Platform Simultaneously Supporting Advanced Media and Signaling Processing



*The Cantata Technology™ Excel MSP (Multi-Services Platform) 1010 is a new addition to the CSP family of products, offering a small-footprint, modern, modular design with scalability and a lower entry cost, supported by the familiar Excel API.*

*The MSP 1010 is a highly flexible, media resource platform, supporting TDM and IP interfaces as well as fixed and mobile, signaling and bearer traffic.*

*A high-density solution with an unmatched price-performance ratio, the MSP 1010 has a single-shelf (1u) form factor and comprehensive GUI for easy installation and maintenance. The MSP 1010 serves as a single development environment for Media Processing and Signaling traffic. This versatility lets users quickly and cost-effectively develop revenue-generating services for both legacy and next-generation networks. Users can develop many types of applications, including pre-paid voice and data services; voice applications such as IVR, voicemail, conferencing; PBX; a wide range of services based on SS7 monitoring, including welcome roamer and missed call alert; as well as signaling services such as SMS-C, SMS Router, IN applications and signaling converters.*

*The MSP 1010 is designed to enable developers to bring new services to market quickly and cost-effectively.*

### Features and Benefits

#### Integrated Digital Signal Processing (DSP)

The MSP 1010 provides high-performance media processing and advanced DSP functionality. The MSP 1010 integrates not only signaling and bearer traffic, but also powerful media capabilities like real-time file recording, playback, conferencing, DTMF receiver, echo cancellation and more. With all these capabilities, application developers can use the MSP 1010 as an intelligent peripheral, comprehensive media server solution, or Interactive Voice Response (IVR) unit and conferencing center.

#### Integrated VoIP Module

The VoIP module along with host based SIP and H.323 signaling protocols, allows users to develop applications over IP networks or converged IP and TDM networks. It transcodes data from PCM to packet technology and/or between different IP codecs, compresses it, provides silence suppression, echo cancellation, and jitter buffering to improve quality. Developers can deliver an application server, signaling engine, gateway, and media server, all in a single system. This unified architecture translates into significant cost savings, reduced development time, and simplified operation for developers and service providers.

#### SS7 Monitoring

With the MSP 1010, service providers can implement a complete new service quickly and easily, using the non-intrusive SS7 monitoring feature, which requires no changes to the SS7 network. The MSP 1010 monitors SS7 traffic, interprets it and takes the appropriate action over a live SS7 link.

#### Scalability

The MSP 1010 allows developers to grow from a low entry level. Developers buy only what they need today, scaling up their capacity seamlessly as demand grows. One MSP 1010 can control up to 32 other MSP 1010s, so even as the services grow, developers won't need to change network architecture.

#### Programmable Protocol Language (PPL)

PPL is a patented software environment that provides truly open programmability — the ability to customize the switch system software on your own. PPL allows these enhancements to be made quickly and easily in the lab or even in the field, using a simple-to-use GUI. The PPL Tool automatically converts a graphical state machine flow chart into a state table configuration, which can then be downloaded and activated in the switch. Developers can even customize SS7 support to cater for local variants prior to deployment, dramatically accelerating time-to-market.

#### Improved Network Performance

Service providers can deploy the MSP 1010 in both distributed and centralized architectures, whichever best meets the needs of service providers. A service provider can use the MSP 1010 to run multiple services simultaneously on a single platform; it provides a cost-effective, scalable, centralized solution.

#### Reduced Costs

Because the MSP 1010 works in different architectures, service providers can roll out new services quickly and cost-effectively. Whether a developer uses the MSP 1010 as an intelligent peripheral, a comprehensive media server solution, Interactive Voice Response (IVR) unit, service control point (SCP) signaling server functions, or as an SMS platform, they can develop the most cost-effective solution for service providers, in terms of both capital and operational expenditures.

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# Excel Multi-Services Platform 1010

## Features and Benefits (cont.)

### Investment Protection

With the MSP 1010, service providers can expand and migrate their platform to meet ever-changing needs. Service providers no longer have to choose between expensive, centralized servers and small, distributed servers, or between products that support SS7 and those that support IP. The MSP is designed to support additional protocols in TDM and IP domains and new developments derived from new trends in the market.

### Specifications

#### PROTOCOL COMPLIANCE

##### SS7 (ITU & ANSI)

- MTP (including China and Japan)
- SCCP (Class 0, 1, 2)
- TCAP
- MAP, ANSI-41
- CAMEL, WIN
- INAP, AIN
- ISUP (& different local national variants)

##### PRI

- NI2 - User and Network side
- DMS 250 - User side
- DMS 100 - User side
- Lucent 5ESS - User side
- Lucent 4ESS - User side
- Euro-ISDN - User and Network side
- JATE ISDN - User side

##### IP Signaling

- SIP - RFC3261
- Sigtran M3UA (AS)
- Host based third party vendor H.323 is enabled

#### DSP SPECIFICATIONS

- Three hours on board voice recording (temporary and permanent)
- Network File System Storage (NFS) — Unlimited Network-Attached Storage for voice files
- 128 conferences per DSP, 128 conferees per conference, and maximum of 256 conferees per DSP
- Tone detection: 512 receivers per DSP chip
- Tone generation: 512 per DSP chip
- 672 concurrent announcements/play files
- 96 fax sessions (eight DSP chips)
- Echo Cancellation (G.168) with tail lengths up to 128 ms
- Positive Voice Detection
- Answering Machine Detection

#### VOIP MODULE SPECIFICATIONS

- Selectable codecs: G.711, G.723.1, G.726, G.729, iLBC, AMR, EVRC
- Fax T.38
- DTMF relay
- Adaptive jitter buffer
- Echo Cancellation
- Silence Suppression
- Comfort Noise Generation
- Up to 1344 ports with only G.711 & 672 with any codec

#### PHYSICAL INTERFACES

- 32 T1, 24 E1/J1 (all can be used for loop timing)
- Four 10/100 Mb/s Ethernet
- Two 10/100/1000 Mb/s Ethernet
- 1+1 Redundancy Connection
- One USB port
- One DS3 connector

#### SYSTEM PERFORMANCE

- 32K simultaneous TCAP dialogues per SS7 stack
- Four SS7 stacks
- 2500 TCAP Transactions Per Second (w/out SK)

#### CAPACITY

- 96-768 TDM channels per 1u shelf
- ISUP remote control — controls the ISUP signaling of up to 32 MSP 1010s
- 64 SS7 links (128 in a redundant configuration)
- SS7 monitoring
  - 64 SS7 monitoring bi-directional links (128 uni-directional links)
  - 16 configurable filters
  - 5 different application servers
  - Advanced filtering capabilities
  - Up to 100% link-occupancy for SS7 monitored traffic (non-circuit-related signaling)
- 1344 IP ports of G.711 codec
- 672 IP ports of any codec

#### POWER REQUIREMENTS

- -48V DC with voltage range (-40V to -60V)
- 100-240V AC 50/60 Hz with voltage range (90V to 260V)
- Power consumption: 105W (including the DSP module and two VoIP modules)

#### PHYSICAL SPECIFICATIONS

- Height: 1.72" (43.7mm)
- Width: 17.25" (438.2mm)
- Depth: 19.00" (482.6mm)
- Weight: 18 lbs (8.1kg)

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