2008 Access Products
Hardware and Software overview
2008 Access Core Products

- **Software**
  - NexusWare
    - NexusWare Core
    - NexusWare C7
    - NexusWare WAN
  - Channel7
  - ChanneLink
  - ComLink

- **PCI / PCI Express**
  - PCI384, T1/E1/J1 PCI
  - PCE385, T1/E1/J1 PCI Express
  - PCI334A, RS232, RS422 (449 / 530), v.35
  - PCE335, RS232, RS422 (449 / 530), PCI Express

- **Communication Servers**
  - MPS1000
  - Managed WAN Gateway

- **CompactPCI**
  - CPC396, T3
  - CPC324, TDM
  - CPC308, TDM
  - CPC300, Carrier
  - CPC358, Serial

- **Voice Processing**
  - PMC531
  - PMC532
2008 New Additions to Access Products

- **Software**
  - NexusWare
    - NexusWare Core
      - NexusWare Portal
    - NexusWare SIP
    - NexusWare WAN
      - WAN Protocol Services

- **Media Blade**
  - MB6224
  - MB6108

- **Media Platform**
  - MP1536

- **TDM/IP Interconnect Platform**
  - TIP1024

- **AMC**
  - AMC335
Wan Protocol Services Overview

WAN Protocol Services (WPS)

- Software enhancements to the existing WAN Protocol software suite.
- Provide more flexibility and configuration of the protocol packages.
- Initially supported on PT-MWG48P hardware platform.
- Tadil-B and Radar will be supported first.
- Additional protocols (HDLC, X.25...) added as required.
- WPS is being designed with portability to our future platforms.
- WPS will be an enhancement to existing protocol packages.
Wan Protocol Services Highlights

- WPS allows the user to access the Managed WAN Gateways 48 serial ports through one IP address.

- More than one client connection (remote & local) can have access to the data payload on an individual serial port.

- Protocol links (ports) are opened, configured and maintained by the WPS. Clients applications open and register to the WPS for specific port data payload.

- Specific port configuration can be performed dynamically on the fly and will not affect the other ports in the system. No reboot of cards or system required.

- System and individual port configuration can be performed remotely via both the MPS API and SNMP.

- System and individual port statistics and health can be obtained via both the MPS API and SNMP.
MB6224 / MB6108

- MB6224
  - 24 TDM Trunks
  - Supports 768 G.711 Ports
  - Integrated CPC324+PMC532

- MB6108
  - 8 TDM Trunks
  - Supports 256 G.711 Ports
  - Integrated CPC308+PMC531

- These blade based sub-systems along with our software provide the foundation for our customers to build blade based media solutions
Media Platform Consisting of:
- 4U Based Platform
  - AMP5091 (Three 250 watt AC)
  - One ISM
  - One 4416F
- Media Processing Capabilities
  - Up to 1536 G.711 Ports
  - Integrated CPC324+PMC532 (2)
- SBC
  - CPC5505
- Expansion Capabilities
  - 4 Slots remain open for expansion
    - Extra Media Processing Blades
    - Storage
    - Etc…

This media platform along with our software provides the foundation for our customers to build a media gateway
TIP1024

- TDM/IP Interconnect Platform
  - 1U Based Platform
  - TDM/IP Interconnect Capability
    - CPC324
      - Allows customers interconnect 24 TDM trunks to IP
  - Expansion Capabilities
    - 1 Slot remains for either SBC or another CPC324/CPC308

- This TDM/IP Interconnect platform along with our software provides the appliance for our customers to build a TDM to IP utility box for bridging the TDM and IP networks
AMC335

- AMC.0 form factor AMC.1 Type 1 (PCI Express)
  - Mid size board
  - Support for AMC.2 types E1 and E2 (Gigabit Ethernet)
- Four High Speed Channels
  - 2 Mbps bi-directional
- RS-422 (RS-449 and EIA-530), RS-232 and V.35 Line Interfaces
- Motorola MPC8270 PowerQUICC® Processor @ 266 MHz – runs the protocols on board
- Software Support
  - NexusWare Core Development Environment (embedded Linux OS)
  - Nexuware WAN Turn-Key: HDLC, Radar, X.25, Frame Relay, Async, Tadil-B
- Beta’s Available in Q3/2008
- Pricing: At this point it is looking like pricing for the RS232 and RS422 model will be priced the same as the PCE335
Strong Software Offering

- **NexusWare**
  - NexusWare Core
    - Full Linux distribution
  - NexusWare C7
    - Installable MTP2 option for Core
  - NexusWare WAN Protocols
    - NexusWare WAN Turn-Key
      - Standalone protocols
    - NexusWare WAN Installable
      - Installable protocols for NexusWare Core

- **WAN Protocols**
  - xSTRA
    - Standalone protocols

- **Channel7**
  - Standalone MTP2 option for PCI384 and PCE385

- **ChanneLink**
  - API and driver that allows customers to use Sunsoft protocols

- **ComLink**
  - API and driver that allows customers to use Sunsoft protocols
ComLink vs ChanneLink
ComLink vs ChanneLink

**ComLink –**
- Provides API and driver for use in Solaris environment
- Allows customers to utilize Sunsoft protocols (X.25, Frame Relay …)
- First time users must purchase media kit, which includes driver and RTU
- Subsequent purchases only require RTU
- **Supported on PCI334A and PCE335**

**ChanneLink –**
- Provides API and driver for use in Solaris or Linux environment
- Allows customers to utilize Sunsoft protocols (X.25, Frame Relay …)
- First time users must purchase media kit, which includes driver and RTU
- Subsequent purchases only require RTU
- **Supported on PCI384**
Channel7 vs NexusWare C7
Channel7 vs NexusWare C7

- **Channel7**
  - Provides SS7 MTP2 firmware that runs on board and API for use in Solaris or Linux environment
  - SS7 MTP2 provides error detection and sequence checking, and retransmits unacknowledged messages
  - Allows customers to connect to upper level SS7 stacks such as Hughes
  - Sold by link count (4, 8, 16…) also available as unchannelized (Annex A)
  - **Customer purchases 1 copy per board which includes the RTU**
  - Supported on PCI384 and PCE385

- **NexusWare C7**
  - Provides SS7 MTP2 firmware that run under NexusWare Core
  - SS7 MTP2 provides error detection and sequence checking, and retransmits unacknowledged messages
  - Customer utilizing C7 will also be writing application in NexusWare Core
  - Allows customers to connect to upper level SS7 stacks such as Hughes
  - Sold in single configuration ($3,000 list) that allows customer to configure link count
  - **First time customers purchase development kit and RTU, subsequent purchases only require RTU and hardware (1 C7 and 1 NexusWare Core RTU per hardware)**
  - Supported under NexusWare Core on CPC324/CPC308/CPC300
WAN Protocols
WAN Protocols

◆ Three Main Categories for WAN Protocols
  ◆ WAN xSTRa Protocols
  ◆ NexusWare WAN Turn-Key
  ◆ NexusWare WAN Installable
WAN xSTRa Protocols

- **WAN xSTRa Protocols**
  - xSTRa is a legacy development environment used before NexusWare
  - **WAN xSTRa Protocols** are: Radar/SBSI, HDLC, X.25, Frame Relay, Tadil-B and Async
  - Supported on Linux, Solaris and Windows environments
  - xSTRa protocols are the only thing that is running on board
  - First time customers purchase development kit and that includes an RTU
  - Subsequent purchases are for RTU and hardware (1 RTU per hardware)
  - **Supported on PCI334A (last platform to be supported with xSTRa)**
NexusWare WAN Turn-Key vs Installable

- **NexusWare WAN Turn-Key**
  - NexusWare WAN Turn-Key Protocol are: Radar/SBSI, HDLC, X.25, Frame Relay, Tadil-B and Async
  - Supported on Linux, Solaris and Windows environments for embedded PCI driver or any OS that has standard TCP/IP support
  - Turn-Key protocols are the only thing that is running on board
  - First time customers purchase development kit and RTU for appropriate hardware they are working with
  - Subsequent purchases are for RTU and hardware (1 RTU per hardware)
  - Supported on PCI384, PCE385, PCE335, CPC358, CPC324/CPC308/CPC300, MPS1000, Managed Wan Gateway

- **NexusWare WAN Installable**
  - NexusWare WAN Installable Protocol are: HDLC, X.25 and Frame Relay
  - Customer utilizing NexusWare Wan Installable will also be writing application in NexusWare Core, customers applications will dictate what is done with data
  - First time customers purchase development kit and RTU for appropriate hardware they are working with
  - Subsequent purchases are for RTU and hardware (1 protocol and 1 NexusWare RTU per hardware)
  - Supported under NexusWare Core on CPC324/CPC308/CPC300
What’s New with NexusWare…

Added Support for X.86 and PPC Compute Modules
- Continues to broaden the HW supported

Built on 2.6.20 Kernel
- Upgrade from current 2.6.12 kernel

HPI Library
- Conforms to OpenHPI

CGL 4.0 Registered
- Newest requirements specified by Linux Foundation
NexusWare Provides the Customer with:

- **Integrated Software / Hardware Solution**
  - Simplifies integration and decreases time-to-market

- **Powerful, Simple-to-use APIs for All Board Functions**
  - Allows developers to concentrate on upper level application

- **Complete Linux Distribution and Embedded OS**
  - All the standard Linux tools plus enhancements
NexusWare Provides the Customer with...

NexusWare Studio Integrated Development Environment
- Based on Eclipse, widely being adopted as industry standard IDE

Installable Protocols; MTP2, SIP, Frame Relay, HDLC, …
- Provides flexibility and options to developers

NexusWare Image Builder
- Management tool for creating image
Hardware Supported by NexusWare

Compute Modules
- X86
- Power PC

TDM Modules
- T1/E1/J1
- T3

Storage
- 2.0 Terabyte storage expansion

Serial Modules
- RS232
- RS422

One Development Environment Spanning Across all Hardware Elements
New Pricing Changes

NexusWare

- **PT-NXSWARE-11359** = $2,500
  - Provides Complete OS and Development Env.
  - Allows one developer to use complete development env. and tools
- **PT-NXDSEAT-12240** = $995
  - Floating development seat for additional developers
- **PT-NXWX86-12235** = $500
  - RTU for x.86 based compute modules
- **PT-NXWPPC-12236** = $500
  - RTU for PowerPC based compute modules
Software Summary
## Difference in software kits

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<thead>
<tr>
<th>Software</th>
<th>CD Kit Includes SW RTU for HW</th>
<th>Must Purchase SW RTU with subsequent HW purchase</th>
<th>Must Also Purchase NexusWare Core RTU</th>
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1. Must now fill out lic. DB for NexusWare Core CD
2. Always get CD and RTU
# Software / Hardware Matrix

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<th>Channel7 MTP2 sold in many different link counts</th>
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Thank You