

EDITORIAL CONTACTS:

PRSP0100238

Glen Haley, Agere Systems
+1 908 508 8662
glenhaley@agere.com

Akiko Shikimori, NEC
+81 3 3798 6511
a-shikimori@ay.jp.nec.com

Mark Alden, Agilent
+1 408 654 8741
mark_alden@agilent.com

John Allen, OpNext
+1 732 544 3504
jallen@opnext.com

Gerald Gottheil, JDS Uniphase
+1 408 546 4400
gerald.gottheil@jdsu.com

Helene Wolpher, Optillion
+46 701 81 5223
helene.wolpher@optillion.com

Robert Barz, Mitsubishi Electric
+81 3 3218 2346
robert.barz@hq.melco.co.jp

Mike Ratcliff, Tyco Electronics
+1 717 592 2316
cmratcli@tycoelectronics.com

Industry Leaders Announce “X2” Multi-Source Agreement
for 10 Gigabit Pluggable Optical Transceivers

Based on XENPAK Technology, New MSA Defines Smaller Form Factor,
Versatile Package That Saves Costs and Board Space

PALO ALTO, Calif., July 22, 2002 -- Eight leading networking component suppliers, including Agere Systems, Agilent Technologies, JDS Uniphase, Mitsubishi Electric, NEC, OpNext, Optillion and Tyco Electronics, today announced “X2,” a new multi-source agreement (MSA) for smaller form factor 10 Gigabit-per-second (Gb/s) pluggable fiber optic transceivers. Transceivers

developed using this new specification will offer a smaller size that reduces board space on line cards for optical networking systems.

The X2 specification supports multiple 10 Gb/s applications, providing network equipment manufacturers (NEMs) with one platform that addresses several 10 Gb/s markets. This flexibility to cover a wider range of applications has in previous product generations enabled higher volumes and lower optics costs. While another MSA also specifies a smaller version of the popular XENPAK transceiver, the X2 MSA has stronger industry support and is more compatible with the existing XENPAK MSA specification.

The X2 MSA specifies a module that is physically shorter than XENPAK, mounts on the topside of the host PCB and uses the established electrical I/O specification defined by the XENPAK MSA. X2 is initially focused on optical links to 10 kilometers and is targeted at “second generation” 10 Gb/s enterprise, storage and telecom applications that do not require the thermal capacity provided by XENPAK.

Optically, the X2 MSA supports 802.3ae 10 Gb Ethernet, ANSI/ITUT OC192/STM-64 SONET/SDH interfaces, ITUT G.709, OIF OC192 VSR, INCITS/ANSI 10GFC (10 Gigabit Fibre Channel) and others. X2 is ideally suited for Ethernet, Fibre Channel and telecom switches and standard PCI (peripheral component interconnect) based server and storage connections, where a “half size” XENPAK optical transceiver is desired.

The X2 platform is designed so that the heat sink and front bezel can be easily adapted to the different needs of the key 10 Gb/s markets. X2 can be mounted on the front panel, mid board, or on a conventional PCI card. The X2 MSA offers a more thermally robust solution and provides better electromagnetic shielding than the other “smaller XENPAK” proposals.

X2 uses the same Tyco Electronics-designed 70-pin electrical connector as XENPAK, now available from other suppliers, and supports XENPAK’s four wire XAUI (10 Gigabit attachment unit interface). X2 also will support the OIF SFI4_P2 and serial electrical interfaces as they emerge.

The X2 MSA group will make the details of the specification available to the industry so that other optical transceiver manufacturers can produce compatible products. The companies expect to begin shipping these new 10 Gb/s transceivers in the first half of 2003.

About the X2 MSA

The X2 MSA welcomes application for membership from both transceiver and network equipment manufacturers. For more information on joining the MSA and status and availability of the specification, visit www.x2msa.org.

For further information, customers may contact the following representatives:

Agere Systems	Mike Pepler	pepler@agere.com
Agilent Technologies	Antony Spilman	antony_spilman@agilent.com
JDS Uniphase	Mike L. Zumbrennen	mike.zumbrennen@jdsu.com
Mitsubishi Electric	Junichiro Yamashita	junichiro.yamashita@edg.mea.com
NEC	Tetsuyuki Suzaki	tet-suzaki@cj.jp.nec.com
OpNext	Edward Cornejo	ecornejo@opnext.com
Optillion	Bertil Kronlund	bertil.kronlund@optillion.com
Tyco Electronics	Robert Atkinson	rdatkins@tycoelectronics.com

###