



AT-MX400T4 10BASE-T/100BASE-T4 Transceiver Installation Guide

Overview

The Fast Ethernet[®] Micro Transceiver Series of products are direct-attach IEEE 802.3 and 802.3u Ethernet 10 Mb/s and 100Mb/s Data Terminal Equipment (DTE). ATI supports all common Ethernet media with Micro Transceivers for 10 Mb/s thin coax (10BASE2), UTP (10BASE-T) and Fiber Optic (10BASE-FL, FOIRL) and 100Mb/s UTP (100BASE-T4, 100BASE-TX) and Fiber Optic (100BASE-FX) LAN systems.

The AT-MX400T4 transceiver provides the media-dependent-interface (MDI) to media-independent-interface (MII) services required of the 100BASE-T4 physical-layer-device (PHY) sublayer. The AT-MX400T4 complies with ANSI/IEEE 802.3 and 802.3u. Direct connection of the AT-MX400T4 to the 40-pin MII connector found on most 100BASE Ethernet stations (DTEs) reduces cabling costs.

Installation

Hot Insertion. The transceiver can be inserted in the MII connector with power ON. This does not damage the transceiver. Follow these steps:

1. Do not power down the device (DTE) to which you are attaching the transceiver.
2. Set DIP switches on the transceiver. (See the "PHY Address" section of this guide.)
3. Plug in the transceiver.
4. Reset the DTE. This is necessary to latch in the correct address and set up Default Operation Mode.

Cold Insertion. For Cold insertion (the most common), follow these steps:

1. Power down the device (DTE) to which you are attaching the transceiver.
2. Set DIP switches on the transceiver. (See the "PHY Address" section of this guide.)
3. Plug in the transceiver.
4. Power ON.

Status Indicators

The AT-MX400T4 shows status by means of LEDs as listed in Table 1.

Table 1: LED Guide

LED Name	Meaning When LED Is Illuminated
100 Mb/s	Indicates 100 Mbps speed
LNK	Indicates Link established
ACT	Indicates transmit or receive Activity (flashes)
PWR	Indicates Power applied

Half or Full Duplex

At power up, the default operation mode is 100Mb/s half duplex. To set the AT-MX400T4 to another operation mode (10 Mb/s full or half duplex), refer to the adapter card or hub manual; the adapter card driver or hub management software accesses the MII Mode Control Register on the AT-MX400T4.

PHY Address

The PHY section of the micro transceiver is always set to an address (typically 1). This address is used locally by the DTE to differentiate multiple PHYs connected to a single MII. Addresses are selected using the Physical Address DIP switch on the front of the transceiver. The address range is 0-1 decimal; the default setting as shipped is address 1.

NOTE

When the address is set to 0, the transceiver is in Isolation Mode. In Isolation Mode, the transceiver responds only to MDIO and MDC signals and ignores all other MII signals.

Auto-Detection

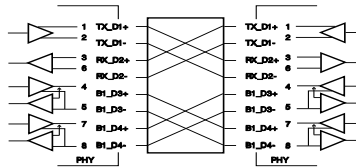
The AT-MX400T4 supports auto-detection. If the other end supports 100Base-T4, the AT-MX400T4 will auto switch to 100mb/s at half duplex. If the other end supports 10Base-T the AT-MX400T4 will auto switch to 10mb/s at half duplex.

Cabling

The AT-MX400T4 uses RJ45 connectors and 4-pair wire of category 3, 4, or 5 unshielded twisted pair (UTP) or type 1 shielded twisted pair (STP). The recommended maximum cable length is 100 meters.

Automatic polarity correction. The transceiver should be connected with a straight-through cable to a hub or a crossover cable to another PHY. See Figure 1 for standard wiring to a hub. If the polarity is inverted, the MX400T4 automatically corrects polarity.

Figure 1: Link Segment Wiring



Warranty

The AT-MX400T4 transceiver has a lifetime warranty.

Electrical Safety and Installation Requirements

RADIATED ENERGY

U.S. Federal Communications

Note: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Note: Modifications or changes not expressly approved of by the manufacturer or the FCC, can void your right to operate this equipment.

Canadian Department of Communications

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

STANDARDS: This product meets the following standards
RFI Emission EN55022 Class A

WARNING: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Immunity EN50082-1

Electrical Safety EN60950, UL1950, CSA 950

SAFETY

LIGHTNING DANGER

DANGER: DO NOT WORK on equipment or CABLES during periods of LIGHTNING ACTIVITY.

Operating temperature

This product is designed for a maximum ambient temperature of 40 degrees C.



**Environmental Air Notice**

Caution: UL listed for use in other Environmental Air Spaces in Accordance with Article 300-22(C) of the U.S.A National Electrical Code. Note: Product is not Plenum rated.

All Countries: Install product in accordance with local and National Electrical Codes.

NORMEN: Dieses Produkt erfüllt die Anforderungen der nachfolgenden Normen.
Hochfrequenzstörung EN55022 Klasse A

WARNUNG: Bei Verwendung zu Hause kann dieses Produkt Funkstörungen hervorrufen. In diesem Fall mußte der Anwender angemessene Gegenmaßnahmen ergreifen.
Störsicherheit EN50082-1

Elektrische Sicherheit EN60950, UL1950, CSA 950

**SICHERHEIT**

GEFAHR DURCH BLITZSCHLAG
GEFAHR: Keine Arbeiten am Gerät oder an den Kabeln während eines Gewitters ausführen

**BETRIEBSTEMPERATUR**

Dieses Produkt wurde für den Betrieb in einer Umgebungstemperatur von nicht mehr als 40° C entworfen.

Alle Länder: Installation muß örtlichen und nationalen elektrischen Vorschriften entsprechen.

Radiofrequenz forstyrrelsesemission EN55022 Klasse A

ADVARSEL: I et hjemligt miljø kunne dette produkt forårsage radio forstyrrelse. Bliver det tilfældet, påkræves brugeren muligvis at tage tilstrækkelige foranstaltninger.

Immunitet EN50082-1

Elektrisk sikkerhed. EN60950, UL1950, CSA 950.

**SIKKERHED****FARE UNDER UVEJR**

FARE: UNDLAD at arbejde på udstyr eller KABLER i perioder med LYNAKTIVITET.

**Bedjeningstemperatur**

Dette apparat er konstrueret til en omgivende temperatur på maksimum 40 grader C.

Alle lande: Installation af produktet skal ske i overensstemmelse med lokal og national lovgivning for elektriske installationer.

RFI Emission EN55022 Klasse A

WAARSCHUWING: Binnenshuis kan dit product radiostoring veroorzaken, in welk geval de gebruiker verplicht kan worden om gepaste maatregelen te nemen.

Immunitet EN50082-1

Electrische Veiligheid EN60950, UL1950, CSA 950

**VEILIGHEID**

GEVAAR VOOR BLIKSEMINSLAG
GEVAAR: NIET aan toestellen of KABELS WERKEN bij BLIKSEM.

**Bedrijfstemperatuur**

De omgevingstemperatuur voor dit produkt mag niet meer bedragen dan 40 graden Celsius.

Alle landen: het toestel installeren overeenkomstig de lokale en nationale elektrische voorschriften.

NORMES : ce produit est conforme aux normes de suivantes :

Emission d'interférences radioélectriques EN55022 Classe A

MISE EN GARDE : dans un environnement domestique, ce produit peut provoquer des interférences radioélectriques. Auquel cas, l'utilisateur devra prendre les mesures adéquates.

Immunité EN50082 -1

Sécurité électrique EN60950, UL1950, CSA 950

**SECURITE**

DANGER DE Foudre
DANGER : NE PAS MANIER le matériel ou les CABLES lors d'activité orageuse.

**TEMPERATURE DE FONCTIONNEMENT**

Ce matériel est capable de tolérer une température ambiante maximum de 40 degrés Celsius.

Pour tous pays : Installer le matériel conformément aux normes électriques nationales et locales.

Radioaaltojen häiriintä EN55022 Luokka A

VAROITUS: Kotiloosuhteissa tämä laite voi aiheuttaa radioaaltojen häiriötä, missä tapauksessa laitteen käyttäjän on mahdollisesti ryhdyttävä tarpeellisiin toimenpiteisiin.

Kestävyyys EN50082-1

Sähköturvallisuus EN60950, UL1950, CSA 950

**TURVALLISUUS**

SALAMANISKUVAARA
HENGENVAARA: ÄLÄ TYÖSKENTELE laitteiden tai KAAPELEIDEN KANSSA SALAMOINNIN AIKANA.

**KÄYTTÖLÄMPÖTILA**

Tämä tuote on suunniteltu ympäröivän ilman maksimilämpötilalle 40°C.

Kaikki maat: Asenna tuote paikallisten ja kansallisten sähköturvallisuusmääräysten mukaisesti.

Emissioni RFI (interferenza di radiofrequenza) EN55022 Classe A

AVVERTENZA: in ambiente domestico questo prodotto potrebbe causare radio interferenza. In questo caso potrebbe richiedersi all'utente di prendere gli adeguati provvedimenti.

Immunità EN50082-1

Sicurezza elettrica EN60950, UL1950, CSA 950

**NORME DI SICUREZZA**

PERICOLO DI FULMINI
PERICOLO: NON LAVORARE sul dispositivo o sui CAVI durante PRECIPITAZIONI TEMPORALESICHE.

**Temperatura di funzionamento**

Questo prodotto è concepito per una temperatura ambientale massima di 40 gradi centigradi.

Tutti i paesi: installare il prodotto in conformità delle vigenti normative elettriche nazionali.

RFI stråling EN55022 Klasse A

ADVARSEL: Hvis dette produktet benyttes til privat bruk, kan produktet forårsake radioforstyrrelse. Hvis dette skjer, må brukeren ta de nødvendige forholdsregler.

Immunitet EN50082-1
Elektrisk sikkerhet EN60950, UL1950, CSA 950



SIKKERHET
FARE FOR LYNNEDSLAG

FARE: ARBEID IKKE på utstyr eller KABLER i TORDENVÆR.



Driftstemperatur

Dette produktet er konstruert for bruk i maksimum romtemperatur på 40 grader celsius.

Alle land: Produktet må installeres i samsvar med de lokale og nasjonale elektriske koder.

Emissão de interferência de radiofrequência EN55022 Classe A

AVISO: Num ambiente doméstico este produto pode causar interferência na radiorrecepção e, neste caso, pode ser necessário que o utente tome as medidas adequadas.

Imunidade EN50082-1

Segurança Eléctrica EN60950, UL1950, CSA 950

SEGURANÇA



PERIGO DE CHOQUE CAUSADO POR RAI

PERIGO: NÃO TRABALHE no equipamento ou nos CABOS durante períodos suscetíveis a QUEDAS DE RAI.



TEMPERATURA DE FUNCIONAMENTO

Este produto foi projetado para uma temperatura ambiente máxima de 40 graus centígrados.

Todos os países: Instale o produto de acordo com as normas nacionais e locais para instalações elétricas.

Emission RFI EN55022 Classe A

ADVERTENCIA: en un entorno doméstico, este producto puede causar radiointerferencias, en cuyo caso, puede requerirse del usuario que tome las medidas que sean convenientes al respecto.

Inmunidad EN50082-1

Seguridad eléctrica EN60950, UL1950, CSA 950

SEGURIDAD



PELIGRO DE RAYOS

PELIGRO: NO REALICE NINGUN TIPO DE TRABAJO O CONEXION en los equipos o en LOS CABLES durante TORMENTAS ELECTRICAS.



Temperatura requerida para la operación

Este producto está diseñado para una temperatura ambiental máxima de 40 grados C.

Para todos los países: Monte el producto de acuerdo con los Códigos Eléctricos locales y nacionales.

Radiosörning EN55022 Klass A

VARNING: Denna produkt kan ge upphov till radiostörningar i hemmet, vilket kan tvinga användaren till att vidta erforderliga åtgärder.

Immunitet EN50082-1

Elsäkerhet EN60950, UL1950, CSA 950

SÄKERHET



FARE FÖR BLIXTNEDSLAG

FARE: ARBETA EJ på utrustningen eller kablarna vid ÅSKVADER.



DRIFTSTEMPERATUR

Denna produkt är konstruerad för rumstemperatur ej överstigande 40 grader Celsius.

Alla länder: Installera produkten i enlighet med lokala och statliga bestämmelser för elektrisk utrustning.

TRADEMARKS

Ethernet is a registered trademark of Xerox Corporation.

For more information on ATI products available today and in the future, contact your local ATI representative:

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