AT-MX10S, AT-MX20T, & AT-210TS

Micro Transceivers

AT-MX10S-05
10Base2 MAU slim-line transceiver with slide latch

AT-MX20T-04
10T MAU transceiver with pigtail and screw post

AT-MX20T-05
10T MAU transceiver with slide latch

AT-210TS-05D
10T MAU slim-line transceiver with slide latch

AT-210TS-07D
10T MAU slim-line transceiver with screw post

REDUCE CABLING COSTS

Designed to reduce Ethernet cabling costs, Allied Telesyn's micro transceivers connect directly to workstations, bringing thin Ethernet or Unshielded Twisted Pair (UTP) wiring directly to the desktop. With UTP and inexpensive coax network media, these micro transceivers support distances up to 100 meters between workstations and up to 185 meters using coax.

COMPLIANCE AND FLEXIBILITY

The 10Base2 compliant AT-MX10S transceivers use an industry-standard Ethernet transceiver chip that guarantees IEEE 802.3 compliance. The 10T compliant AT-MX20T and AT-210TS transceivers are also guaranteed compliant by the use of standard ICs. Network administrators can enable or disable a Signal Quality Error (SQE)/Heartbeat test for all models via an externally accessible switch.

Additionally, all models feature integral jabber lock-up prevention circuitry and a loopback function, which allows the transceivers to emulate coaxial and loop transmitted packets back to the receiving side.

Local Area Network (LAN) controllers can use the loopback feature to determine whether a Media Attachment Unit (MAU) is connected and operational. The AT-MX20T and AT-210TS transceivers incorporate other functions that offer improved network reliability for workstations.

One such function provides a continuous integrity test of 10T links to multi-port repeaters. Periodically, the transceivers transmit a test pulse to the companion transceiver's receive side. If the pulse is not seen on the receive side, the transceiver is placed into link test fail mode. Normal operation of the transmit side is inhibited and the "Link" LED is turned off. Normal operation is resumed when the link is reestablished by the reception of a valid packet or two valid link pulses.

10T transceivers also address the polarity of the receive pair wiring. In less than one second, the UTP transceiver rolls the wire-pair and allows for the proper operation of the transceiver. The Polarity indicator on the AT-210TS transceiver is off when the circuitry has transposed the receive pair.

KEY FEATURES

- IEEE 802.3 compliant and Ethernet Version 1.0 and 2.0 compatible
- Direct Attachment Unit
- Interface (AUI) connection
- Slim-line versions (AT-MX10S, AT-210TS) for improved mechanical fit for Macintosh, Sun SPARC stations, and IBMRS/6000 workstations
- Switch-selectable SQE test (all models) and LED (AT-MX10S, AT-210TS)
- Polarity detection and correction (AT-MX20T, AT-210TS) and LED (AT-210TS)
- Link integrity test function and LED (AT-MX20T, AT-210TS)
- 5-year warranty

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Micro Transceivers

STATUS INDICATORS

AT-MX10S:

Power/HB	Two-color Heartbeat LED

AT-MX20T:

Power	Power is present from the DTE
Transmit	Indicates packet is being transmitted to the media
Receive	Indicates packet is being received from the media
Link	Indicates a valid link exists

AT-210TS:

Power	Power is present from the DTE
Link	Indicates a valid link exists
SQE Test	SQE/Heartbeat test enabled
Polarity	Automatic polarity reversal has not occurred

AUI INTERFACE

Transmitter:	Typical	Range
Threshold Voltage	-200mv	-175 to -225mv
SQE Test Delay	800ns	600 to 1600ns
Duration	1000ns	500 to 1500ns
Collision Indication Delay	200ns	900ns
Assert Delay	200ns	900ns
Jabber Setup	45ms	20 to 100ms
Recovery	450ms	250 to 750ms
Receiver:		
Start-Up Delay	500ns	
Steady State Delay	100ns	200ns
Signal Amplitude	±800mv	±550 to ±1200mv
Loopback		
Steady State Delay	100ns	
Start-Up Delay	100ns	500ns

COAXIAL INTERFACE

Input Impedance	> 100K Ω
Coaxial Tap Capacitance	< 6 pf

Input/Output Voltage:	Typical	Range
DC Offset	-0.1v	-0.5 to 0v
AC Offset	1.86Vp-p	1.2 to 2.4Vp-p
Transmit Rise/Fall Time	25ns	±5ns

TWISTED PAIR CONNECTOR (RJ-45)

Pin No.	Function
1	+TD
2	-TD
3	+RD
4	Not Used
5	Not Used
6	-RD
7	Not Used
8	Not Used

TWISTED PAIR INTERFACE

Transmitter:	Typical	Range
Peak Differential		
Signal Amplitude	2.5v	2.2 to 2.8v
Transmitter Jitter	±1.5ns	±2ns
Harmonics Content	27dB Down	
Common Mode Output Voltage		
Start-Up Delay	100ns	200ns
Steady State Delay	100ns	200ns
Silence Voltage	±50mv	
Duration	16ms	8 to 130ms
Link Test Pulse	100ns	80 to 130ms
Output Impedance	100 Ω	95 to 105 Ω
Receiver:		
Receiver Threshold	-400mv	-350 to -450mv
Input Impedance	100 Ω	95 to 105 Ω
Differential Noise Rejection	300mv	

POWER CHARACTERISTICS

Isolation:	
Breakdown Voltage	
AT-MX10S	500v rms 50/60Hz for 1 min
AT-MX20T/AT-210TS	1500v rms 50/60 Hz for 1 min

Supply:	Typical	Range
Voltage	12v	11.4 to 12.6v
Current	300mA	500mA

ENVIRONMENTAL SPECIFICATIONS

Operating Temp	0°C to 50°C
Storage Temp.	-20°C to 60°C
Relative Humidity	5% to 80% non-condensing

PHYSICAL CHARACTERISTICS

Dimensions:	
Standard	6.4cm x 4.6cm x 2.0cm
Slim-line	6.9cm x 4.3cm x 2.5cm

ORDERING INFORMATION

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ABOUT ALLIED TELESYN

Allied Telesyn was founded in 1987 with the goal of producing reliable, standards-based networking products. Focused on Ethernet/IP solutions geared to applications, Allied Telesyn offers access-edge products like switches, fiber/copper MAPs, and CPE. We're also a leading global manufacturer of media converters, unmanaged switches, and NICs. Our customer-driven approach has made Allied Telesyn the ideal choice for IT professionals looking for high-quality, feature-rich network solutions at a lower price. Allied Telesyn – It's Our Network, Too.
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617-00151-00 Rev. E

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