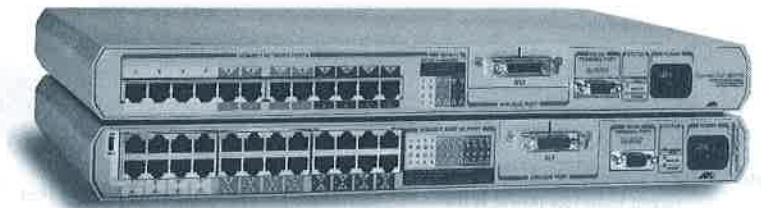




CentreCOM 3600 Series Stackable Hubs

- Complies with IEEE 802.3, Ethernet, Version 1.0 and 2.0
- Provides 12 or 24 10Base-T ports with shielded RJ45 connectors
- Modular backbone port with optional Twisted Pair (10Base-T), Thinnet (10Base-2), AUI (10Base-5) or Fiber Optic (10Base-FL) appliques
- Standalone, 19-inch rack or chassis mounted
- Three types of network management: SNMP, ASYNC ASCII terminal port (Omega Local) and Telnet (Omega Remote)
- SNMP redundancy
- Software upgrade capability through firmware cassette or in-band downloading
- Hot-swapping of units in 3600 chassis system
- Comprehensive diagnostic LED support
- Lifetime warranty*

*One year on power supply and fan



3600 Series Managed 10Base-T Hubs

AT-3612TR

12-PORT 10BASE-T HUB WITH SNMP MANAGEMENT (RJ45)

AT-3624TR

24-PORT 10BASE-T HUB WITH SNMP MANAGEMENT (RJ45)

Allied Telesyn's 3600 Family provides an affordable managed stackable hub solution which is easy to use and truly scalable. The AT-3612TR and AT-3624TR hubs serve as single building blocks for both standalone and chassis configurations. This allows networks to be easily built and reconfigured at minimum expense.

Each AT-3612TR comes with 12, each AT-3624TR with 24, 10Base-T ports (RJ45.) An additional modular port (pre-configured with AUI appliqué) provides backbone or inter-repeater connectivity through multiple types of cable media. Optional backbone appliques include support for Unshielded Twisted Pair (10Base-T), Fiber Optic (10Base-FL) and Thinnet (10Base-2.)

The AT-3612TR and AT-3624TR are fully self-contained with internal universal power supply, advanced IEEE 802.3/Ethernet repeater functionality, diagnostic LED support and comprehensive network management capabilities. For maximum functionality and reliability, they are based on an Allied Telesyn-developed ASIC.

All 3600 Series managed hubs are standard-equipped with three types of network management agents. For inexpensive local management, Allied Telesyn network management support is provided through an ASYNC terminal port (Omega Local.) An Omega Remote agent is also

included. This network management interface is utilized in an in-band fashion through a Telnet session. Out-of-band connection to any remote hub is provided through Omega Local. In addition, the AT-3612TR and AT-3624TR hubs support industry standard SNMP network management stations.

A single department concentrator with up to 192 ports can be configured when up to 8 AT-3624TR hubs are mounted into a 3600 chassis system. In a chassis configuration, the AT-3612TR and AT-3624TR hubs take on different personalities. The unit in slot one becomes the SNMP Master unit, slot two provides the SNMP Backup unit and the remaining slots create SNMP Slave units. Through this process, maximum network reliability is provided should the SNMP Master unit fail. Any of the units, except the current Master Unit, can be hot-swapped for fault tracing or reconfiguration of the concentrator without network downtime.

A firmware port is provided, enabling easy upgrades of the hub software. When a firmware cassette is inserted into the unit, the new firmware is copied into the unit's on-board Flash EEPROM at the time of power up. In addition, any AT-3612TR or AT-3624TR unit can be upgraded over the network with new software from any other 3600 Series managed hub, with no user impact on the network.

AT-3612TR, AT-3624TR

STATUS INDICATORS

Back Panel:

| | |
|--------|--|
| Power | Green indicates power is on |
| Master | Amber indicates the unit is acting as Master agent |
| Fault | Red indicates general fault condition |

Front Panel Central:

| | |
|--------|--|
| Power | Green indicates power is on |
| Master | Amber indicates the unit is acting as Master agent |
| Fault | Red indicates general fault condition |

Front Panel Per Port (AT-3612TR):

| | |
|----------------|--|
| No Light | Indicates no link |
| Steady Green | Indicates port OK (good link and port not partitioned) |
| Flashing Green | Indicates the port is receiving data |

Front Panel Per Port Multi-Function (AT-3624TR):

| | |
|----------------|---|
| No Light | Indicates no link |
| Steady Green | Indicates port OK (good link and not partitioned) |
| Flashing Green | Indicates port is receiving data |
| Steady Amber | Indicates link OK and port is partitioned |
| Flashing Amber | Indicates collision and port OK |

PACKET TRANSMISSION CHARACTERISTICS

Delay Times:

(Any segment in to all other segments out)

Backbone port to UTP

Start of Packet 900 ns Maximum

Collision to Jam 900 ns Maximum

UTP to UTP

Start of Packet 1400 ns Maximum

Collision to Jam 1400 ns Maximum

Preamble:

| | |
|--------|---|
| Input | 32 bits Minimum including SFD |
| Output | 64 bits including SFD (last 2 bits are 1,1) |

Jam Output:

A pattern of 1,0 is sent to all segments (except receive port) when a collision is detected.

Packet Fragment Extension:

96 bits including preamble. Packet fragments are extended using the 1,0 pattern.

Auto Partitioning/Reconnection:

Port partitioning occurs after 32 consecutive collisions or if collision has a duration of more than 1 ms. Reconnection occurs after 512 bits are received or transmitted on the partitioned port without collision (IEEE standard algorithm) or after data is transmitted without collision for 512 bits (alternate algorithm.)

Jabber Lock-Up Protection:

For packets that exceed 64k bit, packet output is interrupted for 96 bit times.

STANDARD 3600 SOFTWARE

SNMP Agent:

Compliant with MIB II and the SNMP Repeater MIB (hub MIB.)

Local ASCII Terminal Agent (Omega Local):

Allied Telesyn ASCII terminal-based management agent via RS-232 ASYNC port with DB-9 connector.

Telnet (Omega Remote):

Telnet terminal emulation over Ethernet.

BACKBONE PORT APPLIQUES

Available Modules:

| | |
|-----------|--------------------------------------|
| 10Base-T | UTP appliqué |
| 10Base-2 | BNC appliqué |
| 10Base-5 | AUI appliqué (pre-installed) |
| 10Base-FL | Fiber Optic appliqué (ST, SC or SMA) |

INTER-REPEATER BUS

Allied Telesyn LAN and Management Bus used in conjunction with the 3600 Series chassis (passive backplane system.) Units connect over the bus as one repeater.

SOFTWARE DOWNLOADING

1 Through insertion of a firmware module located on the back panel of the AT-3612TR or AT-3624TR.

2 Downloading from other AT-3612TR or AT-3624TR units on the same LAN (within the same IP domain) initiated from terminal menus.

UTP INTERFACE (IEEE 802.3 10BASE-T COMPLIANT)

| Transmitter: | Typical | Range |
|------------------------------------|---------|-------------------------|
| Peak Differential Signal Amplitude | 2.5 V | 2.2 to 2.8 V |
| Transmitter Jitter | ±3.5 ns | |
| Harmonics Content | | >27dB below fundamental |
| Common Mode Output Voltage | | <50 mV |
| Silence Voltage | 0 | ±50 mV |
| Link Test Pulse | 100 ns | 60 to 130 ns |
| Output Impedance | 100 Ω | 85 to 115 Ω |
| UTP Length | | 100 m |
| Receiver: | | |
| Receiver Threshold | -400 mV | -300 to -520 mV |
| Differential Noise Rejection | 300 mV | |

POWER CHARACTERISTICS

Input Voltage (Auto Ranging):

| |
|----------------------------------|
| 100 to 120 VAC, 50/60 Hz, 0.5 A |
| 200 to 240 VAC, 50/60 Hz, 0.25 A |

Power:

| | |
|-------------|------------------|
| Consumption | 40 W |
| Isolation | 1500 VAC (1 min) |

PHYSICAL CHARACTERISTICS

Dimensions: 43.2 cm x 25.2 cm x 4.6 cm (17.0 in x 9.9 in x 1.8 in)

Weight: 4.8 kg (10 lb 12 oz)

Temperature:

| | |
|-----------|---------------|
| Operating | 0° to 50° C |
| Storage | -20° to 60° C |

Relative Humidity: 5% to 80% noncondensing

Electrical/Mechanical Approvals:

| | |
|-------------|-----------------|
| EMI | FCC Class A |
| Safety | UL, TUV-GS, CSA |
| CE Approved | |

Specifications

ORDERING INFORMATION

| Part Number | Description |
|----------------|---|
| Hub | |
| AT-3612TR | 12-port managed 10Base-T hub (RJ45) with AUI appliqué |
| AT-3624TR | 24-port managed 10Base-T hub (RJ45) with AUI appliqué |
| Options | |
| AT-A1 | 10Base-FL appliqué for AT-3612TR and AT-3624TR (SMA) |
| AT-A2 | 10Base-FL appliqué for AT-3612TR and AT-3624TR (SC) |
| AT-A3 | 10Base-FL appliqué for AT-3612TR and AT-3624TR (ST) |
| AT-A8 | 10Base-2 appliqué for AT-3612TR and AT-3624TR (BNC) |
| AT-A9 | 10Base-T appliqué for AT-3612TR and AT-3624TR (RJ45) |

10Mbps

Managed

Managed Ethernet Hubs

AT-3600 Series of Managed Ethernet Hubs

A full family of affordable stackable managed hubs with multiple media options.

AT-3600 series of managed stackable Ethernet hubs

AT-3606F

TAA

FIBRE



FL x 6 Ports AUI/F x 1 Appliqué Port

AT-3606F

AT-3612TR

TAA



T x 12 Ports AUI/F x 1 Appliqué Port

AT-3612TR

AT-3624TR

TAA

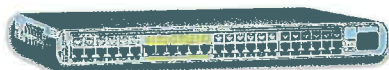


T x 24 Ports AUI/F x 1 Appliqué Port

AT-3624TR

AT-3624TRS

TAA



T x 24 Ports AUI/F x 1 Port

AT-3624TRS

AT-3612T

TAA



T (Telco) x 12 Ports AUI/F x 1 Appliqué Port

AT-3612T

| | | | |
|----------|---------|---|-----------|
| Stack | Int Pwr | SNMP | Telnet |
| Download | Jabber | 19" | Partition |
| RS232C | LED | Link | Uplink |
| HotSwap* | M/S* | * When used with C series or E series backplane | |

Physical specs: 432mm by 252mm by 46mm,
4.8 Kg, 17" x 9.9" x 1.8", 10.6lbs

- RS232 connector is standard on all hubs, except AT-3624TRS
- 1 MDI/MDI-X port is equipped as standard on the AT-3624TR
- The AT-3624TRS is manageable when a backplane is used

Optional backbone appliques & accessories for AT-3600 hubs

AT-A2

FL Appliqué, Fibre SC

AT-A9

T Appliqué, RJ45

AT-A3

FL Appliqué, Fibre ST

AT-ADAPT-2

Telco to RJ45 Harmonica for AT-3612T

AT-A8

2 Appliqué, BNC

AT-S4 firmware cassette for AT-3600 series

AT-3600 series bracket and chassis systems

C series for 19" rack systems

TAA

| | |
|---------------|--|
| AT-36C1 | 1-slot 19" bracket |
| AT-RKMT5 | |
| AT-36C2 | 2-slot 19" bracket with snap-on shared backplane |
| AT-36C3 | 3-slot 19" bracket with snap-on shared backplane |
| AT-36C4 | 4-slot 19" bracket with integrated shared backplane |
| AT-36C8 | 8-slot 19" rack chassis with integrated shared backplane |
| AT-C36RG4-xR1 | 4-slot 19" rack chassis with integrated segmented backplane in conjunction with an Ethernet switch x = 1 for US power cord, x = 2 for no power cord |
| AT-C36RG8-xR2 | 8-slot 19" rack chassis with integrated segmented backplane in conjunction with an Ethernet switch x = 1 for US power cord, x = 2 for no power cord |

E series for desktop or floor placement

TAA

| | |
|---------------|---|
| AT-36E1 | 1-slot tower-type floor stand |
| AT-36E2 | 2-slot desktop bracket with snap-on shared backplane |
| AT-36E3 | 3-slot desktop bracket with snap-on shared backplane |
| AT-36E4 | 4-slot desktop chassis with integrated shared backplane |
| AT-36E8 | 8-slot desktop chassis with integrated shared backplane |
| AT-C36DG4-xR1 | 4-slot desktop chassis with integrated segmented backplane in conjunction with an Ethernet switch x = 1 for US power cord, x = 2 for no power cord |
| AT-C36DG8-xR2 | 8-slot desktop chassis with integrated segmented backplane in conjunction with an Ethernet switch x = 1 for US power cord, x = 2 for no power cord |