



## CentreCOM 3600 Series Stackable Hubs

- Complies with IEEE 802.3, Ethernet, Version 1.0 and 2.0
- Provides 6 10Base-FL ports with ST, SC or SMA 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 and supply fan



### 3600 Series Managed 10Base-FL Hub

#### AT-3606F

6-PORT 10BASE-FL HUB WITH SNMP MANAGEMENT  
(ST, SC OR SMA)

Allied Telesyn's 3600 Family provides an affordable managed stackable hub solution which is easy to use and truly scalable. The AT-3606F hub serves as a single building block for both standalone and chassis configurations. This allows networks to be easily built and reconfigured at minimum expense.

Each AT-3606F comes with 6 10Base-FL ports (ST, SC, or SMA) plus a modular port (pre-configured with AUI appliques) that provides backbone or inter-repeater connectivity through multiple types of cable media. Optional backbone appliques include support for Unshielded Twisted Pair (10Base-FL) and Thinnet (10Base-2.)

The AT-3606F is 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, it is 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 possible through Omega Local. In addition, AT-3606F supports industry standard SNMP network management stations through the SNMP agent. A single management concentrator with up to 48 ports can be configured when up to eight AT-3606F hubs are mounted into a chassis system. In this configuration, AT-3606F 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 fail. Any of the units can be hot-swapped for fault tracing or reconfiguration without network downtime.

A firmware port is provided, enabling upgrades of the AT-3606F software. When a firmware cassette is inserted into the unit, the new firmware is copied to the unit's on-board Flash EEPROM at time of power up. In addition, any AT-3606F 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-3606F

## 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:

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

## PACKET TRANSMISSION CHARACTERISTICS

### Delay Times:

(Any segment in to all other segments out)

Backbone port to fiber

Start of Packet 900 ns Maximum

Collision to Jam 900 ns Maximum

Fiber to fiber

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 APPLIQUÉS

### Available Modules:

(See separate datasheet on accessories):

|           |                                      |
|-----------|--------------------------------------|
| 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-3606F.

2 Downloading from other AT-3600 units on the same LAN (within the same IP domain) initiated from terminal menus.

## FIBER OPTIC INTERFACE

| Optical:    | Typical              | Worst                |
|-------------|----------------------|----------------------|
| Wavelength  | 830 nm               | ±20 nm               |
| Sensitivity | -30 dBm              |                      |
| Saturation  | 170 µW<br>(-7.6 dBm) | 150 µW<br>(-8.2 dBm) |

### Transmitter:

|              |           |           |
|--------------|-----------|-----------|
| Output Power |           |           |
| 62.5/125 mM  | -12.0 dBm | -15.0 dBm |
| 100/140 mM   | -6.5 dBm  | -9.5 dBm  |
| 50/125 mM    | -16.5 dBm | -19.5 dBm |

## POWER CHARACTERISTICS

### Input Voltage (Auto Ranging):

100 to 120 VAC, 50/60 Hz, 1.0 A  
200 to 240 VAC, 50/60 Hz, 0.5 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, IEC 825-1 Class 1 |

CE Approved

# Specifications

## ORDERING INFORMATION

| Part Number | Description  |
|-------------|--|
| <b>Hub</b>  |  |
| AT-3606F/ST | 6-port managed 10Base-FL hub (ST) with AUI appliqué  |
| AT-3606F/SC | 6-port managed 10Base-FL hub (SC) with AUI appliqué  |
| AT-3606F/SM | 6-port managed 10Base-FL hub (SMA) with AUI appliqué |

### Options

|       |                                       |
|-------|---------------------------------------|
| AT-A1 | 10Base-FL appliqué for AT-3606F (SMA) |
| AT-A2 | 10Base-FL appliqué for AT-3606F (SC)  |
| AT-A3 | 10Base-FL appliqué for AT-3606F (ST)  |
| AT-A8 | 10Base-2 appliqué for AT-3606F (BNC)  |
| AT-A9 | 10Base-T appliqué for AT-3606F (RJ45) |



# 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<br>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<br>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<br>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<br>x = 1 for US power cord, x = 2 for no power cord |