Allied Telesis

FX20

AT-TN-139, AT-TN-142 20-PORT 100BX FTTX SERVICE MODULES

The iMAP FX20 (AT-TN-139-A/B and AT-TN-142-A) are an evolution of the FX10BX (AT-TN-109) providing a range of Allied Telesis IEEE 802.3ah active FTTH/B service modules for iMAPs. This card provides 20 ports at 100Mbps (full-duplex) over a single fiber (bi-directional).

Industry-leading Fiber Density

The FX20 provides 20 ports of 100BX Ethernet on a single iMAP service module, doubling the density of the FX10BX. Designed to meet the explosive growth in FTTx subscribers, the FX20 leads the industry in fiber density giving service providers maximum subscriber coverage with minimal equipment footprint. This breakthrough in fiber density is enabled through the use of patented new fiber optic technology. As with the FX10 family of service modules, the FX20 is compatible with all Allied Telesis 100BX iMGs.

High Definition Ethernet

Like all iMAP service modules, the FX20 delivers a full suite of Layer 2+ capabilities that are designed for reliable, secure, and wirespeed Triple Play service delivery. Implemented using an advanced Ethernet switch fabric, the FX20 sets a new standard for implementing fine grained QoS and guaranteed service level agreements. Advances over the FX10BX service module include; more queues per port, support for more VLANs and multicast groups, and precision port rate limiting. In addition, the FX20 hardware is ready to support sophisticated traffic management features such as per queue rate limiting and WRR scheduling.

Part of Allied Telesis' IP Broadband Access Family

Whether it is broadband ADSL2+, FTTH or POTS, the iMAP family is the ideal platform for last mile service delivery. The FX20 line card can be used with any of the iMAP family of carrier grade platforms:

- iMAP 9700 (9RU, 17 service slots)
- iMAP 9810 (3RU, 8 service slots)
- iMAP 9400 (3RU, 7 service slots)
- MiniMAP 9100 (1RU, 3 service slots)

Provisioning, management, and diagnostics of subscriber ports can be accomplished from either the iMAP command line interface or the NMS.

Key Features

» 20 x 100BX wirespeed ports

QoS
» Eight queues
» Strict priority scheduling
» Hardware capable of supporting WRR
» VLAN stacking

Security
» Upstream forwarding only
» Extensive ACL support

Services
» High-speed Internet
» VoIP
» IPTV
» Business VPN
» T1/E1 circuit emulation

iMAP
INTEGRATED MULTISERVICE ACCESS PLATFORM

Specifications

Interface Specifications

Number of 100BX ports: 20
Single-mode, single fiber
Tx 1550nm, Rx 1310nm
Optical budget: AT-TN-139 - 19 dB
AT-TN-142 - 34 dB
SFF with SC connector
Backplane capacity: 1Gbps
Physical design: Front access

Port Specifications

Number of VLANs per port: 4095
Priority queues: 8
Dropped packet counter
Full traffic classifier support
Full traffic classifier action support
ARP filtering
Egress/ingress port rate limiting: 64kbps increment
Hardware capable of supporting per queue rate limiting
Ingress metering: 64kbps increment

Protocols and Specifications

IEEE 802.1d,w	Rapid Spanning-Tree
IEEE 802.1D	Bridging
IEEE 802.1Q	VLAN bridging
IEEE 802.1p	Prioritization
IETF RFC 1112	IP multicasting/IGMP snooping v1
IETF RFC 2236	IP multicasting/IGMP snooping v2
RFC 3046	DHCP relay agent option 82

Power Requirements

Maximum power: 42W

Environmental Specifications

AT-TN-139-A
Operating temp: -5°C to 55°C (23°F to 131°F)
Storage temp: -40°C to 75°C (-40°F to 167°F)
Relative humidity: 5% to 95%, non-condensing

AT-TN-139-B
Operating temp: -40°C to 65°C (-40°F to 149°F)
Storage temp: -40°C to 75°C (-40°F to 167°F)
Relative humidity: 5% to 95%, non-condensing

AT-TN-142-A
Operating temp: -5°C to 55°C (23°F to 131°F)
Storage temp: -40°C to 75°C (-40°F to 167°F)
Relative humidity: 5% to 95%, non-condensing

Regulatory Approvals

FCC Part 15 Class A/ANSI C63.4
EN 300 386 V1.3.1:2001-09/EN 55022:1998, Class A
VCCI Class A; ITE/ CISPR 22:1997 Class A
EN 300 386 V1.3.1:2001-09/EN 55022:1998, Class A
EN 300 386 V1.3.1:2001-09/EN 61000-4-3:1998
EN 300 386 V1.3.1:2001-09/EN 6100-4-6:1996
EN 300 386 V1.3.1:2001-09/EN 61000-4-4:1995
EN 300 386 V1.3.1:2001-09/EN 61000-4-5:1995
EN 300 386 V1.3.1:2001-09/EN 61000-4-2:1999
UL/cUL 60950: IEC60950
NEBS Level 3, GR-1089 Issue 3, GR63 Issue 2
USDA RUS

Ordering Information

FX20 Service Modules

AT-TN-139-A
20 ports, 100BX service module

AT-TN-139-B
20 ports, 100BX service module

AT-TN-142-A
20 ports, 100BX 40 km service module

iMAP 9x00 Chassis

iMAP 9810 (AT-TN-253G)
8-slot chassis with DC power

iMAP 9700 (AT-TN-250G)
17-slot chassis with DC power

iMAP 9400 (AT-TN-251G)
7-slot chassis with DC power

MiniMAP 9101 (AT-TN-9101-A-80)
3-slot mini chassis with DC power

MiniMAP 9102 (AT-TN-9102-A-xx)
3-slot mini chassis with AC power

iMAP Common Control

CFC24 (AT-TN-401-E)
24GbE switch controller card

GE3 (AT-TN-301-C)
3 x GbE WAN interface card

CFC12 (AT-TN-408-C)
12GbE switch controller card

CFC56 (AT-TN-407-C)
56GbE switch control module

CFC100 (AT-TN-409-A)
100GbE switch control module

XE1 (AT-TN-308-A)
10GbE WAN interface card

Where xx =
10 for US power cord
30 for UK power cord
40 for Australian power cord
50 for European power cord

Related Allied Telesis Equipment

FX10BX (AT-TN-109-A)
10-port, 100Mbps single-mode, single fiber service module

AT-iMG726MOD-PKG1
Base active Ethernet outdoor media gateway, 6 Ethernet ports, 2 FXS ports, single fiber WAN

AT-iMG746MOD-PKG1
Active Ethernet outdoor media gateway, 6 Ethernet ports, 4 FXS ports, single fiber WAN

AT-iMG726MOD-MN
Base active Ethernet outdoor media gateway, 6 Ethernet ports, 2 FXS ports

AT-iMG746MOD-MN
Base active Ethernet outdoor media gateway, 6 Ethernet ports, 4 FXS ports

AT-iMG646MOD-W01-001 (10 km WAN)
AT-iMG726MOD/746MOD 100BX WAN module

AT-iMGMOD-WAN-100M-40-BD (40 km WAN)
AT-iMG726MOD/746MOD 100BX 40 km WAN module

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