ASCENT
Communication Technology

ASCENT

PRODUCT CATALOG

2023 ~ 2024

- Data Center
- Transceiver
- FTTx/XGS PON
- Video Overlay
- HFC
- Passives
- IPTV & STB

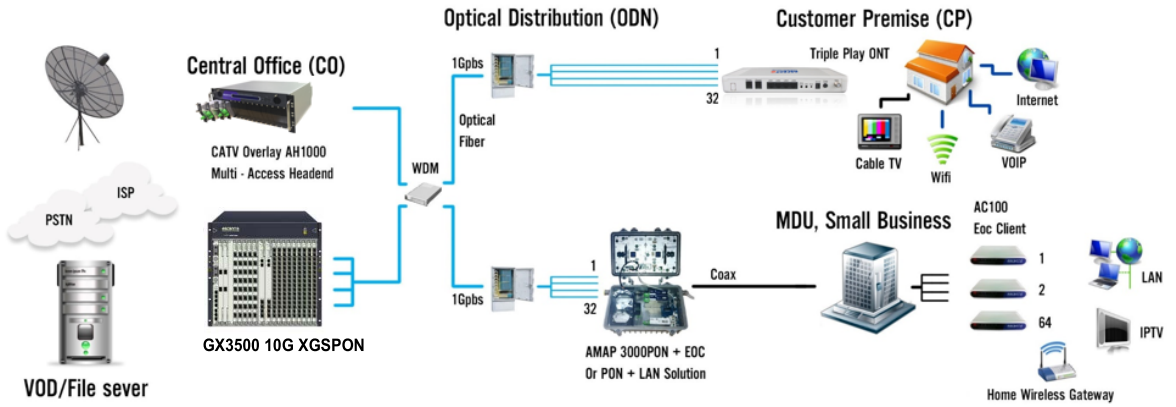
Table of Contents

Portfolio of FTTx, Wireless & HFC Products

Advanced, scalable, intelligent, last mile fiber technology platforms for MSOs, Network Operators, and Services Providers of all size

Next-Generation Network has growing customer demand for IPTV, VoD, HSD, VoIP, Wireless and smart IOT services. To stay competitive, operators need a network solution that can maximize their existing infrastructure, and at the same time has the flexibility to scale up for higher bandwidth next-generation services. Ascent Communication Technology (ACT) network solution has got the answer with a comprehensive product portfolio. Products have been designed with today and tomorrow networks in mind, with ease of technology migration and network upgrade. ACT products cover technologies from Data Center Interconnect, FTTx (Active Ethernet, XGS PON, PON+EoC), Wirless (b/g/n/ac/ax), HFC Deep Fiber, to smart home, smart community and city networks.

ACT understands each network has a unique requirement. ACT advises operators the best migration technology that minimize capital investment while provide the required bandwidth for next-gen services.

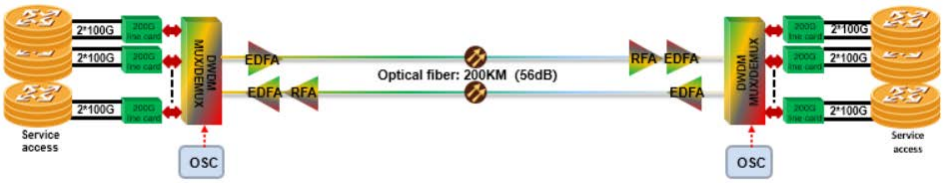


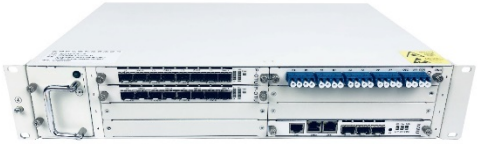
A1600E Data Center Interconnect (DCI) Solutions

Features

- Hot-swappable Modular design, supports smooth upgrade,
- Bi-directional 1.6 Tbps service transmission
- Up to 16*100G client-side access, 8*200G and 4*400G line-side transmission
- Transmission capacity up to single fiber 19.2Tbps (single lambda 200G*96CH) or 25.6Tbps (single lambda 400G*64CH)
- Supports line side 100G/200G/400G adjustable rate and wavelength, and can be used with optical layer OA, OLP, OSC, OCM, OTDR equipment.
- CFP2-DCO most advanced single-carrier 7nm coherent DSP and photonic integration technology,
- Ultra-low energy consumption 12W/100G with multi-carrier Super Channel technology
- Standard DCI rack design: with dual power supply 1+1 hot backup,
- Complete network management protocol: WEB, SNMP, CLI, TLI and other network management interfaces.
- Supports SDN architecture network management design: with open Netconf/Yang model

Application Diagram





Specifications DCI BOX

	2U	4U
Maximum Capacity of Single System	4CH, 8CH, 16CH, 40CH, 48CH, 80CH, 96CH	4CH, 8CH, 16CH, 40CH, 48CH, 80CH, 96CH
Wavelength (Frequency) Range	DWDM: 1529.16 nm to 1567.14 nm (191.3 THz to 196.05 THz)	Compliance with ITU-T G.692, ITU-T G.695 standards.
Service Access Types	OTN: ODU2, ODU2e, ODU3, ODU4 Ethernet: 10GbE, 100GbE, 100GE FlexE SONET: OC-192 SDH: STM-64 OTU2, OTU4	PDH, EPON, GPON, SDH: STM-1/STM-4/STM-16/STM-64/STM-256 SONET: OC-3/OC-12/OC-48/OC-192/OC-768, FE, GE, 10GE, 40GE, 100GE, CPRI 1 to 7, POS, FICON, ESCON, CATV
Physical Network Topology	Chain type, star type, ring type	Chain type, star type, ring type
Working Temperature	-10°C to +70 °C	-10 °C to +70 °C
Storage Temperature	-40 °C to +80 °C	-40 °C to +80 °C
Relative Humidity	5 % to 95 % no condensation	5% to 95% no condensation.
Dimensions (W×H×D)	440 mm × 88 mm × 420	482 mm × 177 mm × 350 mm
Power Supply	220 V_{AC}, 50Hz -48 V_{DC} and 240V HVDC power supply (optional)	220V_{AC}, 50 Hz -48V_{DC} (optional)
Safety and EMC	Complies with FCC, UL, CE, TUV, CSA standards	Complies with FCC, UL, CE, TUV, CSA standard
Power Consumption	<800 W	<300 W

DCI Electrical Layer Equipment – 400G Line Card

Features

- Compatible with 100-400G unidirectional or bidirectional transmission
- Support single OC channel 1-4 channels 100G to 1 channel 400G transmission
- Support flexible service access functions: 100GE, 100GE KR4, OTU4, 100G FlexE and OTUCn
- The client side supports multiple module interface types: 100G SR4/CWDM4/LR4/PSM4
- Support Ethernet RMON performance statistics, LLDP monitoring, constellation map monitoring, DM delay and PRBS detection function

10*10G+2*100G to 200G Line Card

Features

- Supports 100G or 200G unidirectional or bidirectional transmission
- Supports 10G-100G service access
- Supports FlexGrid 96 waves with adjustable wavelength
- Supports flexible service access functions:
- 10G: 10GE/10G WAN/10G LAN/SDH/OTU2/OTU2,
- 100G:100GE, 100GE KR4, 100G FlexE, OTU4, OTUCn
- Client side supports multiple module interface types: 100G SR4/CWDM4/LR4/PSM4
- Support Ethernet RMON performance statistics, LLDP monitoring, constellation graph monitoring, DM delay and PRBS detection functions, OTN PM and SM performance statistics and other functions

DCI Optical Layer Device - OA card

Features

- Supports setting pump switch, AGC mode and APC mode (input and output optical power adjustable)
- Can monitor: pump drive current, pump output power, pump switch, pump temperature, input optical power, output optical power, module temperature
- Supports power amplification and pre-amplification of the combined signal of optical terminal stations, and has built-in 1 direction OSC channel

DCI Optical Layer Device – MUX/DEMUX

Features

- Supports multiplexing and demultiplexing of 48-96 DWDM optical signals
- Supports DWDM system smooth upgrade to 96 wave customization
- Supports online upgrade and expansion, simple maintenance, convenient operation
- Low insertion loss, high channel isolation, high reliability and stability, in accordance with GR-1221 standard

DCI Optical Layer Device – OTDR Card

Features

- Large dynamic range
- Event dead zone and attenuation dead zone are low
- High test accuracy
- Fast data transmission based on Ethernet interface
- Real-time test refresh rate in milliseconds
- Automatic monitoring of communication light
- Supports unified network management platform based on SNMP, network management mode CLI (telnet and console), Web

DCI Optical Layer Device – WSS Card

Features

- Twin 1x9 191.3-196.1Thz supports Flex grid.
- Reconstruction time ≤ 3s.
- Automated optical alignment and assembly (high throughput, multi-parameter optimization, high accuracy/repeatability, operator independence).
- An optional integrated PLC provides per-channel power control based on OCM.
- Equalize, attenuate, block, switch/route any or all wavelengths.
- Flat wide passband, low dispersion cascading.
- Support unified network management platform based on SNMP, network management mode CLI (telnet and console), Web. on Ethernet interface

800G Transceivers

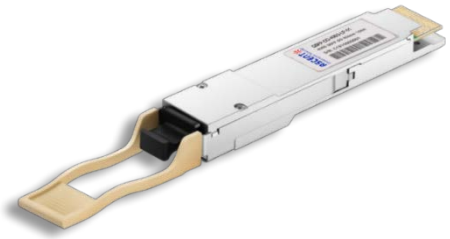
Features

- Supports 850Gbps
- Single 3.3V Power Supply
- Up to 10km over SMF with KP4 FEC supported at the Host side
- Dual duplex CS connector
- 8x106.25Gbps (PAM4) electrical interface
- PIN and TIA array on the receiver side
- Power dissipation < 16W
- Safety Certification: TUV/UL/FDA*1
- RoHS Compliant
- Application for 1x800G Ethernet, 2x400G Ethernet, 2x200G Ethernet

400G & 100G Transceivers

Features

- Up to 120 km transmission distance
- QSFP28 MSA compliant
- QSFP-DD MSA compliant
- 100G Lambda MSA 400G-LR4 compliant
- Compatible with Ethernet 100GBASE-SR4
- 3.3 V operating voltage
- 100G Lambda MSA 400G-LR4 compliant
- Digital diagnostics
- RoHS compliant



40G & 25G Transceivers

Features

- Up to 120 km transmission over single-mode fiber (SMF)
- QSFP+ MSA compliant
- 40GBASE-SR4 compliant
- Hot-pluggable
- Digital diagnostics
- RoHS compliant

10G Transceivers

Features

- SFP+ and XFP transceivers
- 3.3 V operating voltage
- Up to 120 km transmission distance
- Wide operating temperature range
- Digital diagnostics
- Bi-directional SFP+ transceivers available

SFP Transceivers

Features

- 3.3 V operating voltage
- Up to 120 km transmission distance
- Wide operating temperature range
- Metal enclosure for lower EMI
- Digital diagnostics
- Compliant with SFF-8472

Direct Attach Twinax Cables (DACs)

Features

- 100 Gigabit Ethernet
- Fiber Channel over Ethernet
- InfiniBand EDR
- Data storage and communication industry switch/router/HBA
- Enterprise network SAN
- Data Center Network

Active Optical Cables (AOCs)

Features

- Full Duplex 4 channel 850nm parallel active optical cable
- Up to 11.1 Gbps per channel
- Up to 300 m on OM3 MMF
- 40G Ethernet
- QSFP+ MSA compliant
- RoHS compliant
- <1.5 W power dissipation per cable end

DAC/AOC Breakout Cables

Features

- 3.d40G to 10G Ethernet Interoperability
- Aggregate 4 SFP+ 10G Into
- Single QSFP+ 40G Interface
- 150m links on OM4 multimode fiber
- Electrically hot-pluggable
- QSFP+ module compliant to SFF 8436 MSA
- SFP+ module compliant to SFF 8431 MSA
- RoHS Compliant

QSFP to SFP/SFP+ Adapter Module

Features

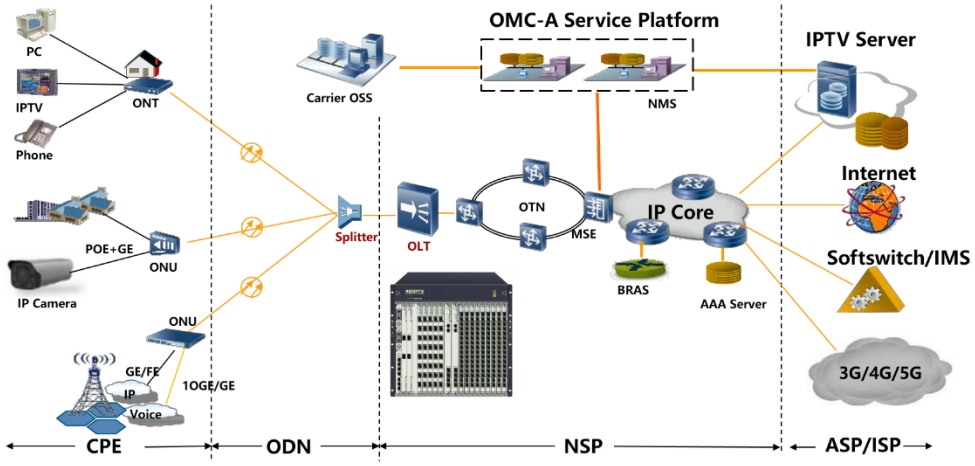
- 3dTrouble-free installation
- Compliant to industry standards: QSFP+ MSA SFF-8436 / SFP+ MSA SFF-8431
- Precision process control
- All-metal housing for superior EMI performance
- 100 Ω differential impedance system
- Low insertion loss
- Low crosstalk
- Secure latching mechanism
- RoHS compliant

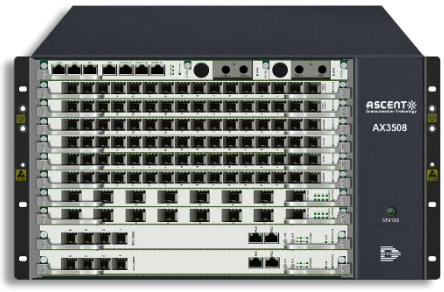
GX3500 10G XGSPON OLT Solution

Features

- ITU-T G.984/G.987/G.988/G.9807 compliant 10gbps/2.5gbps downstream and 10Gbps/2.5bps/1.25Gbps upstream PON interface
- Hybrid platform for GPON/XG(S)PON technology
- Power/CSM redundance, PON protection
- 272*GPON/208*XG(S)PON/240*XG(S)PON & GPON combo PON ports in 11U chassis
- Hot swap modular design
- Advanced L2/L3 functions
- Abundant QoS functions
- Unified NMS platform
- Remote provision and management

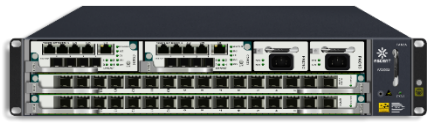
Application Diagram





Specifications

GX3500-S Series	GX3500-S17	GX3500-S15	GX3500-S8	GX3500-S2
	11U, 21-inch	11U, 19-inch	7U, 19-inch	2U, 19-inch
Switching Capability	7.2 T (CSM35)	7.2 T (CSM35)	7.2 T (CSM35)	960G (CSM25)
Max Slot Bandwidth	200G	200G	200G	200G
Power Supply		DC (1+1 redundancy)		DC/AC (1+1 redundancy)
Max GPON/Slot	16	16	16	16
Max XG(S)PON/Slot	16	16	16	16
Max XG(S)PON COMBO/Slot	16	16	16	16
Uplink (CSM)	2*4*25GE/10GE	2*4*25GE/10GE	2*4*25GE/10GE	2*4*10GE/GE



GX3100 10G XGSPON OLT

Features

- Supports rich layer 2/3 switching features and flexible management methods
- Supports multiple link redundancy protocols such as FlexLink/STP/RSTP/MSTP/ERPS/LACP
- Hybrid platform for GPON/XG(S)PON technology
- Redundant power, PON protection
- Up to 16x XG(S)PON & GPON combo PON ports in 1U pizza box
- Hot-swappable modular design
- Abundant QoS functions
- Unified NMS platform
- Remote provision and management
- Supports power failure alarm

Specifications

	GX3108C	GX3116
Switch Capacity	440 Gbps	300 Gbps
Service Ports	8*XG(S)PON&GPON COMBO port 8*10GE/GE SFP 2*100G QSFP28	16*XG(S)PON&GPON COMBO port 2*100GE
Dimensions (W×H×D)	440 mm × 270 mm × 44 mm	482 mm × 286 mm × 44 mm
Weight	6.5 kg	4.8 kg
Power Consumption	90 W	250 W

AG3242A 10G XGSPON ONT

Specifications

Interface	2*POTS + 4*GE + 2.4G & 5G WiFi + 1*USB3.0
Indicators	Power + PON + LOS + Internet + 4*LAN + 2*Phone + WiFi + WPS + USB
Power Adapter Input	100 to 240V AC, 50/60 Hz
Power Adapter Output	12 V, 3 A
Buttons	Power + Reset + WPS
Dimensions (W×H×D)	242 mm × 162 mm × 30 mm (without base)
Operating Temperature	-10 °C to +55 °C
Operating Humidity	5 % RH to 95 % RH (non-condensing)

P2500 5-Wavelength XGPON Power Meter

Features

- High-definition color LCD screen
- Sub-wavelength test of high isolation optical components
- Reference value can be set, with alarm function
- Multiple adapter configurations
- Store and adjust 999 groups of test data
- Shutdown memory, multiple power supply options available
- Custom visual light source function
- Humanized backlight adjustment and automatic shutdown function

AP200 & AP600 Series GPON ONT

Features

- P2MP residential/business gateway
- ITU-T G.984 compliant GPON
- Strict SLA for tiered services
- CATV RF receiver (Video Overlay)
- 2 POTs VOIP, 4 data ports
- IEEE 802.11b/g/n Wireless-LAN
- Enhanced security with 128-bit AES
- Layer 2 bridging and VLAN
- Easy home installation
- Web interface and SNMP management

AP200 Single Family ONT Specifications

	AP204	AP224	AP224-N
Ports	1*GPON uplink port 4*10/100/1000BASE-TX	1*GPON uplink 4*10/100/1000B-TX 2*VOIP	1*GPON uplink 4*10/100/1000B-TX 2*VOIP, 1*WLAN
Connector Type	Default SC/APC, Optional SC/PC		
Wavelength	1490nm/1310 nm		
Features	Layer 2 bridging, VLAN, NAT/NAPT, IGMP Multicast, QoS, PPPoE, IPv6, Web Mgmt		
Dimension(D×W×H)	110mm×160mm×27mm		
Weight	<1.5kg		
Voltage	Power adaptor(100 to 220AVC input-12VDC/2A output)		
Max Power Consumption	<12W	<15W	<17W
Working Temp		0 °C to 50 °C	

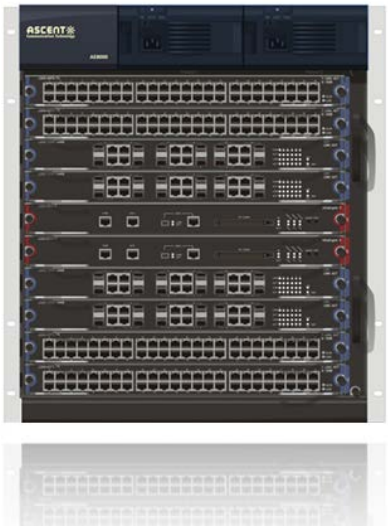
AP600 MDU ONT Specifications

	AP224-TV-N	AP624
Port	1*GPON uplink port 4*10/100/1000BASE-TX 2*VOIP, 1*CATV RF 1*WLAN	1*GPON uplink port 8 *1000BASE-TX 16 * POTS WiFi
Connector Type	Default SC/APC, Optional SC/PC	
Wavelength	1490nm/1310 nm	
Features	Layer 2 bridging, VLAN, NAT/NAPT, IGMP Multicast, QoS, PPPoE, IPv6, Web Mgmt	
Dimension(D×W×H)	130mm×180mm×35mm; 400mmx220mmx44mm	
Weight	<1.5kg; <2.5kg	
Voltage	Power adaptor(100 to 220AVC input-12VDC/2A output)	
Max power consumption	<25W	<37W
Working temp	0 °C to 50 °C	

AE8000 High Density P2P Headend Core Switches

Features

- Gigabit Ethernet P2P Headend
- High performance L2/L3/L4 switching with IPv6 supported
- High Density up to 336 ports at 1Gb/s
- Switching fabric with up to 2.6 Tb/s Backplane Capacity
- Up to 4 x 10 Gbps uplinks with link aggregation
- Congestion-free switching for all ports
- High-level security supporting extended ACL, DAP, RADIUS, and Intelligent ARP
- Supports Active Ethernet technology with FE and GE subscriber lines
- Strict QoS with 802.1p, Diffserv, and L2-L4 flow classification
- IPTV and Video Overlay supported
- Wire-speed switching and aggregation with up to 384 Gbps capacity
- Dual hot-swappable redundant controller cards
- Dual hot-swappable power supplies for redundancy
- Shelf management for monitoring and control via network. Both CLI and SNMP access
- Advanced routing and switching features
- RADIUS-based broadband management and customer SLA control
- Low power consumption to save maintenance and services cost



Specifications

	AE8006	AE8009	AE8012
Available Slots	3	6	10
Service Line Cards	2	4	8
Backplane Bandwidth	768Gbps	1.5Tbps	2.6Tbps
Exchange Capacity	384G	768G	1.5T
Packet's Forwarding Rate	143Mpps	286Mpps	572Mpps
Maximum # of 10G ports	8	16	32
Maximum # of 1G ports	96	192	384
Maximum # of 100M ports	96	192	384
Physical Size (WxDxH)	482×548×266mm	482×548×399mm	482×548×533mm
Power Consumption	600W	600W	1000W

Service Line Cards (w/o SFP or XFP)

	FE Ports	GE Ports	Combo (SFP&TX)
AE80-24FE-SFP-2GE	24 FE SFP	-	2 GE Combo
AE80-24GE-SFP	-	20 GE SFP	4 GE Combo
AE80-24GE-TX	-	20 GE TX	4 GE Combo
AE80-48FE-TX	48 FE TX	-	-
AE80-48GE-TX	-	48 GE TX	-
AE80-48GE-SFP-MPLS	-	48 GE SFP	-
AE80-1TE-XFP	-	1 10GE XFP	-
AE80-2TE-XFP	-	2 10GE XFP	-
AE80-4TE-XFP	-	4 10GE XFP	-
AE80-SC-096	AE8000 Switching Control Unit - for AE8003/AE8006, 96G		
AE80-SC-192	AE8000 Switching Control Unit - 192G		
AE80-SC-384	AE8000 Switching Control Unit - 384G		

AS3000 1RU P2P Headend Aggregation Switches

Features

- Gigabit Ethernet P2P Headend
- High performance L2/L3 switching with IPv6 supported
- Switching fabric Supporting Up to 280 Gbps passive backplane Capacity
- Up to 48 x 10 Gbps uplinks with SFP+ ports with link aggregation
- High density Gigabit Active Ethernet FTTH platform supports up to 48 subscribers per 1RU chassis
- High-level security supporting extended ACL, DAP, RADIUS, and Intelligent ARP defence
- Supports Active Ethernet technology with FE and GE subscriber lines
- IPTV and Video Overlay supported
- Strict QoS with 802.1p, Diffserv, and L2-L3 flow classification
- Wire-speed filtering and forwarding with up to 480 Mbps capacity
- Shelf management for monitoring and control via network. Both CLI and SNMP access
- Advanced routing and switching features
- RADIUS-based broadband management and customer SLA control
- Low power consumption to save maintenance and services cost
- RPS redundant power interface

AS3600 Full 10G Switches Specifications

	AS3624S
10G bps ports	24 SFP+
40G bps ports	2 QSFP
Combo 1G TX & SFP ports	N/A
Backplane bandwidth, bps	640G
Throughput, pps	480M
Physical Size (WxDxH)	437.5×360×44 mm
Power Consumption	120W

AS3200 1G/10G Switches Specifications

	AS3232S
1GE bps SFP ports	24 SFP
10GE bps SFP+ ports	8 SFP+
1GE bps TX ports	8 TX
Backplane bandwidth, bps	192G
L3 Forwarding Rate, pps	77M
Physical Size (WxDxH)	442.5×375×44 mm
Power Consumption	80W

AS2300 1G/10G Switches Specifications

	AS2328S
Processor	MIPS32
10/100/1000 Base-T Ports (TX)	0
1000Base-X Ports (1G SFP)	28
Combo TX/SFP 1G ports	4
Switching Capacity	64 Gbps
Packet Forwarding Rate	42 Mpps
Dimensions (WxDxH)	440x180x44 mm
Power Consumption	<45 W

AT5200 FTTX Multiport EDFA (PON OLT & COM)

Features

- Video-Overlay for FTTx applications
- Up to 64 output ports
- Low noise, high performance
- Intuitive front panel LCD display
- Optional built-in optical switch
- Redundant power
- Universal management through craft interface and SNMP

Specifications

Wavelength	1540 to 1563nm
Input power, dBm	-10 to 10, 3dBm typical
Maximum output power, dBm	19dBm per port
Output Power Stability, dB	±0.5
Noise Figure, dB (PIN=0dBm)	<5 (o/p<19dBm)
Power Supply	90 to 265 VAC or 30 to 72 VDC
Dimensions (W x D x H)	483x368x88 mm, 19x14.5x3.5 inch
Wavelength	1540 to 1563nm

AON120 FTTH Mini Node Series

Features

- 1 GHz FTTG optical receiver
- High output 82dBuV
- Compact housing
- Optical AGC
- Optional FTTH PON upgrade port
- Low power consumption
- LED status indicators

Specifications

Optical Wavelength (Forward Path)	1540 to 1560nm, 1550nm center
RF Bandwidth	47 to 1002MHz
Optical Input Power	-12 to +3dBm
Output Level	82dBmV (@-2dBm)
CNR	48.5dB (60ch PAL loading, -8dBm receive)
CSO/ CTB	-66dBc/-60dBc
Operating Temp	-40 to 60 °C
Dimensions (W x D x H)	59 x 98 x 23 mm, 2.3x3.9x0.9 inch

FTTH PON, RFoG WDM Optical Passive Specification

Optical wavelength	1260 nm to 1360 & 1480 to 1620 nm 1540 to 1560nm (CATV)
Channel spacing	20 nm
Channels	≥14nm
Channel pass band	CW±7.5nm, DWDM ITU ±0.25nm
Pass band flatness	≤ ±0.5 dB
Insertion Loss 1x24 Coupler	16.7dB (CATV - COM), 0.8 (COM – PON)
Insertion Loss 1x32 Coupler	18dB
Insertion Loss 8 ch	2.5 dB Max
Adjacent channel isolation	≥ 35 dB (CATV – COM)
Directivity	≥ 50 dB
Return loss	≥ 45 dB
Operating Temp, °C	-10 to 70
Storage Temp, °C	-40 to 85
Power Supply	90 to 265 VAC or 30 to 72 VDC
Operating relative humidity, %	5 to 95
Dimensions (W x D x H)	1RU: 470x225x44 mm, 19x9x1.75 inch

WSC710 Enterprise-Level Intelligent WAC Controllers

Features

- Wireless Access for FTTx applications
- Centralized wireless network management
- Seamless roaming characteristics
- Secure access wireless network
- Layer-2 and layer-3 roaming functions
- All-round QoS mechanism
- Diversified connection and authentication interface

Specifications

Model	WSC710-X32B
Ports	1 × CON 1 × USB 2.0 2 × GE Combo 8 × GE Base-T ports
Operation Keys	Reset
AP Access	Built-in 32 × Lic
User Access	Recommend ≤1K
Data Throughput	≥512 Mbps
Dimensions (W×D×H)	300 mm × 200 mm × 44 mm
Weight	≤1.8 kg
Power Supply	220 V AC
Average Power Consumption	≤36 W
Operating Temperature	0 °C to 50 °C
Operating Humidity	5% to 95 % RH (non-condensing)

WAP310 Ceiling Mounted Intelligent Wireless Access Point

Features

- 1 GHz FTTG optical receiver
- High output 82dBuV
- Compact housing
- Optical AGC
- Optional FTTH PON upgrade port
- Low power consumption
- LED status indicators

Specifications

Model	WAP310-GE
Ports	1 × GE WAN port 2 × GE LAN ports
Operation Keys	RESET key
Wireless Modules	2 × wireless modules 802.11a/b/g/n/ac MIMO 2 × 2
Antenna	Built-in antenna 3 dBi
Output Power	24 dBm/path
Size	180 mm × 180 mm × 25 mm
Operating Humidity	5% to 95 % RH (non-condensing)

AH1000 Converged High Density Headend Platform

Features

- High density modular design
- Up to 16 modules in 3RU chassis
- Comprehensive modules (1310 & 1550nm)
- Low power consumption
- FTTH Video Overlay applications
- Redundant power
- USB local monitoring
- Universal Mgmt via SNMP interface

Specifications

Chassis	19" EIA, 3RU
Operating Temp, °C	0 to 50
Storage Temp, °C	-40 to 70
Operating relative humidity, %	5 to 85 non condensing
Dimensions (W x D x H)	483x420x176 mm

AH10-PS-AC or DC Power Supply

Features

- 90 to 264 VAC wide range
- 24 VDC/300W output
- Hot-swap capability
- Built in power sharing circuit
- Auto-recovery short circuit protection
- Integrated fans for localized cooling
- LEDs for module status indication

Specifications

Input AC/DC VAC	85 to 264 VAC IEC Male or 36 to 60 VDC
Power Consumption W	24 VDC / 300W
Power Efficiency %	86 % @ 230 VAC or 84 % @115VAC to 60 VDC
Short Circuit Protection	Yes
Dimensions (W x D x H)	155x300x45mm

AH10-SMM System Management Module

Features

- Short circuit protection
- USB Port for local monitoring and setting
- RJ45 for communication with SNMP
- LEDs to indicate data access activity
- Hot-swap design
- Firmware field upgradeable

Specifications

Front LED	User Friendly Front Panel LED
SNMP Interface	RJ45, 10Mbps
Power Consumption W	5 Max
Dimensions (W x D x H)	483x420 x44mm
Weight, kg	1 kg

AH10-F3ST AH1000 Forward 1310 nm Transmitter

Features

- High performance distributed feedback (DFB) laser with pre-distortion circuit
- Hot-swap capability
- Bandwidth 45~1218 MHz
- Automatic/manual gain control
- Broadband and narrowband input
- RF input test point
- Short circuit protection

Specifications

Optical Wavelength	1310±20nm or CWDM
RF bandwidth	47 to 1218 MHz
Optical Output Power	2, 4, 6, 8, 10, 11, 12, 13, 14, 15dBm
CNR	52dB (77ch NTSC, 15km fibre, -1dBm receive)
CSO /CTB	-63dBc/-67dBc
RF Input Level	15±4dBmV
Dimensions (W x D x H)	25x380x138 mm

AH10-ARQR-ST/RD/RFoG AH1000 Quad Return RX

Features

- Four independent return path receivers
- Hot-swap capability
- Bandwidth 5~300 MHz
- 105dBuV output level
- 18 to 2dBm input optical power
- RFoG version with EIN 4 pA /√Hz
- Manual attenuation control
- RF output test point

Specifications

Wavelength	1200 to 1620nm
Optical Input Ports	4
Optical Input Level	-18 to 2dBm, -27 to -13dBm (RFoG)
RF Output Level (RD)	105dBuV (-7dBm with 16 % OMI, 0dB att)
RF Output Level (RFoG)	90dBuV (-13dBm with 10 % OMI, 28dB att)
RF Attenuation	30dB
CNR	50dB (0dB Pad, OMI = 16 %, -7dBm receive)
CSO /CTB	-55dBc/-60dBc
Power Consumption	≤10 W (14W RFoG)
Dimensions (W x D x H)	25x380x138 mm

AH10-F5ST AH1000 1550nm Direct Mod Transmitter

Features

- High performance distributed feedback (DFB) laser with pre-distortion circuit
- Bandwidth 47~1003 MHz
- Automatic/manual gain control (AGC/MGC)
- Broadband and narrowband input
- RF input test point
- OMI adjustment range: 10dB
- MGC scope: ±5dB

Specifications

Optical Wavelength	1550±10nm, ITU Ch
RF bandwidth	47 to 1003 MHz
Optical Output Power	6, 8, 10dBm
CNR	50dB (77ch NTSC, 20km fibre, -1dBm receive)
CSO/ CTB	-58dBc/-65dBc
RF Input Level	15±4dBmV
Dimensions (W x D x H)	25x380x138 mm

AH10-EDFA AH1000 Optical Amplifier

Features

- Video-Overlay for FTTx applications
- Cost effective single or dual output port
- Performance with pre-distortion circuit
- Redundant power supply
- Intuitive front panel LCD display
- Adjustable SBS
- Universal management through craft interface and SNMP

Specifications

Wavelength	1540 to 1560nm
Input power	-3 to 10 dBm
Output power	14dBm to 23dBm
Output Power Stability	±0.5dB
Noise Figure, dB (PIN=0dBm)	<5 (o/p<20dBm), <5.5 (o/p<23dBm)
Return Loss	40dB
Dimensions (W x D x H)	25x380x138 mm

AH10-RFAF AH1000 RF Amplifier

Features

- Forward RF single amplifier
- High linearity and low noise
- Front panel test point
- Single output port with up to 30dB gain
- 47 to 1003 MHz RF output
- 20 or 30dB Gain options
- Remote attenuation/slope control

AH10-RFSW AH1000 Forward RF Switch

Features

- A/B Style RF switch
- Hot swap plug-in module
- Bandwidth 5~1003 MHz
- RF level detection for auto matrix switching
- RF level monitoring for input and output
- Slope adjustment range from 0 to 4dB
- Remote monitoring and level setup

Specifications

Bandwidth	47 to 1003MHz
Return Loss	18dB
Gain	30/20dB ±0.6
ATT/SLOPE Range	0-9dB (0.5dB step)
Noise Figure	6.5@30dB Gain, 7.5@20dB Gain
CSO /CTB	-78dBc/-84dBc (40dBmV o/p, 77NTSC+75QAM)
Power Consumption	≤16 W
Dimensions (W x D x H)	25x380x138 mm

➢ More module types are available, such as Forward Receiver, 1550nm QAM transmitter, RF Switch, Fiber DCM etc.

AT5100 1RU XMOD 1/2 Output 1550nm Transmitter

Features

- Video-Overlay for FTTx applications
- Adjustable SBS 13dBm to 18dBm
- Low noise, high performance
- Low dispersion distortion
- Long distance CATV transmission
- Dual hot-swappable PS
- Status morning and control
- SNMP management

Specifications

Bandwidth	5 to 1003MHz
Return Loss	16dB
Insertion loss	<7dB
SLOPE Control	0-4dB
Frequency Response	±0.75dB
Switching Time	≤15ms
Power Consumption	≤2 W
Dimensions (W x D x H)	25x380x138 mm

AT5000 1RU EDFA High Performance Optical Amplifier

Features

- Video-Overlay for FTTx applications
- Up to 32 output ports
- Low noise, high performance
- Intuitive front panel LCD display
- Adjustable output
- Redundant power
- Universal management through craft interface and SNMP

Specifications

Wavelength	1540 to 1563nm
Input power, dBm	-10 to 10, 3dBm typical
Maximum output power, dBm	26dBm per port
Output Power Stability, dB	±0.5
Noise Figure, dB (PIN=0dBm)	<5 (o/p<19dBm), <6 (o/p<23dBm), <7 (o/p<26dBm)
Power Supply	90 to 265 VAC or 30 to 72 VDC
Dimensions (W x D x H)	483x368x44 mm, 19x14.5x1.75 inch

AT5000 1RU DMOD Forward 1550nm Transmitter

Features

- Video-Overlay for FTTx applications
- Cost Effective solution
- QAM DWDM overlay
- Analog and digital video
- Redundant power
- Intuitive Front Panel LCD Display
- Universal management through craft interface and SNMP

Specifications

Optical Wavelength	1550±5nm
RF bandwidth	47 to 1002 MHz
Optical Output Power	6, 9, 10dBm
CNR	51dB (60ch PAL, 10km fibre, 0dBm receive)
CTB /CSO	-63dBc/-57dBc
RF Input Level	15 to 25dBmV
Dimensions (W x D x H)	483x254x44 mm, 19x10x1.75 inch

AT5000 1RU 1310 nm Forward Transmitter

Features

- 1 GHz high performance DFB transmitter
- AGC/MGC
- Analog and Digital Video
- Single or dual RF inputs
- Redundant power
- Intuitive front panel LCD display
- Universal management through craft interfa and SNMP

Specifications

Optical Wavelength	1310nm
RF bandwidth	47 to 1002 MHz
Optical Output Power	2 to 15dBm
CNR	52dB
CTB /CSO	-70dBc/-63dBc
RF Input Level	15 to 25dBmV
Dimensions (W x D x H)	483x254x44 mm, 19x10x1.75 inch

AT5000 1RU Quad Return Receiver

Features

- Four independent return receiver
- Low noise, high performance
- Bandwidth 5~200 MHz
- Intuitive front panel LCD display
- RFoG Option available
- Redundant power
- Universal management through craft interface and SNMP

Specifications

Wavelength	1200 to 1620nm
Optical Input Ports	4
Optical Input Level	-18 to 0dBm(STD), -27 to -13dBm (RFoG)
RF Output Level	30 to 60dBmV
RF Return Loss	≥16dB
RF Attenuation	0 to 30dB
Dimensions (W x D x H)	483x368x44 mm, 19x14.5x1.75 inch

AT5000 1RU Optical A/B Switch

Features

- Laser/fiber protection
- Low insertion loss
- Switching speed <10ms
- Manual/automatic mode
- Redundant power
- Intuitive front panel LCD display
- Universal management through craft interface and SNMP

Specifications

Optical Wavelength	1260-1360nm or 1510-1610nm
Optical Output Power	-30 to -20dBm or -10 to +10dBm or +10 to +30dBm
Total Optical Insertion Loss	2.0dB
Switch Time	≤10ms
Optical Switch Loss	≤1.0dB
Dimensions (W x D x H)	483x254x44 mm, 19x10x1.75 inch

➢ More module types are available, such as Forward Receiver, 1550nm QAM transmitter, RF Switch, Fiber DCM etc.

AON2200 2 or 4-Port 2x2 Node Platform

Features

- 1 GHz Bandwidth
- 4 high outputs (50dBmV)
- Linear equalizer using JXP PAD for slope adjustment
- Suitable for MDU, SMB
- GaAs technology
- 5 module slots, 2 RX, 2 TX, 1 TXP
- Modular return transmitter (FPi or DFBi, CWDM, DWDM, optional burst mode)
- 15 Amp power passing
- LED status indicators
- HMS transponder

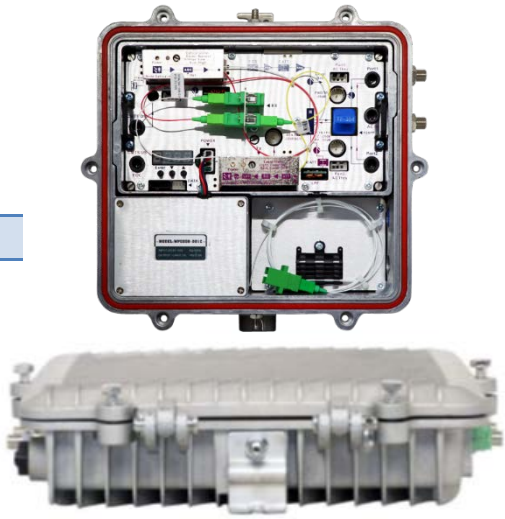
Specifications (Forward and Return)

Optical Wavelength (Forward Path)	1200 to 1600nm
RF bandwidth	54/85 to 1003MHz
Optical Input Power	-8 to +2dBm
RF Output Level	50dBmV @ 0dBm, 60 PAL, 3 % OMI
CNR	51dB (79ch NTSC, 20km fibre, -1dBm receive)
CSO/ CTB	-60dBc/-65dBc
Operating Temp	-40 to 60 °C
Dimensions (W x D x H)	297x220x156mm
Optical Wavelength (Return Path)	1310, 1550, CWDM
RF Bandwidth	5 to 42 MHz, 5 to 65 MHz
Output Power	3dBm (RF input > threshold)
RF Input Level threshold	15 to 25 dBmV
RFoG Burst Mode RTX NPR	20dBmV @ 30dB

AON121X 1 or 2-Port Cabinet Node Platform

Features

- 1.2 GHz bandwidth
- Deep fiber node with 1 or 2 high outputs
- Compact cabinet housing
- Suitable for MDU, SMB
- Built-in forward redundancy switch
- GaAs amplifier device
- SMT process production
- 1x108 dBµV or 2x104 dBµV
- Excellent AGC performance
- ONU module optional



Specifications (Forward and Return)

Operating Wavelength	1260 nm 1650 nm
Pass Wavelength	1540 nm to 1560 nm
Reflect Wavelength	<1540nm
	>1560nm
Insertion Loss	<0.7 dB
Isolation Com-Pass	>35 dB @1490, 1577 nm
Isolation Ref-Pass	>35 dB @1270, 1310 nm
Return Loss	>45 dB
Responsivity	>0.85 mA/mW
Connector	SC/APC
RF Bandwidth	5 to 42 MHz, 5 to 65 MHz
Output Power	3dBm (RF input > threshold)
RF Input Level threshold	15 to 25 dBmV

ARF220 Series 2-port Trunk or Line Amplifier

Features

- 1 GHz RF Spectrum
- Suitable for deep fiber architecture
- 1 or 2 high outputs
- Compact housing
- Suitable for MDU application
- 2x108dBuV
- GaAs technology
- F-type, 5/8-inch UNEF, IEC Connector

Specifications

RF Bandwidth	54 to 1002 MHz
RF Output Power	108dBuV@1002MHz 98dBuV@54MHz
RF Return Bandwidth	5 to 42, 5 to 65MHz (Diplex Filter)
RF Gain Forward	≥33dB (1 and 2 ports)
RF Gain Return	≥23dB (1 and 2 ports)
Noise Figure	5dB
CSO /CTB	-67dBc/-75dBc
Operating Temp, °C	-40 to 65
Dimensions (W x D x H)	257x203x142mm

ARF120 Series 2 port Trunk or Line Amplifier

Features

- 1218 MHz Bandwidth
- Cost effective
- 1 or 2 high outputs
- Compact housing
- Suitable for MDU application
- 1x112dBuV
- GaAs FET technology
- 10 Amp current passing
- Optional AGC

Specifications

RF Bandwidth	54 to 1002 MHz
RF Output Power	Standard 109dBuV @ 862MHz; 99dBuV @ 87MHz Max 112dBuV @ 862MHz
RF Return Bandwidth	5 to 42, 5 to 65MHz (Diplex Filter)
RF Gain Forward	≥36dB (1 and 2 ports)
RF Gain Return	≥20dB (1 and 2 ports)
Noise Figure	5dB
CSO/CTB	-65dBc/-70dBc
Operating Temp, °C	-40 to 65
Dimensions (W x D x H)	290x136x203mm

AM200 EoC Indoor Master and Client CPE

Features

- FTTB MDU application
- 7.5 to 65 MHz
- High quality CATV
- 350Mbps symmetrical
- EoC Master (Homeplug AV)
- IEEE 802.3, IEEE 802.3x, IEEE 802 3u Auto MDI
- VLAN, QoS, IGMP
- 1.25Gbps uplink
- 10/100Mbps LAN
- Support remote monitoring and SNMP

Specifications (AM242 EoC Master)

Fast Ethernet Ports	2x 10/100/1000Mbps Upstream
CATV RF Output	1 or 2 CATV Coaxial F Connector
CATV RF Input	1 or 2 CATV Coaxial F Connector
EoC Specification	HomePlug AV
Modulation	OFDM 1024/256/64/16/8-QAM, QPSK, BPSK
RF Bandwidth	7.5 to 65MHz
Typical EoC Link Range	1km
Receive sensitivity	-65dBm
Output Power	15dBm
Data Performance	
MAC Speed	350Mbps
Physical Layer Speed	500Mbps
Protocol	TDMA, CSMA/CA
VLAN/QoS	IEEE 802.1P, IEEE 802.1Q
Encryption	128-bit AES
General Specifications	
Operating Temp	-25 to 60 °C
Storage Temp	-40 to 70 °C
Power Supply	12V, 100 to 240 VAC Adaptor
Operating relative humidity,	10 to 90 %
Power Consumption	7 W
Dimensions (W x D x H)	162x 152 x 33 mm

Specifications (AC124 EoC Client/Slave)

Fast Ethernet Ports	4x 10/100Mbps LAN port
CATV RF Output	1 x CATV Coaxial F Connector
CATV RF Input	1 x CATV Coaxial F Connector
EoC Specification	HomePlug AV
Modulation	OFDM 1024/256/64/16/8-QAM, QPSK, BPSK
RF Bandwidth	7.5 to 65MHz
Typical EoC Link Range	1km
Receive sensitivity	-65dBm
Output Power	15dBm
Data Performance	
MAC Speed	350Mbps
Physical Layer Speed	500Mbps
Protocol	TDMA, CSMA/CA
VLAN/QoS	IEEE 802.1P, IEEE 802.1Q
Encryption	128-bit AES
General Specifications	
Operating Temp	-5 to 55 °C
Storage Temp	-40 to 70 °C
Power Supply	12V, 100 to 240 VAC Adaptor
Operating relative humidity,	10 to 90 %
Power Consumption	<7 W
Dimensions (W x D x H)	155x 108 x 27 mm

Optical Passives for HFC, FTTx & RFoG Solutions

Features

- Full line of optical passives and accessories
- WDM/CWDM/DWDM
- Optical splitters
- ITU G.694 standard compliant
- Excellent wavelength stability
- Cost effective solution
- High port isolation
- Low insertion loss
- Flexibility for customization

Optical Splitter Specifications

Optical wavelength	1260 nm to 1350 & 1460 to 1620 nm
Configuration	1x2, 1x3, 1x4, 1x8, 1x16, 1x24, 1x32
Channel pass band	≥ 14 nm
Insertion Loss 1 ch to 4 ch	Various (Ref Passive Datasheet)
Insertion Loss 1x8 Coupler	10.5dB
Insertion Loss 1x12 Coupler	12.5dB
Insertion Loss 1x24 Coupler	17dB
Insertion Loss 1x32 Coupler	18dB
Uniformity (dB)	≤1.2 (1x4); ≤1.8 (1x8); ≤2.0 (1x12); ≤3.0 (1x32)
Directivity	≥ 50 dB
Polarization Dependent Loss	≤0.2 (1x4); ≤0.3 (1x8); ≤0.3 (1x12); ≤0.5 (1x32)
Return loss	≥ 50 dB
Connectors	SC/APC, SC/PC, LC/APC, LC/PC
Fiber Types	900um, 2mm, or 3mm
Operating Temp, °C	-40 to 85
Storage Temp, °C	-40 to 85
Operating relative humidity, %	5 to 95
Dimensions (W x D x H)	Various by model
Weight, kg	Various by model
Ship weight	Various by model

Optical WDM, CWDM, DWDM, OADM Specifications

Optical wavelength	1260 nm to 1360 & 1480 to 1611 nm (CWDM) 1520 to 1580nm (DWDM)
Channel spacing	20 nm (CWDM) 100 or 200 GHz (DWDM)
Channels	2, 4, 6, 8, 10, 12
Channel pass band	CW±7.5nm, DWDM ITU ±0.25nm
Pass band flatness	≤ ±0.5 dB
Insertion Loss 2 ch	1.2 dB Max
Insertion Loss 4 ch	1.7 dB Max
Insertion Loss 8 ch	2.5 dB Max
Adjacent channel isolation	≥ 30 dB
Non-adjacent channel isolation	≥ 40 dB
Directivity	≥ 45 dB
Return loss	≥ 45 dB
Operating Temp, °C	-40 to 85
Storage Temp, °C	-40 to 85
Operating relative humidity, %	5 to 95
Dimensions (W x D x H)	Various by model
Weight, kg	Various by model
Ship weight	Various by model

Optical Splice Enclosure & Distribution Frame

Features

- High strength, low weight, non-metallic shell
- Aerial, underground or direct burial application
- Holds up to 144 splices
- Cable entry/exit ports
- RoHS compliant
- Standard 19” cabinet design frame
- Fiber management with easy installation
- Reliable restricting and positioning
- Patent design for fiber protection
- 12 core fiber distribution

Optical Splice Enclosure Specifications

Sealing structure	Heat-shrinkable Sealing
Maximum Splices Capacity	24 to 144
Core Capacity per Tray	24
Cable Ports	9
Cable Diameter (max)	Φ38mm
Dimensions (DxH)	ϕ470×210mm
Model Number	AOP-HSE-9-xx (xx: splices)
Operating Temp, °C	-40 to 85
Storage Temp, °C	-40 to 85
Operating relative humidity, %	5 to 95

Optical Distribution Frame Specifications

Material	1.5mm thick cold-rolled sheet, 1 to 4RU
Insertion Loss	≤0.5dB
Optical Connector	AS: SC/APC; US: SC/UPC; AF: FC/APC or UF: FC/UPC
Return Loss	PC≥40dB, UPC≥50dB, APC≥60dB
Model Number	AOP-ODF-DXX-YY (XX:36, 48, 72, 96 Fiber, YY: Optical Connector)
Operating Temp, °C	-40 to 85
Storage Temp, °C	-40 to 85
Operating relative humidity, %	5 to 95
Insertion Loss	≤0.5dB

RF Line Passives, Taps, Splitters and Filters

Features

- Two-way passives
- RF pass band of 5 MHz to 1 GHz
- Corrosion-resistant
- Die-cast aluminum housing
- Stand, pole, or pedestal mounting
- Variety of installation configurations
- Accept up to 1-inch diameter coaxial cable
- Easy troubleshooting
- Simple field replacement
- AC power-passing capability

Specifications

RF Frequency	5 to 1002MHz
Tap Loss	±1.2 dB
Insertion Loss	Various by models
Impedance	75Ω
Return Loss	Various by models
Return Isolation	Various by models
Connectors	Metric or Imperial Type
Current Passing	≥14A
Operating Temp	-40 to 85 °C
Dimensions (W x D x H)	Various, check with ACT Sales Professionals

Plug-in Optical ATT, Patch Cords, Pigtails and Adaptors

Features

Optical Attenuator Specifications

Operating wavelength	1310nm ±40nm & 1550nm ±40nm
Attenuation Level	XX: 01, 02, 03…30dB in 1 dB step
Attenuation Accuracy	±10 %
Optical Connector	AS: SC/APC; US: SC/UPC; AF: FC/APC or UF: FC/UPC
Model Number	AOP-ATT-XX-YY (XX: Attenuation; YY: Optical Connector)

Optical Patch Cord Specifications

Fiber Type	3mm Single Mode
Fiber Length	02: 2m, 05: 5m, 10: 10m, 30: 30m
Insertion Loss	≤0.5dB
Optical Connector	AS: SC/APC; US: SC/UPC; AF: FC/APC or UF: FC/UPC
Model Number	AOP-PCD-XX-YY-ZZ (XX, YY: Optical Connector, ZZ: Fiber Length)

Optical Pigtail Specifications

Fiber Type	3mm Single Mode, Connectorized on one end and bare on other
Fiber Length	02: 2m, 05: 5m, 10: 10m, 30: 30m
Insertion Loss	≤0.25dB
Optical Connector	AS: SC/APC; US: SC/UPC; AF: FC/APC or UF: FC/UPC
Model Number	AOP-PGT-XX-ZZ (XX: Optical Connector, ZZ: Fiber Length)

Optical Adaptor Specifications

Optical Connector	AS: SC/APC; US: SC/UPC; AF: FC/APC or UF: FC/UPC
Insertion Loss	Various by connector types
Optical Connector	AS: SC/APC; US: SC/UPC; AF: FC/APC or UF: FC/UPC
Model Number	AOP-ADP-XX-YY (XX, YY: Optical Connector)

General Specifications

Operating Temp, °C	-40 to 85
Storage Temp, °C	-40 to 85
Operating relative humidity, %	5 to 95
Weight, kg	Various by model types

AQ1000 Universal Edge QAM Modulator

Features

- 1 GHz bandwidth
- High density 1RU platform
- IPTV, VOD, DOCSIS 3.0, SDV
- 48 or 96QAM channels
- 8x1000Base-T uplink
- MPEG-2/MPEG-4/H.264 /HDTV/SDTV
- Support both SD and HD channels
- ITU-T J.83 Annex A/B
- Optional DVB-CA and Scrambling
- Internal Web server
- SNMP management

Specifications (Forward and Return)

Standard Format	ITU-T J.83AnnexA(DVB)/Annex B(ATSC)
QAM Signal Constellation	64QAM/128QAM/256QAM
Frequency Range	50-1000MHz
MER	MER ≥ 40dB(pre-EQ), MER ≥ 45dB (post-EQ)
SNR	SNR≥58dB
Output Level	1ch 120dBmV; 2ch 117dBmV; 3ch 115dBmV; 4ch 113dBmV;
Physical Input Ports	4xSFP+4xRJ45
Protocol	IP, UDP, IGMP supported
Redundancy	4+4
Supported SFP	Optical 850, 1310, 15xxnm, Electrical 1000Base-T
Optical Return Loss	Support for power SFP:1000Base-T
Operating Temp	0 to 40 °C
Storage Temp	-40 to 70 °C
Dimensions (W x D x H)	483x522x43mm

AS800/900 IP/Android Based IPTV OTT Set Top Box

Features

- IP/Android-based OTT STB
- H.264 SD Decoding
- IPTV enhanced video
- Multicast, VOD, SDV and Internet access
- Flexible audio and video outputs
- Maximum bandwidth efficiency
- Integration to IPTV system
- Remote management
- Plug and Play
- Easy installation and setup

Specifications

Video Decoding Standards	H.264/AVC, MPEG2 (optional)
Video Form	PAL / NTSC
Audio Decoding Standards	MPEG (Layer1, 2), MP3, AAC /Dolby (optional)
Standards	IEEE 802.1, 802.3, IP Protocol: IPv4
Network Protocol	TCP/IP, HTTP, POP3, DHCP, DNS, FTP, NTP, SSL, PPPoE, SNMP, SMTP
Streaming Protocol	Multicast IPTV (IGMP) Video On Demand (RTSP/RSVP control) VOD: FCC multicast and ARQ VOD: Support listing QoS (optional)
Transport Protocol	TS over UDP, TS over RTP
Operating Temp	-40 to 60 °C
Dimensions (W x D x H)	260x220x120mm

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