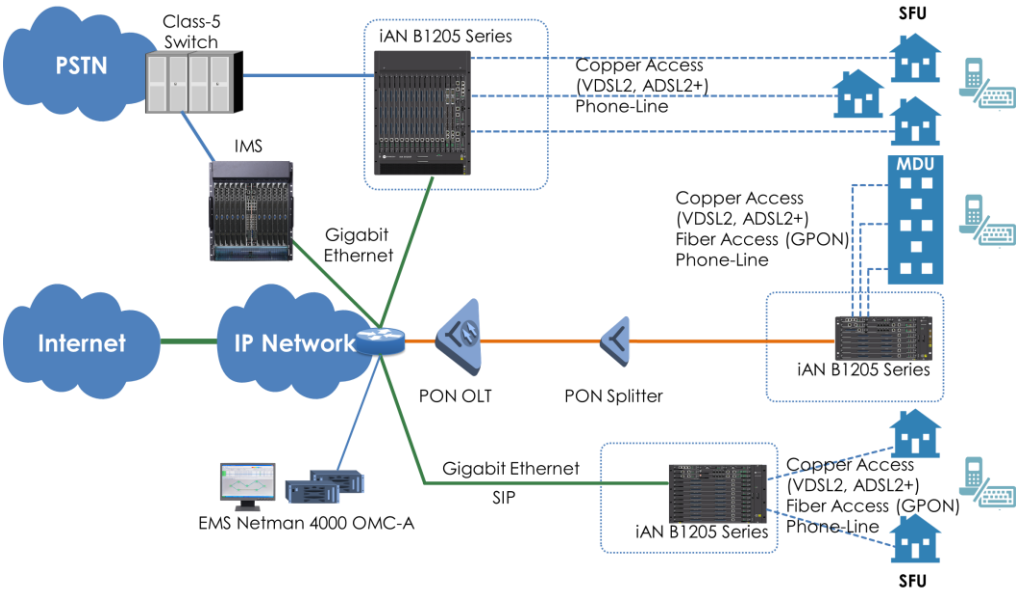
iAN B1205V

Multi-Service Access Node

Features

- VERSATILE INTERFACES: GPON OLT, VDSL2 COMBO WITH VECTORING
- TRANSPORT/TRUNK: 10GE, GE
- IP BASED APPLICATIONS
- QOS
- UP TO 100MBPS CAPACITY PER VDSL2
- MODULAR ARCHITECTURE
- 5RU CHASSIS
- REDUNDANCY FOR SWITCHING, CONTROL, & POWER MODULES
- BUILT-IN LOOP TEST FOR VOICE-BAND AND BROADBAND

A VERSATILE MSAN PLATFORM FOR IP BASED APPLICATIONS



Description

The iAN B1205 Series is a cost effective & versatile Digital Loop Carrier (DLC) and Multi Service Access Node (MSAN) solution from UTStarcom that provides a unique set of capabilities enabling service providers to deliver the most competitive triple-play service offerings. It enables service providers to smoothly migrate to IP based next-generation applications while continuing to offer traditional TDM based services to customers.

The B1205V supports a range of technologies such as GPON, VDSL2 with vectoring and voice which allows service providers to serve highly interactive and bandwidth intensive applications. B1205V acts as a GPON OLT, IPDSLAM, Media Gateway platform integrated into a single device and supports seamless migration from V5/AN to VoIP/AG and IMS Access.

The platform provides a wide range of customer interfaces with unique flexibility in network design:

- SIP, H.248/MEGACO VoIP-based Basic services
- Supplementary services and Centrex services
- T.30, T.38 Fax Relay over IP
- GPON OLT interface
- Hot-redundant Control card, power card, uplink card, 2 clock input and 2 clock output
- State of the art proven Netman 4000 OMC-A EMS
- VDSL2 support as per ITU-T standards
- GPON supports as per ITU-T standards
- IPTV applications using xDSL or GPON
- Support IPV4, IPV6.

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WWW.UTSTAR.COM

UTStarcom, Inc.
1732 North First Street, Suite 220
San Jose, California 95112, USA
T: +1 408 453 4557
F: +1 408 453 4046

A global telecom infrastructure provider of innovative carrier-class broadband transport and access solutions.

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Product Highlights

- SIP, H.248/MEGACO VoIP-based Basic services
- Supplementary services and Centrex services
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- GPON OLT interface
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- State of the art proven Netman 4000 OMC-A EMS
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- GPON supports as per ITU-T standards
- IPTV applications using xDSL or GPON
- Support IPV4, IPV6

Technical Specifications

SHELF CONFIGURATION

- 12 slots per chassis
- 2 slots for redundant Control & Switching Module 3 Flexible slots for: Peripheral Control Unit (PCU)
- 5 universal slots for Subscriber modules: GPON, VDSL2 combo
- 2 slots for redundant Power Modules (POW)

UPLINK CAPACITY (SINGLE CHASSIS)

Per CSM card	2*10GE + 2*1GE
Per chassis	4*10GE + 4*1GE

CALL CAPACITY

20K BHCA

Backplane CAPACITY

200 G

SIGNALING PROTOCOLS

SIP, H.248

FAX/MODEM

T.30, T.38 Fax and Modem

MEDIA PROCESSING

G.711, G.729 A/B, G.723.1,G.726-32, RFC2833
Echo cancellation based on ITU-T G.168
Voice Activity Detection (VAD), Comfort Noise Generation (CNG), SNR
RTP/RTCP

LAYER 2 CAPACITY & PROTOCOLS

TR101 compliance, Wire-speed switching engine, 16K forwarding table, Rapid Spanning tree (IEEE 802.1 W) ,VLAN (IEEE 802.1Q/802.1ad)
IGMP snooping (v1/v2/v3) , IGMP proxy (v1/v2/v3)
QoS (802.1p, IP TOS, DSCP, flow based classification, shaping etc.)
802.3ad, Link aggregation, Port mirroring, MAC filter

IP-xDSL INTERFACES

VDSL2 (ITU-T G.993.2 - Profile 8a,8b,8c, 8d,12a, 2b, 17a)
VDSL2 G.Vector (ITU-T G.993.5 – Profile)

VOIP INTEROPABILITY

Interoperates with mSwitch and 3rd party IMS/soft-switch platforms that comply with IETF/ITU-T standards, including but not limited to Alcatel-Lucent, Huawei, ZTE, UTStarcom, Nokia-Siemens, Sonus, Nortel, Comverse, Teklec, OKI, Teligent, and Broadsoft

MANAGEMENT

EMS Netman 4000 OMC-A
North Bound Interface (NBI)
SNMP based network management

REMOTE TESTING

- Remote line testing with metallic loop for subscriber lines, Line card testing & Subscriber telephone tests
- SELT/DELT

VDSL SPECIFICATIONS

Provides 48 VDSL combo ports per VDSL card
VDSL standards:

- Profiles 8a, 8b, 8c, 8d; profile 12a, 12b; profile 17a of ITU-T G.993.2
- VDSL vectoring features, support ITU-T G993.5
- Auto fallback VDSL2/ADSL2+/ADSL2/ADSL
- OLR of SOS
- Impulse Noise Monitoring (INM)/Protection(INP)
- PHY-R
- Up to 100 Mbps downstream data rate
- Up to 50Mbps upstream data rate
- Line bonding
- PTM mode/PTM-TC/EFM
- US0 of type A or type M when US0 is enabled
- Fixed Rate and Rate Adaptive
- Standard RFI configuration
- Power back off (UPBO & DPBO)
- Limit PSD Mask
- Dying Gasp

Layer-2 switching:

- 4K MAC address table
- MAC address limit per bridge port
- N:1 VLAN translation
- MAC limit per VDSL user port and per C-VLAN
- MAC limit up to 512 per VDSL user port
- Tx/Rx traffic statistics per VLAN at WAN port
- Semi-static MAC address learning
- All scenarios of VLAN architecture per TR-101

QoS:

- Priority marking based on packet classification, bridge port, VLAN translation
- 8 queues in DSL port
- 8 queues in WAN port
- Traffic shaping by srTCM or trTCM
- Flow-based rate limit for bridge port, DSL port

Multicast:

- IGMP snooping v1/v2/v3
- Up to 512 multicast groups per module
- Multicast VLAN and cross VLAN multicast
- IGMP group count limiting per VDSL port

Security:

- Flooding Control
- MAC address spoofing
- MAC address flooding
- MAC filtering
- DHCP filter
- Gateway ARP spoofing
- IP spoofing prevention
- Access Control List (ACL)
- CPU protection

Access loop identification:

- DHCP Option82
- PPPoE+, PPPoE Relay

Management and Maintenance

- Supports SELT/DELT and diagnostics
- Integrated management by the CSM, with in-band communication
- Debug interface on the faceplate
- Loopback diagnostics on VDSL2 interface

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GPON Specifications

PON FEATURES

PON

- Satisfy ITU -T standard
- TR-101 compliant solution for FTTx OLT applications
- Logical splitter ratio is up to 1:64
- Logical reach is up to 60km
- Support uplink FEC, downlink FEC(Forward Error Correction)
- ONU identifier authentication: SN
- Bandwidth allocation mechanism
- 5 types of T-CONT bandwidth
- Static Bandwidth Allocation
- Dynamic Bandwidth Allocation
- GPON feature parameter
- 4096 port-IDs per GPON MAC (Downstream and Upstream)
- 1024 Alloc -IDs per GPON MAC (Upstream)

PON L2 FEATURES

MAC

- MAC Black Hole
- Port MAC Limit

VLAN

- 4K VLAN entries
- Port-based/MAC-based/IP subnet-based VLAN
- Port-based QinQ and Selective QinQ (StackVLAN)
- VLAN Swap and VLAN Remark and VLAN Translate
- GVRP
- Based on ONU service flow VLAN add, delete, replace

Spanning tree protocol

- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol instances (MSTP)

Port

- Bi-directional bandwidth control
- Static link aggregation and LACP (Link Aggregation Control Protocol)
- Port mirroring and traffic mirroring

PON IP ROUTING FEATURES

- ARP Proxy
- DHCP Relay
- DHCP Server
- Static route
- Support IPV6

SECURITY FEATURES

User security

- Anti-ARP-spoofing
- Anti-ARP-flooding
- IP Source Guard create IP+VLAN+MAC+Port binding
- Port Isolation
- MAC address binds to port and port MAC address filtration
- IEEE 802.1x and AAA/Radius authentication
- TACACS+ authentication
- DHCP anti-attack flood attack automatic suppression
- ONU isolation control
- ACL based on MAC address, IP address, protocol ID, UDP/TCP port number, Ethernet type
- ARP/DHCP broadcast

Device security

- Anti-DOS attack(such as ARP , Syn flood, Smurf, ICMP attack), ARP detection, worm and Msblaster worm attack
- SSHv2 Secure Shell
- SNMP v3 encrypted management
- Security IP login through Telnet
- Hierarchical management and password protection of users

Network security

- User-based MAC and ARP traffic examination
- Restrict ARP traffic of each user and force-out user with abnormal ARP traffic
- Dynamic ARP table-based binding
- Supports IP+VLAN+MAC+Port binding
- L2 to L7 ACL flow filtration mechanism on the 80 bytes of the head of user-defined packet
- Port-based broadcast/multicast suppression and auto-shutdown risk port
- URPF to prevent IP address counterfeit and attack
- DHCP Option82 and PPPoE+ upload user's physical location
- Plaintext authentication of OSPF, RIPv2, and MD5 cryptograph authentication

Product Details

SYSTEM CHASSIS

Dimensions	482.6mm x 260mm x 221mm WxDxH
Weight	9.2kg
Mounting	19" inch Rack mount, 5RU

POWER

Power supply	-48V DC power module with over current/surge protection
DC Input	-40V to -60V DC
Power supply features	Supports 1+1 hot redundancy, Reverse polarity protection, Lightning Protection
Power failure alarms	-48V power supply alarm, +3.3V power supply/Ringer alarm
System power consumption	< 500W (varies as per the configuration of cards)
Typical power consumption	350W (varies as per the configuration of cards)

ENVIRONMENTAL

Operating temperature	-10°C to +55°C
Operating humidity	5% to 85%, short term 5% to 95%
Operating acoustical noise	≤ 75 dBA
Storage temperature	-40°C to 70°C
Storage humidity	≤75%
Altitude	60 meters below to 3,962 meters above sea level
Dust Density	3 x10^4 per cubic meter (diameter > 5μm)

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GPON Specifications

PON SERVICE FEATURES

ACL

- Standard and extended ACL
- Time Range ACL
- Packet filter providing filtering based on source/destination MAC address, source/destination IP address, port, protocol, VLAN, VLAN range, MAC address range, or invalid frame. System supports concurrent identification at most 50 service traffic
- Support packet filtration of L2 ~ L7 even deep to 80 bytes of IP packet head

QoS

- Rate-limit to packet sending/receiving speed of port or self-defined flow and provide general flow monitor and two-speed tri-color monitor of self-defined flow
- Priority remark to port or self-defined flow and provide 802.1P, DSCP priority and Remark
- CAR(Committed Access Rate), Traffic Shaping and flow statistics
- Packet mirror and redirection of interface and self-defined flow
- Super queue scheduler based on port and self-defined flow. Each port/ flow supports 8 priority queues and scheduler of SP, WRR and SP+WRR.
- Congestion avoid mechanism, including Tail-Drop and WRED

Multicast

- IGMPv1/v2/v3
- IGMPv1/v2/v3 Snooping
- IGMP Filter/128 filtering profile
- MVR and cross VLAN multicast copy
- IGMP Fast/Intermediate leave
- IGMP Proxy
- PIM-SM/PIM-DM/PIM-SSM
- PIM-SMv6, PIM-DMv6, PIM-SSMv6
- MLDv2/MLDv2 Snooping
- Static multicast forwarding

PON MAINTENANCE FEATURES

Network maintenance

- Telnet-based statistics
- RFC3176 sFlow
- LLDP
- 802.3ah Ethernet OAM
- RFC 3164 BSD syslog Protocol
- Ping and Traceroute

Device management

- Command-line interface (CLI) , Console, Telnet and WEB configuration
- System configuration with SNMPv1/v2/v3
- RMON (Remote Monitoring)1/2/3/9 groups of MIB
- NTP(Network Time Protocol)

Product Details

REGULATORY COMPLIANCE

EMI/EMC:
CE Class A, VCCI Class A
FCC part 15, sub part B, class A

Safety:
IEC 60950 UL 60950 EN 60950

Surge/Lighting protection:
ITU-T K.20
YDT1082-2000

RoHS Compliant

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