Product Description

GTP Filtering and Sampling

Aster XGB A-818/A-820 Load Balancer and Adapter **consistently reduce the amount of traffic to the monitoring tools**, while keeping the integrity of the user data flows intact.

They implement a **powerful GTP correlation engine**, which performs stateful correlation of GTP-C with GTP-U messages, based both on the subscriber ID (IMSI) and the corresponding tunnel ID (TEID), with session-aware filtering and sampling capabilities.

Aster XGB A-818/A-820 can filter GTP traffic session-based and feed the monitoring tools with the amount of traffic they support, at the same time sending all the flows belonging to the same subscriber to the same probe.

Furthermore they perform **session aware sampling**, sending the requested amount of traffic to the output ports by keeping intact subscriber's flows. Sampling percentage available are 25%, 50%, 75%.

Aster A-818 XGB GTP Load Adapter

Aster A-820 XGB GTP Load Adapter

Key features

- Up to **2x100Gb/s and 20x1/10Gb/s or 40x1/10Gb/s** input/output balancing ports,

- **Manage 100Gb/s** total traffic and up to **10 million concurrent tunnels,**

- **Perform stateful correlation, load balancing, session aware filtering and sampling** of GTP traffic,

- **Recognize "no GTP"** traffic and balance it towards some specific monitoring ports or to the same ones used for the GTP traffic,

- **Network protocols and interfaces:**

  * GTPv1-C, GTPv2-C, GTPv1-U,
  * 2G,3G,4G interfaces,
  * IPV4 and IPV6 supported,
  * IP packet fragmentation managed

- **Device Management**:

  * CLI and GUI for local and remote management,
  * Real time statistics, counters and SNMP alarms.

Highlights

- **Reduce CAPEX investments** on traditional monitoring solution, as you can keep using your current tools - with ever growing GTP traffic – by simply reducing their input load;

- **Ensure complete visibility into subscriber experience** as XGB Load Adapter can filter all the incoming traffic performing session-aware correlation of the whole GTP traffic;

- Support **100Gb/s interfaces,** which are currently used by service providers to cope with ever growing traffic.

Filtering Criteria

- IMSI White/Black List
- GTP
- GTP-U
- GTP-C
- GTP-Cv1
- GTP-Cv2
- GTP-V1
- GTP-V2
- GTP Correlated Packets
- APN White/Black List
- Inner IP White/Black List
- VoLTE

Microtel Innovation S.r.l.
Via Armentera 8,
38051 Borgo Valsugana TN (Italy)

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www.microtelinnovation.com
info@microtelinnovation.com

Aster A-818/A-820 XGB GTP Load Balancer — Technical Specification

	Aster A-818 XGB GTP Load Balancer	Aster A-820 XGB GTP Load Balancer
Input/Output Capabilities		
Input/Output ports	20x1/10Gb/s ports; 4x10Gb/s ports; 4x40Gb/s ports to be used as 16x10Gb/s ports, through breakout adapter	2x100Gb/s ports; 20x1/10Gb/s ports
Performances	Manage 100Gb/s total traffic and up to 10 million concurrent tunnels in 1U space	
Management		
Management port	1 x 10/100/1000 Mb/s with RJ45 connector	
Protocols	IPV4, IPV6, SNMPv2, TACACS+, HTTPS	
Statistics and Alarms	Real time statistics and counters available for each input/output port SNMP alarms	
Transceiver type		
Copper (SFP)	1000 Base T	
Singlemode (SFP/SFP+/QSFP+/	1000 Base LX (1310nm)/ 10Gb/s Base LR (1310nm)/ 40Gb/s Base LR-4 (1310 nm)	1000 Base LX (1310 nm)/ 10Gb/s Base LR (1310 nm)/ 100G Base LR-4 (1310 nm)/ 100Gb/s Base PSM4 (1310nm)
Multimode (SFP/SFP+/QSFP+/	1000 Base SX (850nm)/ 10Gb/s Base SR (850 nm)/ 40Gb/s Base SR-4 (850 nm)	1000 Base SX (850 nm)/ 10Gb/s Base SR (850 nm)/ 100Gb/s Base SR-4 (850 nm)
Breakout cable		
Singlemode	Breakout cable 1x40Gb/s (MPO/MTP connector) to 4x10Gb/s (8xLC connectors), OS1/OS2, Single	NA
Multimode	Breakout cable 1x40Gb/s (MPO/MTP connector) to 4x10Gb/s (8 x LC connectors), OM3, Multi-	NA
Breakout rack adapter		
Rack chassis	1U 19" chassis hosting up to 8 AML-14-xM adapters * *it can be used in mixed configuration as It can host both PluriTAP T-20 optical tap modules and AML-14 adapter modules	NA
Singlemode (AML-14-SM)	Adapter 1x40Gb/s (MPO/MTP connector) to 4x 10Gb/s (8 x LC connectors) OS1/OS2, Single Mode, (1310 nm) 9/125 um; MPO/MTP connector cable required	NA
Multimode (AML-14-MM)	Adapter 1x40Gb/s (MPO/MTP connector) to 4x 10Gb/s (8 x LC connectors), OM4, Multimode (850 nm) 50/125 um; MPO/MTP connector cable required	NA

Operating	Power	Dimensions	Regulatory
• Operating temperature: 0°C to 40°C • Relative humidity: min 0% max 95% not condensing	• 90-264 Vac ; 40-72 Vdc • Default redundancy with hot swap power modules	• Chassis 1U surface or 19" rack mount, 483 mm W, 406 mm D, 44 mm H • Weight: (fully equipped): 10 kg (22 lbs)	• FCC Part 15, Class A • CE Mark • UL 60950-1; EN 60950-1

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Via Armentera 8,
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info@microtelinnovation.com

Aster XGB A-818 GTP Load Balancer — Ordering Information

A-818-2416G	Aster A-818, 1U, 19" rack mount, with 20x1/10Gb/s in ports (L-SFP/L-SFP+ not included); 4x10Gb/s in ports (L-SFP+ not included); 4x40Gb/s ports to be used as 16x10Gb/s out ports (1xL-QSFP+ is needed every 4x10Gb/s ports, not included) - With traffic balancing capability up to 35Gb/s.
A-818-2812G	Aster A-818, 1U, 19" rack mount, with 20x1/10Gb/s in ports (L-SFP/L-SFP+ not included); 4x10Gb/s in ports (L-SFP+ not included); 1x40Gb/s ports to be used as 4x10Gb/s in ports (1xL-QSFP+ is needed, not included); 3x40Gb/s ports to be used as 12x10Gb/s out ports (1xL-QSFP+ is needed every 4x10Gb/s ports, not included) - With traffic balancing capability up to 35 Gb/s.
A-818-3208G	Aster A-818, 1U, 19" rack mount, with 20x1/10Gb/s in ports (L-SFP/L-SFP+ not included); 4x10Gb/s in ports (L-SFP+ not included); 2x40Gb/s ports to be used as 8x10Gb/s in ports (1xL-QSFP+ is needed every 4X10Gb/s ports, not included); 2x40Gb/s ports to be used as 8x10Gb/s out ports (1xL-QSFP+ is needed every 4x10G ports, not included) - With traffic balancing capability up to 35 Gb/s.
A-8xx-L-UPGP	Performance upgrade to 100Gb/s - works with all models A-818-xxxxx and A-820-xxxxx
PS1-3/850-AC	Redundant power supply AC
PS1-5/850-DC	Option: unit with redundant power supply DC
L-SFP-GT/J	SFP-GT/J 1000 Base T Copper with RJ-45 connector; enables 1x1G port
L-SFP-GS/L-24	SFP-GS/L-24 1000 Base SX (850nm) Multimode with LC connector; enables 1x1G port
L-SFP-GL/L-23	SFP-GL/L-23 1000 Base LX (1310nm) Single Mode with LC connector; enables 1x1G port
L-SFP+-HR/L-11	SFP+-HR/L-11 10 GE Base-SR (850 nm) Multimode with LC connectors; enables 1x10G port
L-SFP+-HP/L-14	SFP+-HP/L-14 10 GE Base-LR (1310 nm) Single Mode with LC connector; enables 1x10G port
L10-QSFP+-SR/M-4	QSFP+ SR-4 - 40G/4x10G Parallel Fiber - Multimode (850nm) with MPO/MTP connector; requires MPO/MTP connector to 8 x LC connectors adapter or breakout cable. Enables 4x10G port
L10-QSFP+-LR/M-4	QSFP+ LR-4 - 40G/4x10G Parallel Fiber - Single mode (1310nm) with MPO/MTP connector; requires MPO/MTP connector to 8 x LC connectors adapter or breakout cable. Enables 4x10G port
T-20-CH	1U 19" chassis hosting up to 8 AML-14-xM adapters
AML-14-3-MM	Adapter 1 x 40G (MPO/MTP connector) to 4 x 10G (8 x LC connectors), OM3, Multimode (850 nm) 50/125 um; MPO/MTP connector cable required
AML-14-4-MM	Adapter 1 x 40G (MPO/MTP connector) to 4 x 10G (8 x LC connectors), OM3, Multimode (850 nm) 50/125 um; MPO/MTP connector cable required
AML-14-SM	Adapter 1 x 40G (MPO/MTP connector) to 4 x 10G (8 x LC connectors) OS1/OS2, Single Mode, (1310 nm) 9/125 um; MPO/MTP connector cable required
CML-14-MM-2m	Breakout cable 1 x 40G (MPO/MTP connector) to 4 x 10G (8 x LC connectors), OM3, Multimode (850 nm) 50/125 um; 2m lenght
CML-14-SM-2m	Breakout cable 1 x 40G (MPO/MTP connector) to 4 x 10G (8 x LC connectors), OS1/OS2, Single Mode, (1310 nm) 9/125 um; 2m lenght
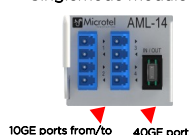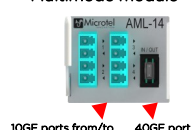
QSFP+ breakout cable adapter

Singlemode module

10GE ports from/to   40GE port

Multimode module

10GE ports from/to   40GE port

QSFP+ breakout rack adapter

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www.microtelinnovation.com
info@microtelinnovation.com

Aster XGB A-820 GTP Load Balancer — Ordering Information

A-820-02C08X-12X	Aster A-820, 1U, 19" rack mount, with 2x100Gb/s in ports (L-100-QSFP28 not included); 8x1/10Gb/s in ports (L-SFP/L-SFP+ not included); 12x10Gb/s out ports (L-SFP+ not included) - With traffic balancing capability up to 35 Gb/s.
A-820-02C04X-16X	Aster A-820, 1U, 19" rack mount, with 2x100Gb/s in ports (L-100-QSFP28 not included); 4x1/10Gb/s in ports (L-SFP/L-SFP+ not included); 16x10Gb/s out ports (L-SFP+ not included) - With traffic balancing capability up to 35 Gb/s.
A-820-20X-02C	Aster A-820, 1U, 19" rack mount, with 20x1/10Gb/s in ports (L-SFP/L-SFP+ not included); 2x100Gb/s out ports (L-QSFP not included) - With traffic balancing capability up to 35 Gb/s.
A-8xx-L-UPGP	Performance upgrade to 100Gb/s - works with all models A-818-xxxxx and A-820-xxxxx
PS1-3/850-AC	Redundant power supply AC
PS1-5/850-DC	Option: unit with redundant power supply DC
L-SFP-GT/J	SFP-GT/J 1000 Base T Copper with RJ-45 connector; enables 1x1G port
L-SFP-GS/L-24	SFP-GS/L-24 1000 Base SX (850nm) Multimode with LC connector; enables 1x1G port
L-SFP-GL/L-23	SFP-GL/L-23 1000 Base LX (1310nm) Single Mode with LC connector; enables 1x1G port
L-SFP+-HR/L-11	SFP+-HR/L-11 10 GE Base-SR (850 nm) Multimode with LC connectors; enables 1x10G port
L-SFP+-HP/L-14	SFP+-HP/L-14 10 GE Base-LR (1310 nm) Single Mode with LC connector; enables 1x10G port
L100-QSFP28-SR/M-4	QSFP28 for 100G Parallel Fiber - Multimode (850nm) with MPO/MTP connector. Enables 1x100G port
L100-QSFP28-PSM4/M-4	QSFP28 for 100G Parallel Fiber- Single mode(1310nm) with MPO/MTP connector. Enables 1x100G port
L100-QSFP28-LR4/L	QSFP28 for 100G LAN-WDM Single mode (1310nm) with LC connector. Enables 1x100G port

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info@microtelinnovation.com