Product Description

GTP Correlation and Balancing

Microtel Aster XGB (eXpert GTP Balancer) A-718/A-720 allow telecom operators to **monitor the whole incoming GTP traffic**, simply by adding new probes to the existing ones, and make the most of them **thanks to Aster XGB A-718/A-720 session aware balancing capabilities.**

Aster XGB A-718/A-720 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 load balancing distribution to the output port.

While Aster A-718 manages **up to 40x1/10Gb/s ports**, Aster A-720 has the capability **to manage also 2x100Gb/s interfaces**, key feature to cope with deployments where NEs uses 100Gb/s interfaces.

Key features

- Up to **2x100Gb/s and 20x1/10Gb/s or 20x1/10Gb/s and 20x10Gb/s** input/output balancing ports,

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

- Identify and correlate the subscriber's traffic flows inside the GTP tunnels, with **session-aware load balancing** to the output ports,

- **Perform stateful correlation** of GTP-C with GTP-U messages, based both on the subscriber ID (IMSI) and the related tunnel ID (TEID),

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

- **Device Management:**

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

- **Network protocols and interfaces**:

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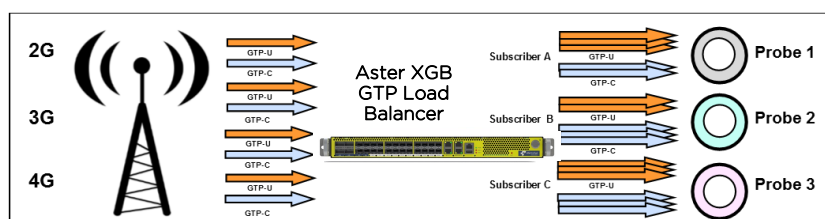

Aster A-718 XGB GTP Load Balancer

Aster A-720 XGB GTP Load Balancer

Highlights

- **Face the dramatic explosion of GTP data traffic, also in case it is overcoming** 100Gb/s in the same site, **by leveraging your existing Monitoring System**, as you can simply add more probes to manage ever growing data loads;

- **Ensure complete visibility into subscriber experience** as XGB balances all the incoming traffic (GTP & no-GTP), performing session-aware correlation of the GTP part;

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

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Aster A-718/A-720 XGB GTP Load Balancer — Technical Specification

	Aster A-718 XGB GTP Load Balancer	Aster A-720 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 ports	1 x 10/100/1000Mb/s with RJ45 connectors	
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+/ QSFP28/)	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)/ 100Gb/s Base LR-4 (1310 nm)/ 100Gb/s Base PSM4 (1310nm)
Multimode (SFP/SFP+/QSFP+/ QSFP28)	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 Mode, (1310 nm) 9/125 um; 2m lenght	NA
Multimode	Breakout cable 1x40Gb/s (MPO/MTP connector) to 4x10Gb/s (8 x LC connectors), OM3, Multimode (850 nm) 50/125 um; 2m lenght	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 • Max. power consumption: 400W	• 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 CAN/CSA-C22.2 60950-1

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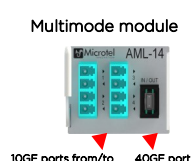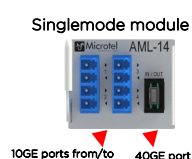Via Armentera 8,
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Aster A-718 XGB GTP Load Balancer — Ordering Information

A-718-2416G	Aster A-718, 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-718-2812G	Aster A-718, 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-718-3208G	Aster A-718, 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-7xx-L-UPGto8xx	Licence to upgrade A-7xx software capabilities to A-8xx
A-7xx-L-UPGP	Performance upgrade to 100Gb/s - works with all models A-718-xxxxx and A-720-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

Singlemode module
10GE ports from/to   40GE port

Multimode module
10GE ports from/to   40GE port

QSFP+ breakout rack adapter

QSFP+ breakout cable adapter

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Aster A-720 XGB GTP Load Balancer — Ordering Information

A-720-02C08X-12X	Aster A-720, 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-720-02C04X-16X	Aster A-720, 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-720-20X-02C	Aster A-720, 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-7xx-L-UPGto8xx	Licence to upgrade A-7xx software capabilities to A-8xx
A-7xx-L-UPGP	Performance upgrade to 100Gb/s - works with all models A-718-xxxxx and A-720-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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