

SIL SNTAplus2

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6-42GHz Bespoke Frequencies



SIL SNTAplus2
6-42Ghz Backhaul, 1-2Gbps
4-4096 QAM

OVERVIEW

The SIL SNTAplus2 is the next generation of 2/4Gbps full outdoor solutions which provide the best TCO by booting capacity and availability of the network and simplifies installation with fully integrated branching and zero indoor footprint.

Thanks to its unmatched spectrum efficiency and larger channel selection, the SIL SNTAplus2 offers the highest capacity and channel flexibility, with no restriction in channel allocations either adjacent or co-polar with best in class system gain. With integrated XPIC capability, and using 34% less power consumption, the SIL SNTAplus2 provides future proof architecture while quadrupling the throughput.

Features

- SM-OS Based Platform
- 4-4096QAM Modulation
- 6GHz to 42GHz Licenced Bands
- Up to 2x 112 MHz Channels
- Multilayer Header Compression
- L1 Radio LAG Over Multiple ODU
- In-house RF Multicore Technology
- Integrated XPIC Circuitry
- Extended Ethernet Connectivity: 10/2.5/GE Interfaces
- AES128/256 Encryption
- Multi Carrier Aggregation
- PoE and Dedicated Power Feeder Connectors
- SDN Microwave Domain Controller: SM-DC
- SilverView Network Management Software

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Distributed By:

SIL AGS20

SIL AGS20
SIL AGS20L
SIL AGS20M



SIL AGS20
7-42GHz Split Mount,
46Gbps Full Duplex



SIL AGS20M
7-42GHz Split Mount,
53Gbps Full Duplex



SIL AGS20L
7-42GHz Split Mount,
100Gbps Full Duplex

6-42GHz Bespoke Frequencies

OVERVIEW

The SIL AGS20 is a Universal Microwave Aggregation Platform which efficiently addresses the different RAN generation needs over a common wireless transport infrastructure, including LTE-Advanced and 5G new stringent requirements.

The SIL AGS20 is a family of microwave aggregators with multiple mechanical arrangements designed to fit different needs and deployment scenarios in a modern mobile backhaul infrastructure. The SIL ASNK ODU is compact in size with less than 2 litres volume and with a benchmarking power consumption of 10W, help operators in diminishing CO2 emissions.

Features

- SM-OS Based Platform
- 4-4096QAM Modulation
- Hitless Adaptive Code and Modulation
- Multilayer Header Compression
- L1 Radio LAG Over Multiple ODU
- Extended Ethernet Connectivity: 10/2.5/GE Interfaces
- AES128/256 Encryption
- Mixed TDM/Ethernet Interfaces for Dual Native Transport
- Multi Carrier Aggregation
- PWE3 TDM Services Defined by Software for Full Packet Networks
- Power over Ethernet (PoE)
- Single Universal ODU for any Capacity and Modulation
- WEB Management
- SilverView Network Management Software

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Technical Specifications

Bespoke Frequencies	SIL SNTAplus2									
Radio										
Frequency	6L/6U GHZ	7/8 GHz	11 GHz	13/15 GHz	18/23 GHz	26 GHz	28 GHz	32 GHz	38 GHz	42 GHz
Frequency Range	5.9-7.1	7.11-8.5	10.2 - 11.7	12.7 - 15.3	17.7 – 23.6	24.5 – 26.5	27.5 – 29.5	32.8 – 33.4	37-40	40.5 – 43.5
Modulation Schemes	4 / 16 / 32 / 64 / 128 / 256 / 512 / 1024 / 2048 / 4096 QAM									
Throughput	Up to 2Gbps									
Frequency Stability	±5ppm									
Frequency Agility	20 KHz (Software Programmable)									
RTPC	Up to 30 in 1 dB steps									
ATPC	Up to 30 in 1 dB steps									
Output Power										
Network										
Interfaces	3xGbE copper ports									
Layer 2 Main Functionalities	MEF 2.0 Carrier Ethernet Services, 8 Queues with Flexible Scheduler (Strict Priority, WRR and Mixed), 4 Level Hierarchical Scheduler (H-QoS), Flexible QoS Definition Based on VLAN, IPv4, IPv6, MPLS Exp Bits, Per Queue WRED Congestion Avoidance, Flow Based Ingress Policing (CIR & EIR Definition), Egress Shaping, Ethernet Ring Protection G.8032, RMON Statistics per Service VLAN Stacking (IEEE 802.1ad QinQ), Link Aggregation IEEE 802.3ad, Ethernet OAM 802.3ah/802.1ag/Y.1731, Jumbo Frames up to 12Kbytes									
Security										
Encryption	AES 128-bit and 256-bit									
Other										
Environmental	ODU Weather Proofing Class: IP65					Operational Temperature Range: -33°C – 55°C Temperature Range Degraded Performances: -40°C – 60°C				
Power	-48 VDC (-15%, +20%) Supply					< 54W (with ATPC) Consumption				
Conformance	ETSI, FCC									
Dimensions	252 x 363 x 176 (mm)* / 9.9 x 14.3 x 6.9 (in)*									
Weight	11.5kg (< 18 GHz), 8kg (> 18 GHz)									

** SW license dependent

Technical Specifications

Bespoke Frequencies	SIL AGS20													
Radio	1x1F					2x1F					4x1F			
Configuration	1+0					1+0 / 1+1 / 2+0 XPIC Radio LAG					1+0 / 1+1 / 2+0 / 4+0 XPIC Radio LAG			
Switching Capability	46 Gbps Full Duplex													
TDM Transmission Capability	Up to 126 x E1 (Per Radio Direction)													
Modulation	4 QAM to 4096 QAM with Hitless ACM													
Ethernet / Radio Interfaces	1 x 1F (ODU) 2 x GE Electrical 4 x GE SFP (1 / 2.5 Gbps) 2 X GE Combo (Electrical / Optical)					2 x 1F (ODU) 2 x GE Electrical 4 x GE SFP (1 / 10 / 2.5 Gbps) 2 x GE Combo (Electrical / Optical)					4 x 1F (ODU) 2 x GE Electrical 2 x GE SFP (1 / 10 / 2.5 Gbps) 2 x GE Combo (Electrical / Optical)			
Frequency Band	4GHz	6L/6U GHz	7/8 GHz	10/11 GHz	13 GHz	15 GHz	18 GHz	23 GHz	26 GHz	28 GHz	32 GHz	38 GHz	42 GHz	
Frequency Range	4.4-5	5.9-71	7.11 -8.5	10.2- 11.7	12.7- 13.2	14.4- 15.3	17.7- 19.7	21.2- 23.6	24.5- 26.5	27.5- 29.5	32.8- 33.4	37- 39.5	40.5- 43.5	
Modulation Schemes	4 / 16 / 32 / 64 / 128 / 256 / 512 / 1024 / 2048 / 4096 QAM													
Channel Spacing	7 MHz, 14MHz, 28 MHz, 40 MHz, 56 MHz, 112 MHz													
Throughput	Up to 1Gbps Per Radio Channel													
TDM Interfaces (Optional)	16 x E1 Native / PWE3 Mode Software Selectable 2 x STM-1 Native NBUS (Nodal Expansion)													
Synchronization Interfaces	1pps / ToD / 2048 KHz													
Local Maintenance Interfaces	Console Port / LAN Port													
Network														
Layer 2 Functionalities	MEF 2.0 Certified, 8 Queues with Flexible Scheduler (Strict Priority, WRR and Mixed), 4 Level Hierarchical Scheduler (H-QoS), Flexible QoS Definition based on VLAN, IPv4, IPv6, MPLS Exp Bits, Per Queue WRED Congestion Avoidance, Flow Based Ingress Policing (CIR & EIR Definition), Egress Shaping, Ethernet Ring Protection G.8032, RMON Statistics per Service VLAN Stacking (IEEE 802.1ad QinQ), Link Aggregation IEEE 802.3ad, Ethernet OAM 802.3ah/802.1ag/Y.1731, Jumbo Frames up to 12 Kbytes													
Layer 3 Functionalities	LDP (Label Distribution Protocol) / TLDP, RSVP/RSVP-TE, MPLS LVPN / VPLS, MPLS L3VPN, MPLS TE using RSVP-TE, OSPFv2 and OSPF with TE Extension, BGPv4, MP-BGP, IS-IS, eBGP, BDP Bidirectional Forwarding Detection for PW VCCV, FRR Fast Re-Route, LSP RSVP-TE Protection 1:1, MPLS-OAM (with MPLS-TP)													
Security														
Encryption	AES 128-bit and 256-bit **													
Other														
Environmental	ODU Weather Proofing Class: IP67						IDU Temperature Range: -5°C to +55°C ODU Temperature Range: -35°C to +55°C							
Conformance	ETSI EN 302 217 / FCC Part 101													
Dimensions	442 x 44 x 223 (mm_) - 17.4 x 1.7 x 8.7 (in)													

** SW license dependent

Technical Specifications

Bespoke Frequencies	SIL AGS20M													
Radio														
Configuration	1+0 / 2+0 / 4+0 / 1+1 / 2+2/ XPIC / Radio LAG													
Switching Capability	53 Gbps full duplex													
TDM Transmission Capability	Up to 126 x E1 (per radio direction)													
Modulation	4 QAM to 4096 QAM with Hitless ACM													
Ethernet / Radio Interfaces	Main Board Unit 2 x IF Module 4 x 10 Gbps, 4 x GE, 2 x GE SFP 8 x E1 Native or PWE3 Expansion Unit 2 x IF Module													
Frequency Band	4GHz	6L/6U GHz	7/8 GHz	10/11 GHz	13 GHz	15 GHz	18 GHz	23 GHz	26 GHz	28 GHz	32 GHz	38 GHz	42 GHz	
Frequency Range	4.4-5	5.9-71	7.11 -8.5	10.2-11.7	12.7-13.2	14.4-15.3	17.7-19.7	21.2-23.6	24.5-26.5	27.5-29.5	32.8-33.4	37-39.5	40.5-43.5	
Modulation Schemes	4 / 16 / 32 / 64 / 128 / 256 / 512 / 1024 / 2048 / 4096 QAM													
Channel Spacing	7 MHz, 14MHz, 28 MHz, 40 MHz, 56 MHz, 112 MHz													
Throughput	Up to 1Gbps Per Radio Channel													
TDM Interfaces (Optional)	16 x E1 Native / PWE3 Mode Software Selectable 2 x STM-1 Native NBUS (Nodal Expansion)													
Synchronization Interfaces	1pps / ToD / 2048 KHz													
Local Maintenance Interfaces	Console Port / LAN Port													
Network														
Layer 2 Functionalities	MEF 2.0 Certified, 8 Queues with Flexible Scheduler (Strict Priority, WRR and Mixed), 4 Level Hierarchical Scheduler (H-QoS), Flexible QoS Definition based on VLAN, IPv4, IPv6, MPLS Exp Bits, Per Queue WRED Congestion Avoidance, Flow Based Ingress Policing (CIR & EIR Definition), Egress Shaping, Ethernet Ring Protection G.8032, RMON Statistics per Service VLAN Stacking (IEEE 802.1ad QinQ), Link Aggregation IEEE 802.3ad, Ethernet OAM 802.3ah/802.1ag/Y.1731, Jumbo Frames up to 12 Kbytes													
Layer 3 Functionalities	LDP (Label Distribution Protocol) / TLDP, RSVP/RSVP-TE, MPLS LVPN / VPLS, MPLS L3VPN, MPLS TE using RSVP-TE, OSPFv2 and OSPF with TE Extension, BGPv4, MP-BGP, IS-IS, eBGP, BDP Bidirectional Forwarding Detection for PW VCCV, FRR Fast Re-Route, LSP RSVP-TE Protection 1:1, MPLS-OAM (with MPLS-TP)													
Security														
Encryption	AES 128-bit and 256-bit **													
Other														
Environmental	ODU Weather Proofing Class: IP67							IDU Temperature Range: -5°C to +55°C ODU Temperature Range: -35°C to +55°C						
Conformance	ETSI EN 302 217 / FCC Part 101													
Dimensions	442 x 44 x 223 (mm_ - 17.4 x 1.7 x 8.7 (in)													

** SW license dependent

Technical Specifications

Bespoke Frequencies	SIL AGS20L	
Radio		
Configuration	1+0 / 2+0 / 4+0 / 8+0 / 1+1 / 2+2/ 4+4/ XPIC / Radio LAG	
Switching Capability	100 Gbps full duplex	
TDM Transmission Capability	Up to 126 x E1 (per radio direction)	
Modulation	4 QAM to 4096 QAM with Hitless ACM	
Ethernet / Radio Interfaces	Core card 2 x 10 Gbps + 2 x 100Base T for DCN DRI-2 card 2 x 10 Gbps Module ARI-2 card 2 x IF Module / 2 x IF Module +1 x10Gbps ETH card 2 x 10 Gbps / 4 x GE electrical + 4 x GE SFP / 8 x GE SFP TDM card 8 x E1+2 STM-1 / 16 x E1 FAN card Up to 2 module per IDU PSU card Nominal -48VDC	
TDM Interfaces (Optional)	16 x E1 Native / PWE3 Mode Software Selectable 2 x STM-1 Native NBUS (Nodal Expansion)	
Synchronization Interfaces	1pps / ToD / 2048 KHz	
Local Maintenance Interfaces	Console Port / LAN Port	
Network		
Layer 2 Functionalities	MEF 2.0 Certified, 8 Queues with Flexible Scheduler (Strict Priority, WRR and Mixed), 4 Level Hierarchical Scheduler (H-QoS), Flexible QoS Definition based on VLAN, IPv4, IPv6, MPLS Exp Bits, Per Queue WRED Congestion Avoidance, Flow Based Ingress Policing (CIR & EIR Definition), Egress Shaping, Ethernet Ring Protection G.8032, RMON Statistics per Service VLAN Stacking (IEEE 802.1ad QinQ), Link Aggregation IEEE 802.3ad, Ethernet OAM 802.3ah/802.1ag/Y.1731, Jumbo Frames up to 12 Kbytes	
Layer 3 Functionalities	LDP (Label Distribution Protocol) / TLDP, RSVP/RSVP-TE, MPLS LVPN / VPLS, MPLS L3VPN, MPLS TE using RSVP-TE, OSPFv2 and OSPF with TE Extension, BGPv4, MP-BGP, IS-IS, eBGP, BDP Bidirectional Forwarding Detection for PW VCCV, FRR Fast Re-Route, LSP RSVP-TE Protection 1:1, MPLS-OAM (with MPLS-TP)	
Security		
Encryption	AES 128-bit and 256-bit **	
Other		
Environmental	ODU Weather Proofing Class: IP67	IDU Temperature Range: -5°C to +55°C ODU Temperature Range: -35°C to +55°C
Conformance	ETSI EN 302 217 / FCC Part 101	
Dimensions	442 x 44 x 223 (mm_ - 17.4 x 1.7 x 8.7 (in)	

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