7705 Service Aggregation Router Card and Module Support Quick Reference Card, Release 8.0

# Platform Notes

All 7705 SAR chassis run the same system software. The main difference between the products is their hardware platforms.

Table 1: Platform Notes









SAR-8	SAR-18	SAR-A	SAR-Ax	SAR-H	SAR-Hc
SAR-8: 12 Gb/s HD SAR-8 Shelf V2: 60 Gb/s HD	140 Gb/s HD	10 Gb/s HD	10 Gb/s HD	8 Gb/s HD	5 Gb/s HD
Rack-mountable: 2 RU	Rack-mountable: 10 RU	Rack-mountable: 1 RU	Rack-mountable: 1 RU	Rack-mountable: 1.5 RU Wall-mountable	DIN rail-mountable Wall-mountable Panel-mountable
<ul> <li>The SAR-8 is an 8-slot chassis that supports:</li> <li>2 CSMs</li> <li>1 Fan module (with alarm functionality)</li> <li>6 adapter cards</li> </ul>	<ul> <li>The SAR-18 is an 18-slot chassis that supports:</li> <li>2 CSMs</li> <li>1 Fan module</li> <li>1 alarm module</li> <li>16 adapter cards (up to 12 1-Gb/s and 2.5-Gb/s cards and up to 4 10-Gb/s cards)</li> </ul>	<ul> <li>The SAR-A is a fixed chassis with two variants:</li> <li>passively cooled chassis with 12 Ethernet ports and 8 T1/E1 ports</li> <li>passively cooled chassis with 12 Ethernet ports and no T1/E1 ports</li> </ul>	<ul> <li>The SAR-Ax is a fixed chassis with 12 Ethernet ports:</li> <li>4 combination (XOR) ports that can be configured as either RJ-45 10/100/1000 Ethernet ports or 100/1000 SPF Ethernet ports</li> <li>8 100/1000 Ethernet ports</li> <li>The SAR-Ax chassis also has a factory- installed GNSS receiver and a GNSS RF faceplate connector. The GNSS RF connector can be cabled to an external GNSS antenna. When locked to the active antenna, the GNSS receiver can integrate GPS and GLONASS signals in the chassis.</li> </ul>	<ul> <li>The SAR-H is a fixed chassis that has:</li> <li>2 SFP GigE ports</li> <li>2 combination SFP/RJ-45 10/100/1000 Ethernet ports</li> <li>4 PoE-capable RJ-45 10/100/1000 Ethernet ports</li> <li>2 module slots</li> <li>Connecting a PoE Power Supply increases the number of Ethernet ports that can supply PoE to a connected device.</li> <li>There are two variants of the SAR-H chassis:</li> <li>high-voltage AC/DC for 100/240 VAC and 110-250 VDC installations (includes integrated AC input)</li> <li>low-voltage DC for -48/-60 and +24 VDC installations</li> </ul>	<ul> <li>The SAR-Hc is a fixed chassis that has:</li> <li>2 SFP GigE ports</li> <li>2 RJ-45 10/100/1000 Ethernet ports</li> <li>2 PoE-capable RJ-45 10/100/1000 Ethernet ports</li> <li>2 RS-232 ports</li> </ul>

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SAR-M	SAR-O	SAR-W	SAR-Wx	SAR-X
10 Gb/s HD	Passive (no HD)	10 Gb/s HD	10 Gb/s HD	54 Gb/s HD
Rack-mountable: 1 RU	Pole-mountable Wall-mountable Rack-mountable: 1 RU Cabinet-mountable	Pole-mountable Wall-mountable Cable strand-mountable Rack-mountable: 1 RU Cabinet-mountable	Pole-mountable Wall-mountable Cable strand-mountable	Rack-mountable: 1 RU
<ul> <li>The SAR-M is a fixed chassis with four variants:</li> <li>fan-cooled chassis with 7 GigE ports, 16 T1/E1 ports, and 1 module slot</li> <li>fan-cooled chassis with 7 GigE ports, no T1/E1 ports, and 1 module slot</li> <li>passively cooled chassis with 7 GigE ports, 16 T1/E1 ports, and no module slots</li> <li>passively cooled chassis with 7 GigE ports, no T1/E1 ports, and no module slots</li> <li>passively cooled chassis with 7 GigE ports, no T1/E1 ports, and no module slots</li> </ul>	<ul> <li>The SAR-O is a passive, unpowered optical unit with 14 models that are used to add and drop CWDM wavelengths from an optical network. The models are available in three variants:</li> <li>a 2-wavelength CWDM dual-fiber variant (8 models)</li> <li>a 4-wavelength CWDM dual-fiber variant (4 models)</li> <li>an 8-wavelength CWDM single-fiber variant (2 models)</li> </ul>	<ul> <li>The SAR-W is a fixed, ruggedized, environmentally hardened chassis that has:</li> <li>3 SFP GigE ports</li> <li>2 PoE+ capable RJ-45 GigE ports</li> </ul>	<ul> <li>The SAR-Wx is a fixed, ruggedized, environmentally hardened chassis with six variants:</li> <li>chassis with 3 SFP GigE ports, 2 RJ-45 GigE ports, and an RJ-45 alarm input connector</li> <li>chassis with 3 SFP GigE ports, 2 RJ-45 GigE ports, an RJ-45 alarm input connector, and a GPS receiver</li> <li>chassis with 3 SFP GigE ports, 1 RJ-45 GigE port, 1 PoE+ RJ-45 GigE port, and an RJ-45 alarm input connector</li> <li>chassis with 3 SFP GigE ports, 1 RJ-45 GigE port, 1 PoE+ RJ-45 GigE port, an RJ-45 GigE port, 1 PoE+ RJ-45 GigE port, an RJ-45 alarm input connector</li> <li>chassis with 3 SFP GigE ports, 1 RJ-45 GigE port, 1 PoE+ RJ-45 GigE port, an RJ-45 alarm input connector, and a GPS receiver</li> <li>chassis with 3 SFP GigE ports, 1 RJ-45 GigE port, 1 RJ-45 4-pair xDSL port, and an RJ-45 alarm input connector</li> <li>chassis with 3 SFP GigE ports, 1 RJ-45 GigE port, 1 RJ-45 4-pair xDSL port, and A RJ-45 alarm input connector</li> </ul>	<ul> <li>The SAR-X is a fixed chassis that has 8 T1/E1 ports, 4 combination (XOR) GigE ports (each can be configured either as RJ-45 or SFP), 8 SFP GigE ports, and 2 SFP+10-GigE ports.</li> <li>There are two variants of the SAR-X chassis:</li> <li>AC variant can use a 100 to 240 VAC power source</li> <li>DC variant can use a single or dual +24/48/60 VDC power source</li> </ul>

input connector, and a GPS receiver

#### **Adapter Card Support**

Table 2 lists the adapter cards supported on the 7705 SAR-8 and SAR-18. Adapter cards cannot be installed in the other chassis.

#### Table 2: Platform and Adapter Card Support

Adapter Card	SAR-8	SAR-18
2-port 10GigE (Ethernet) card	Up to 4 cards	Up to 6 cards
2-port OC3/STM1 Channelized card (1)	Up to 6 cards	Up to 12 cards
4-port OC3/STM1 Clear Channel card	Up to 6 cards	Up to 12 cards
4-port OC3/STM1 / 1-port OC12/STM4 card (1)	Up to 4 cards	Up to 6 cards
4-port DS3/E3 card <sup>(1)</sup>	Up to 6 cards	Up to 12 cards
6-port E&M card <sup>(2)</sup>	Up to 6 cards	Up to 12 cards
6-port Ethernet 10Gbps card	Up to 6 cards	Up to 12 cards
6-port FXS card <sup>(2)</sup>	Up to 6 cards	Up to 12 cards
8-port Ethernet card, ver 2	Up to 6 cards	Up to 12 cards
8-port FXO card <sup>(2)</sup>	Up to 6 cards	Up to 12 cards
8-port Gigabit Ethernet card	Up to 6 cards	Up to 12 cards
8-port Voice & Teleprotection card <sup>(2)</sup>	Up to 6 cards	Up to 12 cards
10-port 1 GigE/1-port 10 GigE X-Adapter card	—	Up to 4 cards
12-port Serial Data Interface card <sup>(2)</sup>	Up to 6 cards	Up to 12 cards
16-port T1/E1 ASAP card, ver 2	Up to 6 cards	Up to 12 cards
32-port T1/E1 ASAP card	Up to 6 cards	Up to 12 cards
Auxiliary Alarm card	Up to 6 cards	Up to 12 cards
CWDM OADM card	Up to 6 cards	Up to 12 cards
GNSS Receiver card	Up to 2 cards	Up to 2 cards
Integrated Services card (2)	Up to 6 cards	Up to 12 cards
Packet Microwave card	Up to 6 cards	Up to 12 cards
Power Injector card	Up to 4 cards	Up to 8 cards

Notes:

(1) The number of cards supported depends on channelization.

On a 7705 SAR-8 chassis with a CSMv2, a maximum of six 2-port OC3/STM1 Channelized Adapter cards and 4-port DS3/E3 Adapter cards can be installed in MDA slots 1 to 6 if DS3/E3 channelization is used (E3 channels are supported on the 4-port DS3/E3 Adapter card only). If DS1/E1 channelization is used, four 2-port OC3/ STM1 Channelized Adapter cards, four 4-port OC3/STM1 / 1-port OC12/STM4 Adapter cards, or six 4-port DS3/E3 Adapter cards can be installed in MDA slots 1 to 6. If DS0 (64 kb/s) channelization is used, four 2-port OC3/STM1 Channelized Adapter cards and 4-port DS3/E3 Adapter cards can be installed in MDA slots 1 to 6. On a SAR-18 chassis, a maximum of twelve 2-port OC3/STM1 Channelized Adapter cards and 4-port DS3/E3 Adapter cards can be installed in MDA slots 1 to 12 if DS3/E3 channelization is used (E3 channels are supported on the 4-port DS3/E3 Adapter card only). If DS1/E1 channelization is used, four 2-port OC3/STM1 Channelized Adapter cards, six 4-port OC3/STM1 / 1-port OC12/STM4 Adapter cards, or twelve 4-port DS3/E3 Adapter cards can be installed in MDA slots 1 to 12. If DS0 (64 kb/s) channelization is used, four 2-port OC3/STM1 Channelized Adapter cards and 4-port DS3/E3 Adapter cards can be installed in MDA slots 1 to 12. If DS0 (64 kb/s) channelization is used, four 2-port OC3/STM1 Channelized Adapter cards and 4-port DS3/E3 Adapter cards can be installed in MDA slots 1 to 12.

The total number of channel groups that can be configured per card and per node is bound by release-specific system limits. For more information, please contact your Nokia technical support representative.

(2) Because this card supports access mode only, for network applications, at least one of the other installed cards must be a network-capable adapter card.

## **Module Support**

Table 3 lists the modules supported on the 7705 SAR platforms that support modules.

#### Table 3: Platform and Module Support

SAR-8	SAR-18	<b>SAR-M</b> <sup>(1)</sup>	SAR-H
_	_	1 module	_
_	_	_	Up to 2 modules
_	_	_	Up to 2 modules
_	_	1 module	_
_	_	1 module	_
—	_	1 module	—
—	1 module	—	—
—	Up to 2 modules	_	_
Up to 2 modules	_	_	_
—	—	1 module	—
1 module	1 module	—	—
—	—	1 module	—
—	—	—	1 module
		1 module          Up to 2 modules         Up to 2 modules	-       1 module          -       -          -       -          -       -          -       -          -       1 module          -       1 module          -       1 module          -       1 module          1 module       -          1 module       -          1 module       -          Up to 2 modules       -          -       1 module         1 modules       -       1 module

Notes:

Modules are only supported on the SAR-M variants with a module slot (fan-cooled).
 The 6-port SAR-M Ethernet module supports PoE/PoE+.

## AC and High Voltage DC Power Supply Support

Nokia offers the following AC/DC and HVDC power supplies that can be used with 7705 SAR platforms.

#### 100W High Voltage Power Supply

A 100W High Voltage Power Supply with integrated AC input is available for 100/240 VAC installations. The input can be modified to function as a high-voltage DC power supply for rated 110-250 VDC installations. The 100W High Voltage Power Supply can be mounted on a DIN rail, wall, or panel.

The following 7705 SAR platforms support AC or DC source-to-router connections through the 100W High Voltage Power Supply:

- SAR-A
- SAR-Ax
- SAR-Hc
- SAR-M

#### 250W AC Power Supply Unit

An external 250W AC Power Supply with integrated AC input is available for 100/240 VAC installations.

The SAR-8 and SAR-8 Shelf V2 (–48 VDC systems only) support AC connections through the 250W AC Power Supply.

#### 2500W AC Power Supply Shelf

A 2500W AC Power Supply Shelf with integrated AC input is available for 240 VAC installations. The 2500W AC Power Supply Shelf can be mounted on a standard 19-inch rack and occupies one rack unit. It supports up to four power supplies for redundancy.

The following 7705 SAR platforms support AC connections through the 2500W AC Power Supply:

- SAR-8 and SAR-8 Shelf V2 (-48 VDC systems only)
- SAR-18

# CLI Naming for Adapter Cards, Modules, and Platform Ports

Table 4 lists the CLI name for each adapter card (MDA type) for the 7705 SAR platforms that support adapter cards.

Table 5 lists the CLI name for each module for the 7705 SAR platforms that support modules.

**Note:** All 7705 SAR platforms support the IOM, which uses the CLI naming convention iom-sar. The IOM is virtualized in the system software, and must be activated before any adapter cards or modules can be preprovisioned and configured.

Table 6 lists the CLI name for the group of ports on the 7705 SAR platforms that provide an integrated T1/E1, Ethernet, and/or other interface capability.

#### Table 4: CLI Naming for Adapter Cards

Adapter Card	SAR-8	SAR-18
2-port 10GigE (Ethernet) card	a2-10gb-xfp	a2-10gb-xfp
2-port OC3/STM1 Channelized card	a2-choc3	a2-choc3
4-port OC3/STM1 /1-port OC12/STM4 card	a4-choc3/12	a4-choc3/12
4-port OC3/STM1 Clear Channel card	a4-oc3	a4-oc3
4-port DS3/E3 card	a4-chds3	a4-chds3
6-port E&M card	a6-em	a6-em
6-port FXS card	a6-fxs	a6-fxs
6-port Ethernet 10 Gbps card	a6-eth-10G	a6-eth-10G
8-port Ethernet card, ver 2	a8-ethv2	a8-ethv2
8-port FXO card	a8-fxo	a8-fxo
8-port Gigabit Ethernet card, ver 1	a8-1gb-sfp	a8-1gb-sfp
8-port Gigabit Ethernet card, ver 2	a8-1gb-v2-sfp	a8-1gb-v2-sfp
8-port Gigabit Ethernet card, ver 3	a8-1gb-v3-sfp	a8-1gb-v3-sfp
8-port Voice & Teleprotection card	a8-vt	a8-vt
10-port 1 GigE/1-port 10 GigE X-Adapter card, ver 1	—	x-10GigE
10-port 1 GigE/1-port 10 GigE X-Adapter card, ver 2	—	x-10GigE-v2
12-port Serial Data Interface card	a12-sdi	a12-sdi
12-port Serial Data Interface card, ver 2	a12-sdiv2	a12-sdiv2
16-port T1/E1 ASAP card, ver 2	a16-chds1v2	a16-chds1v2
32-port T1/E1 ASAP card	a32-chds1v2	a32-chds1v2
Auxiliary Alarm card	aux-alarm	aux-alarm
CWDM OADM card	oadm-cwdm-1ch	oadm-cwdm-1ch
	oadm-cwdm-2ch	oadm-cwdm-2ch
	oadm-cwdm-4ch	oadm-cwdm-4ch
	oadm-cwdm-8ch	oadm-cwdm-8ch
GNSS Receiver card	a1-gnss	a1-gnss
Integrated Services card	isc	isc
Packet Microwave card	a8-pmc	a8-pmc
Power Injector card	mw-pic-2	mw-pic-2

#### Table 5: CLI Naming for Modules

Module	SAR-8	SAR-18	SAR-H	SAR-M <sup>(1)</sup>
2-port 10GigE (Ethernet) module	—	—	—	p2-10gb-xfp
4-port SAR-H Fast Ethernet module			p4-eth	
4-port T1/E1 and RS- 232 Combination module	_	—	p4-combo	—
6-port DSL Combination module	—	_	—	p6-dcm
6-port SAR-M Ethernet module				p6-eth
8-port xDSL module	—	—	—	p8-xdsl
CSM (2)	—	csm-10g	—	—
CSMv2 <sup>(2)</sup>	csmv2-10g	—	—	—
CWDM OADM module	—	—	-	oadm-cwdm- 1ch
GPS Receiver module	—	—	p1-gps	—
GPON module	—	—	—	p1-gpon

#### Notes:

(1) Modules are only supported on the SAR-M variants with a module slot (fan-cooled).

(2) The SAR-A, SAR-Ax, SAR-H, SAR-Hc, SAR-M, SAR-W, SAR-Wx, and SAR-X replace the CSM found in the SAR-8 and SAR-18 with a control and switching functional block that is integrated into the chassis and does not need to be provisioned. It is shown in the CLI as CSM A with a provisioned type of csm-2.5g.

#### Table 6: CLI Naming for Platform Ports

Chassis	Ports			
	T1/E1 ports	Ethernet ports	Other ports	
SAR-A	i8-chds1 (1)	i12-eth-xor	—	
SAR-Ax	-	i12-1gb-xor	i1-gnss (2)	
SAR-H	—	i8-1gb	—	
SAR-Hc	-	i6-1gb	i2-sdi <sup>(3)</sup>	
SAR-M	i16-chds <sup>(1)</sup>	i7-1gb	—	
SAR-W	—	i5-1gb	—	
SAR-Wx	—	i4-1gb-b <sup>(4)</sup>	i4-xdsl <sup>(6)</sup>	
		i5-1gb-b <sup>(5)</sup>	i1-gps (7)	

#### Table 6: CLI Naming for Platform Ports (Continued)

Chassis	Ports			
	T1/E1 ports	Ethernet ports	Other ports	
SAR-X	i8-chds1-x	i7-mix-eth	_	

## Notes:

(1) On the variants equipped with T1/E1 ports

(2) GNSS RF port

(3) RS-232 ports

(4) On the variants equipped with four Ethernet ports

(5) On the variants equipped with five Ethernet ports

(6) On the variants equipped with an xDSL port

(7) GPS port, on the variants equipped with a GPS receiver

# **CLI Card and Port Identifiers**

In the CLI context for the SAR-8 and SAR-18, adapter cards are referred to as MDAs. The cards are identified using the format *slot/mda*, where *slot* identifies the IOM slot ID (always 1) and *mda* identifies the physical slot in the chassis for the adapter card.

For the SAR-A, SAR-Ax, SAR-H, SAR-Hc, SAR-M, SAR-W, SAR-Wx, and SAR-X, the *mda* is a preset virtual slot number; configuration is not done at this level for these chassis.

The SAR-O is a passive unit that requires no CLI configuration.

Ports are identified using the format *slot/mda/port*, where *port* identifies the physical port on the adapter card or SAR-A, SAR-Ax, SAR-H, SAR-Hc, SAR-M, SAR-W, SAR-Wx, or SAR-X; for example, 1/5/1.

Channelized ports are identified using the format *slot/mda/port.channel-group-id*, where *channel-group-id* identifies the channel group ID; for example, 1/5/1.1.

Bundled channels are identified using the format bundle-*type-slot/mda.bundle-num*, where bundle is a keyword, *type* is either ppp (for MLPPP bundles) or ima (for IMA groups), and *bundle-num* is the bundle number; for example, bundle-ima-1/5.1.

Table 7 lists the available MDA slots per platform.

#### Table 7: MDA Slots

Chassis	Available MDA slots		
SAR-8	Slots MDA 1 to 6		
SAR-18	Slots MDA 1 to 12 and XMDA 1 to 4 (X1 to X4 or 13 to 16)		
SAR-A	Slots 1 and 2 preconfigured as:		
	Slot 1 for Ethernet ports (both variants)		
	<ul> <li>Slot 2 for T1/E1 ports (only on the variant equipped with T1/E1 ports)</li> </ul>		
SAR-Ax	Slots 1 and 2 preconfigured as:		
	Slot 1 for Ethernet ports		
	Slot 2 for the GNSS RF ports		

## Table 7: MDA Slots (Continued)

Chassis	Available MDA slots
SAR-H	Slots 1 to 3 preconfigured as:
	Slot 1 for Ethernet ports
	Slot 2 for module slot position 1
	Slot 3 for module slot position 2
SAR-Hc	Slots 1 and 2 preconfigured as:
	Slot 1 for Ethernet ports
	Slot 2 for RS-232 ports
SAR-M	Slots 1 to 3 preconfigured as:
	Slot 1 for Ethernet ports
	<ul> <li>Slot 2 for T1/E1 ports (only on the variants equipped with T1/E1 ports)</li> </ul>
	Slot 3 for modules (only on the variants that support modules)
SAR-W	Slot 1 preconfigured for the Ethernet ports
SAR-Wx	Slots 1 to 3 preconfigured as:
	Slot 1 for Ethernet ports
	<ul> <li>Slot 2 for xDSL ports (only on the variants that support xDSL)</li> </ul>
	<ul> <li>Slot 3 for GPS RF ports (only on the variants that support GPS)</li> </ul>
SAR-X	Slots 1 to 3 preconfigured as:
	Slot 1 for T1/E1 ports
	<ul> <li>Slot 2 for Ethernet ports: XOR (either RJ-45 or SFP) GigE ports, SFP GigE ports, or SFP+ 10-GigE ports</li> </ul>
	<ul> <li>Slot 3 for Ethernet ports: XOR (either RJ-45 or SFP) GigE ports, SFP GigE ports, or SFP+ 10-GigE ports</li> </ul>

# **Base Part Numbers**

Table 8 lists the base part numbers of the 7705 SAR platforms and common equipment. Table 9 lists the base part numbers of the adapter cards and modules.

For full part numbers and details on variants, refer to the 7705 SAR OS 8.0.Rx Software Release Notes, part number 3HE11057000xTQZZA.

#### Table 8: 7705 SAR Platforms and Common Equipment

Description	Nokia Base Part Number
100W HV Power Supply	3HE06972
7705 SAR-18	3HE04991
7705 SAR-18 Alarm Module	3HE04994
7705 SAR-18 Control and Switching Module (CSM)	3HE04992
7705 SAR-18 Fan Module	3HE04993
7705 SAR-8	3HE02773
7705 SAR-8 CSMv2	3HE02774
7705 SAR-8 Fan Module	3HE02778
7705 SAR-8 Shelf V2	3HE06791
7705 SAR-8 Shelf V2 Ext. Temp Fan Module	3HE06792
7705 SAR-A with 12 Ethernet ports	3HE06796
7705 SAR-A with 12 Ethernet ports, 8 T1/E1 ports	3HE06797
7705 SAR-Ax	3HE10329
7705 SAR-H	3HE06969
7705 SAR-H 100W 48 VDC Power Supply	3HE06970
7705 SAR-Hc	3HE07353
7705 SAR-M with 16 T1/E1 ports, 7 GigE ports	3HE05051
7705 SAR-M with 7 GigE ports	3HE05653
7705 SAR-M Fanless with 16 T1/E1 ports, 7 GigE ports	3HE06790
7705 SAR-M Fanless with 7 GigE ports	3HE06793
7705 SAR-O 2-wavelength 1471/1491	3HE09126
7705 SAR-O 2-wavelength 1511/1531	3HE09127
7705 SAR-O 2-wavelength 1551/1571	3HE09128

## Table 8: 7705 SAR Platforms and Common Equipment (Continued)

Description	Nokia Base Part Number
7705 SAR-O 2-wavelength 1591/1611	3HE09129
7705 SAR-O 2-wavelength 1271/1291	3HE09641
7705 SAR-O 2-wavelength 1311/1331	3HE09642
7705 SAR-O 2-wavelength 1351/1371	3HE09643
7705 SAR-O 2-wavelength 1431/1451	3HE09644
7705 SAR-O 4-wavelength variants (4 models)	3HE07939
7705 SAR-O 8-wavelength variants (2 models)	3HE07940
7705 SAR-W	3HE07349
7705 SAR-Wx with 4 GigE ports, 4-pair xDSL port, and AC power	3HE07618
7705 SAR-Wx with 4 GigE ports, 4-pair xDSL port, GPS Rx, and AC power	3HE07619
7705 SAR-Wx with 5 GigE ports and AC power	3HE07614
7705 SAR-Wx with 5 GigE ports, GPS Rx, and AC power	3HE07615
7705 SAR-Wx with 5 GigE ports (1 PoE+) and AC power	3HE07616
7705 SAR-Wx with 5 GigE ports, (1 PoE+), GPS Rx, and AC power	3HE07617
7705 SAR-X, AC power	3HE08533
7705 SAR-X, DC power	3HE08534

#### Table 9: 7705 SAR Adapter Cards and Modules

Description	Nokia Base Part Number
10-port 1GigE/1-port 10GigE X-Adapter Card	3HE06153
10-port 1GigE/1-port 10GigE X-Adapter Card, v2	
12-port Serial Data Interface Card	3HE03391
12-port Serial Data Interface Card v2	
16-port T1/E1 ASAP Adapter Card, v2	3HE02775
2-port 10GigE (Ethernet) Adapter Card	3HE06789
2-port 10GigE (Ethernet) Module	3HE06788

## Table 9: 7705 SAR Adapter Cards and Modules (Continued)

Description	Nokia Base Part Number
2-port OC3/STM1 Channelized Adapter Card	3HE03127
32-port T1/E1 ASAP Adapter Card, v2	3HE02781
4-port DS3/E3 Adapter Card	3HE04962
4-port OC3/STM1 Clear Channel Adapter Card	3HE03125
4-port OC3/STM1 / 1-port OC12/STM4 Adapter Card	3HE07938
4-port SAR-H Fast Ethernet Module	3HE09303
4-port T1/E1 and RS-232 Combination Module	3HE06973
6-port Ethernet 10Gbps Adapter Card	3HE07943
6-port E&M Adapter Card	3HE03126
6-port FXS Adapter Card	3HE02780
6-port DSL Combination Module	3HE05914
6-port SAR-M Ethernet Module	3HE09170
8-port Ethernet Adapter Card, v2	3HE02776
8-port FXO Adapter Card	3HE06794
8-port Gigabit Ethernet Adapter Card	3HE06151
8-port Gigabit Ethernet Adapter Card, v2	
8-port Gigabit Ethernet Adapter Card, v3	
8-port Voice & Teleprotection Card	3HE06006
8-port xDSL Module	3HE05577
Auxiliary Alarm Card	3HE02772
CWDM OADM Adapter Card (1-channel)	3HE06582
CWDM OADM Adapter Card (2-channel)	3HE06583
CWDM OADM Adapter Card (4-channel)	3HE06584
CWDM OADM Adapter Card (8-channel)	3HE06585
CWDM OADM Module (1-channel)	3HE06582

## Table 9: 7705 SAR Adapter Cards and Modules (Continued)

Description	Nokia Base Part Number
GNSS Receiver Card	3HE07954
GPON Module	3HE05126
GPS Receiver Module	3HE07955
Integrated Services Card	3HE07942
Packet Microwave Adapter Card	3HE02782
Power Injector Card	3HE07152

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