

# ISA-MS Hardware

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## In This Section

This section provides an overview of Alcatel-Lucent's implementation of the ISA MS hardware.

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## ISA-MS Overview

The ISA-MS is a resource module within the router providing packet buffering and packet processing in support of IPTV video features.

ISA-MS fits in an MDA/ISA slot on an IOM and has no external ports, so all communication passes through the IOM, making use of the network processor complex on the carrier IOM for queuing and filtering functions like other MDAs and ISAs.

The actual ingress and egress throughput will vary depending on the buffering and processing demands of a given video application, but the ISA hardware connector can support slightly more than 10 Gbps of throughput ingress and egress.

# Application Assurance Hardware Features

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## AA ISA Host System Support

The Application Assurance Integrated Services Adapter (AA ISA) is a resource adapter, which means that there are no external interface ports on the AA ISA itself. Instead, any other Input Output Modules on a system in which the AA ISA is installed are used to switch traffic internally MS ISA to the AA ISA. [Table 1](#) describes Application Assurance ISA support on 7750 SR and 7450 ESS products. [Table 2](#) shows platform, IOM model, and feature matrix.

**Table 1: Application Assurance AA ISA System Support**

System	AA ISA Supported
7450 ESS-12	Yes
7450 ESS-7	Yes
7450 ESS-6	Yes
7450 ESS-1	No
7750 SR-12	Yes
7750 SR-7	Yes
7750 SR-c4	Yes
7750 SR-c12	Yes
7750 SR-1	No
7710 SR	No

A key strength of Application Assurance features is the complete integration into the 7750 SR and 7450 ESS family of products. Common interfaces and operational familiarity reduce the effort to integrate the Application Assurance into existing networks.

**Table 2: MS-ISA Host IOM Support Matrix**

	<b>7450 ESS: ESS-6, ESS-6v, ESS-7, ESS-12</b>	<b>7750 SR: SR-7, SR-12</b>
Application Assurance	IOM-20G-B, IOM3-XP	IOM-20G-B, IOM2-20G, IOM3-XP
Video: FCC/RET	IOM-20G-B, IOM3-XP	IOM-20G-B, IOM2-20G, IOM3-XP
Video: Ad Insertion	n/a	IOM-20G-B, IOM2-20G, IOM3-XP
NAT	n/a	IOM3-XP

## IOM Support for AA ISA

The AA ISA is supported on IOM-20G-B and IOM3-XP. Each IOM can support a maximum of two AA ISA modules. To maximize AA ISA redundancy, deployment of AA ISAs on separate host IOMs is recommended as it provides IOM resilience. Traffic from any supported IOM (for example IOM-20G-B and IOM3-XP, fixed port IOMs (IMMs)) can be diverted to AA ISA hosted by either an IOM-20G-B and IOM3-XP. The AA ISA is field replaceable and supports hot insertion and removal. See [Figure 1](#). A system can support up to 7 active AA ISA cards providing up to 70 G of processing capacity.

AA ISA software upgrades are part of the ISSU functionality. Upgrades to AA ISA software, for example to activate new protocol signatures, do not impact the second MDA slot for the IOM carrying the AA ISA, nor do upgrades impact the router itself (for example, a new AA ISA software image can be downloaded without a need to upgrade other software images).

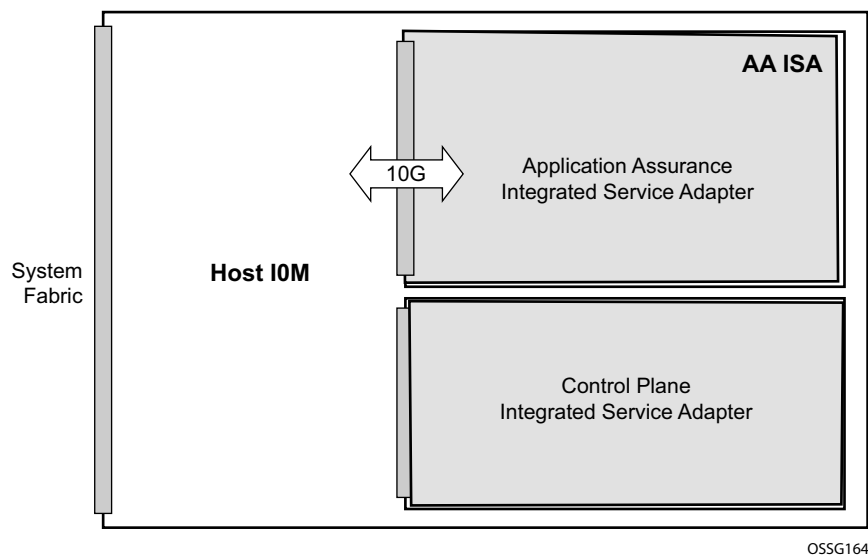


Figure 1: AA ISA on Host IOM 2-20G Example

