

#### **PRODUCT BULLETIN NO. 2879**

# CISCO IOS SOFTWARE RELEASES 12.4 MAINLINE AND 12.4T FEATURE SETS FOR THE CISCO 2800 SERIES ROUTERS

This product bulletin details changes to the Cisco IOS® Software packaging for Cisco® 2800 Series routers. It introduces four new cross-platform feature sets in Cisco IOS Software releases 12.4 Mainline and 12.4T.

**Note:** This product bulletin covers the packaging of functions into feature sets. It does not cover individual new features. For information about new features in Cisco IOS Software releases 12.4 Mainline and 12.4T, refer to the Cisco IOS Software pages at Cisco.com.

#### **OVERVIEW**

The Cisco 2800 and 3800 series integrated services routers are introduced exclusively on eight cross-platform feature sets. Similar to 12.3T, Cisco IOS Software releases 12.4 Mainline and 12.4T consist exclusively of the cross-platform feature sets.

**Table 1.** Type of Feature Sets by Release Train

Cisco IOS Software Release 12.3 Mainline	Cisco IOS Software Release 12.3T	Cisco IOS Software Releases 12.4 Mainline and 12.4T
Classic Feature Sets		
Cross-Platform Feature Sets	Cross-Platform Feature Sets	Cross-Platform Feature Sets
Special-Purpose Feature Sets	Special-Purpose Feature Sets	Special-Purpose Feature Sets

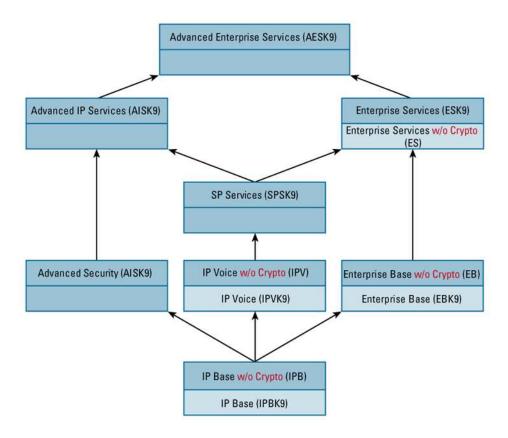
In addition to the eight cross-platform feature sets that were released with Cisco IOS Software releases 12.3T and 12.3 Mainline, four additional cross-platform feature sets will be added starting with 12.4 Mainline and 12.4T. Derivatives of the existing eight feature sets, these four new feature sets were created to address router management capabilities. The new feature sets are described in Table 2.

Table 2. New Feature Sets for Cisco IOS Software Releases 12.4 and 12.4T

Image Name	Cisco IOS Software Release 12.3 and Prior	Image Name	Cisco IOS Software Release 12.4 and Forward
		IP Base	New
IP Base	X	IP Base without Crypto	Renamed
		Enterprise Base	New
Enterprise Base	X	Enterprise Base without Crypto	Renamed
		IP Voice	New
IP Voice	X	IP Voice without Crypto	Renamed
Advanced Security	X	Advanced Security	X
SP Services	X	SP Services	X
Advanced IP Services	X	Advanced IP Services	X
		Enterprise Services without Crypto	New
Enterprise Services	X	Enterprise Services	X
Advanced Enterprise Services	X	Advanced Enterprise Services	X

Note that there is a name change for the feature sets that previously had no cryptography technology, and this fact is now noted in their titles. Going forward, the new feature sets that have cryptography technology will have the basic title without any cryptography designator.

Figure 1. Reformation Feature Map



The remainder of this product bulletin provides details of feature set availability in Cisco IOS Software releases 12.4 Mainline and 12.4T.

#### **CISCO IOS SOFTWARE RELEASE 12.4 MAINLINE**

#### Overview of Available Feature Sets in Cisco IOS Software Release 12.4 Mainline

Table 3 lists the Cisco IOS Software Release 12.4 Mainline feature sets that are available for the Cisco 2800 Series routers.

Note that the flash memory recommendations given in the table are calculated without added management tools such as Cisco Security Device Manager (SDM).

 Table 3.
 Cisco 2801—12.4M Feature Set Memory Recommendations

Product Discription   Recommended Flash   Recommended Flash   Recommended Plash   Register   Regi	Software Product Description		
Product Description         Recommended Flash         Recommended Plash           Tabaq Filename         12.4M         12.4M           Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES         64         128           Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES         64         128           Cisco 2800 IOS ADVANCED IP SERVICES         64         128           Cisco 2800 IOS ADVANCED IP SERVICES         64         128           Cisco 2800 IOS ADVANCED SECURITY         64         128           Cisco 2800 IOS ADVANCED SECURITY         64         128           Cisco 2800 IOS ADVANCED SECURITY         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE         64         128	Software Product Description Product ID		
S280AESK9	Product Description	Recommended Flash	Recommended DRAM
Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES         64         128           C2801-adventerprisek9-mz         64         128           Cisco 2800 IOS ADVANCED IP SERVICES         64         128           C2801-advipservicesk9-mz         64         128           S280ASK9         64         128           Cisco 2800 IOS ADVANCED SECURITY         620         128           C2801-advsecurityk9-mz         64         128           S280EB         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           C2801-anthase-mz         64         128           C3800 IOS ENTERPRISE BASE         64         128           C3801-anthasek9-mz         64         128           C3801-entservices-mz         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           C3801-entservicesk9-mz         64         128           C3801-entservicesk9-mz         64         128           C3801-entservicesk9-mz         64         128           C3801-ipbase-mz         64         128           C3801-ipbase-mz         64         128           C3801-ipbase-mz         64         128      <	Image Filename	12.4M	12.4M
c2801-adventerprisek9-mz         64         128           S280AISK9         64         128           Cisco 2800 IOS ADVANCED IP SERVICES         64         128           C2801-advispearvicesk9-mz         64         128           S280ASK9         64         128           Cisco 2800 IOS ADVANCED SECURITY         64         128           c2801-advsecurityk9-mz         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE BASE         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS IP BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE         128         128           Cisco 2800 IOS IP VICE WITHOUT CRYPTO	S280AESK9	64	128
S280AISK9	Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES		
Cisco 2800 IOS ADVANCED IP SERVICES         64         128           C2801-advipservicesk9-mz         64         128           S280ASKI9         64         128           Cisco 2800 IOS ADVANCED SECURITY         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE BASE         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS IP BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE         64         128           Cisco 2800 IOS IP BASE         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128	c2801-adventerprisek9-mz		
c2801-advipservicesk9-mz         64         128           S280ASK9         64         128           Cisco 2800 IOS ADVANCED SECURITY         64         128           c2801-advisecurityk9-mz         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           c2801-entbase-mz         64         128           Cisco 2800 IOS ENTERPRISE BASE         64         128           c2801-entbasek9-mz         64         128           S280ES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           c2801-entservices-mz         5280ESK9         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS IP BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128 <td>S280AISK9</td> <td>64</td> <td>128</td>	S280AISK9	64	128
S280ASK9	Cisco 2800 IOS ADVANCED IP SERVICES		
Cisco 2800 IOS ADVANCED SECURITY         64         128           C2801-advsecurityk9-mz         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           C2801-entbase-mz         64         128           Cisco 2800 IOS ENTERPRISE BASE         64         128           C2801-entbasek9-mz         64         128           S280ES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           C2801-entservices-mz         64         128           S280ESK9         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS IP BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128	c2801-advipservicesk9-mz		
c2801-advsecurityk9-mz         64         128           S280EB         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         2801-entbase-mz         2801-entbase-mz           S280EBK9         64         128           Cisco 2800 IOS ENTERPRISE BASE         64         128           C2801-entbasek9-mz         64         128           S280ES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           C2801-entservices-mz         64         128           C3800 IOS ENTERPRISE SERVICES         64         128           C3800 IOS IP BASE WITHOUT CRYPTO         64         128           C3801 I-pibase-mz         64         128           S280IPBK9         64         128           C1sco 2800 IOS IP BASE         64         128           C2801-ipbasek9-mz         64         128           S280IPW         64         128           C1sco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           C2801-ipvoice-mz         5280IPVS         64         128           C1sco 2800 IOS IP VOICE         64         128           C2801 I-pvoicek9-mz         5280 I-pvoicek9-mz         528	S280ASK9	64	128
S280EB         64         128           Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO         64         128           C2801-entbase-mz         64         128           S280EBK9         64         128           Cisco 2800 IOS ENTERPRISE BASE         64         128           C2801-entbasek9-mz         64         128           Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS ENTERPRISE SERVICES         64         128           Cisco 2800 IOS IP BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP BASE         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE WITHOUT CRYPTO         64         128           Cisco 2800 IOS IP VOICE         64         128           Cisco 2800 IOS IP VOICE         64         128           Cisco 2800 IOS IP VOICE         64         128	Cisco 2800 IOS ADVANCED SECURITY		
Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO       64       128         Cisco 2800 IOS ENTERPRISE BASE       64       128         C2801-entbasek9-mz       64       128         S280ES       64       128         Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO       64       128         Cisco 2800 IOS ENTERPRISE SERVICES       64       128         Cisco 2800 IOS ENTERPRISE SERVICES       64       128         Cisco 2800 IOS INTERPRISE SERVICES       64       128         Cisco 2800 IOS IP BASE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP BASE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP BASE       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP VOICE       64       128 </td <td>c2801-advsecurityk9-mz</td> <td></td> <td></td>	c2801-advsecurityk9-mz		
c2801-entbase-mz       64       128         Cisco 2800 IOS ENTERPRISE BASE       64       128         c2801-entbasek9-mz       64       128         S280ES       64       128         Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO       64       128         c2801-entservices-mz       64       128         Cisco 2800 IOS ENTERPRISE SERVICES       64       128         c2801-entservicesk9-mz       64       128         Cisco 2800 IOS IP BASE WITHOUT CRYPTO       64       128         c2801-jibase-mz       5280IPBK9       64       128         Cisco 2800 IOS IP BASE       2801-jibasek9-mz       64       128         S280IPV       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         c2801-jipvice-mz       64       128         S280IPVK9       64       128         Cisco 2800 IOS IP VOICE       64       128 <td>S280EB</td> <td>64</td> <td>128</td>	S280EB	64	128
\$280EBK9       64       128         Cisco 2800 IOS ENTERPRISE BASE       64       128         c2801-entbasek9-mz       64       128         \$280ES       64       128         Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO       64       128         c2801-entservices-mz       64       128         \$280ESK9       64       128         Cisco 2800 IOS ENTERPRISE SERVICES       64       128         \$280IPB       64       128         Cisco 2800 IOS IP BASE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP BASE       64       128         \$280IPW       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         \$280IPW       64       128         Cisco 2800 IOS IP VOICE       64       128         Cisco 2800 IOS SP SERVICES       64       128	Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO		
Cisco 2800 IOS ENTERPRISE BASE       64       128         280ES       64       128         Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO	c2801-entbase-mz		
c2801-entbasek9-mz       64       128         Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO       64       128         c2801-entservices-mz       64       128         S280ESK9       64       128         Cisco 2800 IOS ENTERPRISE SERVICES       62       128         c2801-entservicesk9-mz       64       128         S280IPB       64       128         Cisco 2800 IOS IP BASE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP BASE       64       128         C2801-ipbase49-mz       64       128         S280IPV       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP VOICE       64       128         Cisco 2800 IOS IP VOICE       64       128         Cisco 2800 IOS IP SERVICES       64       128	S280EBK9	64	128
S280ES	Cisco 2800 IOS ENTERPRISE BASE		
Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO       c2801-entservices-mz         S280ESK9       64       128         Cisco 2800 IOS ENTERPRISE SERVICES       c2801-entservicesk9-mz         S280IPB       64       128         Cisco 2800 IOS IP BASE WITHOUT CRYPTO       c2801-ipbase-mz         S280IPBK9       64       128         Cisco 2800 IOS IP BASE       c2801-ipbasek9-mz         S280IPV       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       c2801-ipvoice-mz         S280IPVK9       64       128         Cisco 2800 IOS IP VOICE       c2801-ipvoicek9-mz         S280SPSK9       64       128         Cisco 2800 IOS S P SERVICES       64       128	c2801-entbasek9-mz		
c2801-entservices-mz       64       128         Cisco 2800 IOS ENTERPRISE SERVICES       64       128         c2801-entservicesk9-mz       64       128         S280IPB       64       128         Cisco 2800 IOS IP BASE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP BASE       64       128         Cisco 2800 IOS IP BASE       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         Cisco 2800 IOS IP VOICE       64       128         Cisco 2800 IOS IP VOICE       64       128         Cisco 2800 IOS IP VOICE       64       128         Cisco 2800 IOS IP SERVICES       64       128	S280ES	64	128
\$280ESK9 Cisco 2800 IOS ENTERPRISE SERVICES c2801-entservicesk9-mz \$280IPB 64 128 Cisco 2800 IOS IP BASE WITHOUT CRYPTO c2801-ipbase-mz \$280IPBK9 64 128 Cisco 2800 IOS IP BASE c2801-ipbasek9-mz \$280IPV \$280IPV Cisco 2800 IOS IP VOICE WITHOUT CRYPTO c2801-ipvoice-mz \$280IPVK9 64 128 Cisco 2800 IOS IP VOICE c2801-ipvoicek9-mz \$280IPVK9 64 128 Cisco 2800 IOS IP VOICE c2801-ipvoicek9-mz \$280SPSK9 64 128 Cisco 2800 IOS IP VOICE c2801-ipvoicek9-mz	Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO		
Cisco 2800 IOS ENTERPRISE SERVICES  c2801-entservicesk9-mz  S280IPB  Cisco 2800 IOS IP BASE WITHOUT CRYPTO  c2801-ipbase-mz  S280IPBK9  Cisco 2800 IOS IP BASE  c2801-ipbasek9-mz  S280IPV  Cisco 2800 IOS IP VOICE WITHOUT CRYPTO  c2801-ipvoice-mz  S280IPVK9  Cisco 2800 IOS IP VOICE  c2801-ipvoicek9-mz  S280IPVK9  Cisco 2800 IOS IP VOICE  C2801-ipvoicek9-mz  S280SPSK9  Cisco 2800 IOS P SERVICES	c2801-entservices-mz		
c2801-entservicesk9-mz       64       128         Cisco 2800 IOS IP BASE WITHOUT CRYPTO       2801-ipbase-mz       64       128         S280IPBK9       64       128       64       128         Cisco 2800 IOS IP BASE       64       128       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128       64       128         Cisco 2800 IOS IP VOICE       64       128       64       128         Cisco 2800 IOS IP VOICE       64       128       64       128         Cisco 2800 IOS SP SERVICES       64       128       64       128	S280ESK9	64	128
\$280IPB Cisco 2800 IOS IP BASE WITHOUT CRYPTO c2801-ipbase-mz \$280IPBK9 Cisco 2800 IOS IP BASE c2801-ipbasek9-mz \$280IPV Cisco 2800 IOS IP VOICE WITHOUT CRYPTO c2801-ipvoice-mz \$280IPVK9 Cisco 2800 IOS IP VOICE c2801-ipvoicek9-mz \$280IPVK9 Cisco 2800 IOS IP VOICE c2801-ipvoicek9-mz \$280IPVS 64 128 Cisco 2800 IOS IP VOICE c2801-ipvoicek9-mz \$280SPSK9 64 128 Cisco 2800 IOS SP SERVICES	Cisco 2800 IOS ENTERPRISE SERVICES		
Cisco 2800 IOS IP BASE WITHOUT CRYPTO c2801-ipbase-mz  S280IPBK9 64 128 Cisco 2800 IOS IP BASE c2801-ipbasek9-mz  S280IPV S280IPV 64 128 Cisco 2800 IOS IP VOICE WITHOUT CRYPTO c2801-ipvoice-mz  S280IPVK9 64 128 Cisco 2800 IOS IP VOICE c2801-ipvoicek9-mz  S280SPSK9 64 128 Cisco 2800 IOS SP SERVICES	c2801-entservicesk9-mz		
c2801-ipbase-mz       64       128         Cisco 2800 IOS IP BASE       2801-ipbasek9-mz       64       128         S280IPV       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       2801-ipvoice-mz       64       128         S280IPVK9       64       128         Cisco 2800 IOS IP VOICE       2801-ipvoicek9-mz       64       128         Cisco 2800 IOS SP SERVICES       64       128	S280IPB	64	128
S280IPBK9       64       128         Cisco 2800 IOS IP BASE       2801-ipbasek9-mz       64       128         S280IPV       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       2801-ipvoice-mz       64       128         Cisco 2800 IOS IP VOICE       2800 IOS IP VOICE       64       128         Cisco 2800 i-ipvoicek9-mz       64       128         Cisco 2800 IOS SP SERVICES       64       128	Cisco 2800 IOS IP BASE WITHOUT CRYPTO		
Cisco 2800 IOS IP BASE c2801-ipbasek9-mz  S280IPV  Cisco 2800 IOS IP VOICE WITHOUT CRYPTO c2801-ipvoice-mz  S280IPVK9  Cisco 2800 IOS IP VOICE c2801-ipvoicek9-mz  S280SPSK9  Cisco 2800 IOS SP SERVICES	c2801-ipbase-mz		
c2801-ipbasek9-mz       64       128         S280IPV       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         c2801-ipvoice-mz       64       128         Cisco 2800 IOS IP VOICE       64       128         c2801-ipvoicek9-mz       64       128         S280SPSK9       64       128         Cisco 2800 IOS SP SERVICES       64       128	S280IPBK9	64	128
S280IPV       64       128         Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       62       128         c2801-ipvoice-mz       64       128         Cisco 2800 IOS IP VOICE       64       128         c2801-ipvoicek9-mz       64       128         S280SPSK9       64       128         Cisco 2800 IOS SP SERVICES       64       128	Cisco 2800 IOS IP BASE		
Cisco 2800 IOS IP VOICE WITHOUT CRYPTO       64       128         S280IPVK9       64       128         Cisco 2800 IOS IP VOICE       2801-ipvoicek9-mz       64       128         S280SPSK9       64       128         Cisco 2800 IOS SP SERVICES       64       128	c2801-ipbasek9-mz		
c2801-ipvoice-mz       64       128         S280IPVK9       64       128         Cisco 2800 IOS IP VOICE       2801-ipvoicek9-mz       64       128         S280SPSK9       64       128         Cisco 2800 IOS SP SERVICES       64       128	S280IPV	64	128
\$280IPVK9       64       128         Cisco 2800 IOS IP VOICE       2801-ipvoicek9-mz       64       128         \$280SPSK9       64       128         Cisco 2800 IOS SP SERVICES       64       128	Cisco 2800 IOS IP VOICE WITHOUT CRYPTO		
Cisco 2800 IOS IP VOICE         c2801-ipvoicek9-mz         S280SPSK9       64       128         Cisco 2800 IOS SP SERVICES	c2801-ipvoice-mz		
c2801-ipvoicek9-mz       64       128         S280SPSK9       64       128         Cisco 2800 IOS SP SERVICES       64       128	S280IPVK9	64	128
\$280\$P\$K9 64 128 Cisco 2800 IO\$ \$P\$ERVICE\$	Cisco 2800 IOS IP VOICE		
Cisco 2800 IOS SP SERVICES	c2801-ipvoicek9-mz		
	S280SPSK9	64	128
c2801-spservicesk9-mz	Cisco 2800 IOS SP SERVICES		
	c2801-spservicesk9-mz		

 Table 4.
 Cisco 2811–2851—12.4M Feature Set Memory Recommendations

Software Product Description Product ID Product Description Image Filename	Recommended Flash 12.4M	Recommended DRAM 12.4M
S28NAESK9 Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES c2800nm-adventerprisek9-mz	64	256
S28NAVSK9 Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES WITH INTEGRATED VOICE/VIDEO GATEKEEPER, IP-IP GATEWAY, TDM-IP GATEWAY c2800nm-adventerprisek9_ivs-mz	64	256
S28NSNAK9 Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES WITH SNA SWITCHING c2800nm-adventerprisek9_sna-mz	64	256
S28NAISK9 Cisco 2800 IOS ADVANCED IP SERVICES c2800nm-advipservicesk9-mz	64	256
S28NASK9 Cisco 2800 IOS ADVANCED SECURITY c2800nm-advsecurityk9-mz	64	256
S28NEB Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO c2800nm-entbase-mz	64	256
S28NEBK9 Cisco 2800 IOS ENTERPRISE BASE c2800nm-entbasek9-mz	64	256
S28NES Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO c2800nm-entservices-mz	64	256
S28NESK9 Cisco 2800 IOS ENTERPRISE SERVICES c2800nm-entservicesk9-mz	64	256
S28NIPB Cisco 2800 IOS IP BASE WITHOUT CRYPTO c2800nm-ipbase-mz	64	256
S28NIPBK9 Cisco 2800 IOS IP BASE c2800nm-ipbasek9-mz	64	256
S28NIPV Cisco 2800 IOS IP VOICE WITHOUT CRYPTO c2800nm-ipvoice-mz	64	256

Software Product Description Product ID Product Description Image Filename	Recommended Flash 12.4M	Recommended DRAM 12.4M
S28NIVS Cisco 2800 IOS IP VOICE WITH INTEGRATED VOICE/VIDEO GATEKEEPER, IP-IP GATEWAY, TDM-IP GATEWAY c2800nm-ipvoice_ivs-mz	64	256
S28NIPVK9 Cisco 2800 IOS IP VOICE c2800nm-ipvoicek9-mz	64	256
S28NSPSK9 Cisco 2800 IOS SP SERVICES c2800nm-spservicesk9-mz	64	256

#### **CISCO IOS SOFTWARE RELEASE 12.4T**

## Overview of Available Feature Sets in Cisco IOS Software Release 12.4T

Table 5 lists the Cisco IOS Software Release 12.3T feature sets that are available for the Cisco 2800 Series routers.

Note that the flash memory recommendations in the table are calculated without added management tools such as Cisco SDM.

 Table 5.
 Cisco 2801—12.4T Feature Set Memory Recommendations

Software Product Description Product ID Product Description Image Filename	Recommended Flash 12.4T	Recommended DRAM 12.4T
S280AESK9 Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES	64	128
c2801-adventerprisek9-mz		
S280AISK9	64	128
Cisco 2800 IOS ADVANCED IP SERVICES		
c2801-advipservicesk9-mz		
S280ASK9	64	128
Cisco 2800 IOS ADVANCED SECURITY		
c2801-advsecurityk9-mz		
S280EB	64	128
Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO		
c2801-entbase-mz		
S280EBK9	64	128
Cisco 2800 IOS ENTERPRISE BASE		
c2801-entbasek9-mz		
S280ES	64	128
Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO		
c2801-entservices-mz		

Software Product Description Product ID Product Description Image Filename	Recommended Flash 12.4T	Recommended DRAM 12.4T
S280ESK9	64	128
Cisco 2800 IOS ENTERPRISE SERVICES		
c2801-entservicesk9-mz		
S280IPB	64	128
Cisco 2800 IOS IP BASE WITHOUT CRYPTO		
c2801-ipbase-mz		
S280IPBK9	64	128
Cisco 2800 IOS IP BASE		
c2801-ipbasek9-mz		
S280IPV	64	128
Cisco 2800 IOS IP VOICE WITHOUT CRYPTO		
c2801-ipvoice-mz		
S280IPVK9	64	128
Cisco 2800 IOS IP VOICE		
c2801-ipvoicek9-mz		
S280SPSK9	64	128
Cisco 2800 IOS SP SERVICES		
c2801-spservicesk9-mz		

Table 6. Cisco 2811-2851—12.4T Feature Set Memory Recommendations

Software Product Description Product ID Product Description Image Filename	Recommended Flash 12.4T	Recommended DRAM 12.4T
S28NAESK9 Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES c2800nm-adventerprisek9-mz	64	256
S28NAVSK9 Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES WITH INTEGRATED VOICE/VIDEO GATEKEEPER, IP-IP GATEWAY, TDM-IP GATEWAY c2800nm-adventerprisek9_ivs-mz	64	256
S28NSNAK9 Cisco 2800 IOS ADVANCED ENTERPRISE SERVICES WITH SNA SWITCHING c2800nm-adventerprisek9_sna-mz	64	256
S28NAISK9 Cisco 2800 IOS ADVANCED IP SERVICES c2800nm-advipservicesk9-mz	64	256

Software Product Description Product ID Product Description Image Filename	Recommended Flash 12.4T	Recommended DRAM
S28NASK9	64	256
Cisco 2800 IOS ADVANCED SECURITY		
c2800nm-advsecurityk9-mz		
S28NEB	64	256
Cisco 2800 IOS ENTERPRISE BASE WITHOUT CRYPTO		
c2800nm-entbase-mz		
S28NEBK9	64	256
Cisco 2800 IOS ENTERPRISE BASE		
c2800nm-entbasek9-mz		
S28NES	64	256
Cisco 2800 IOS ENTERPRISE SERVICES WITHOUT CRYPTO		
c2800nm-entservices-mz		
S28NESK9	64	256
Cisco 2800 IOS ENTERPRISE SERVICES		
c2800nm-entservicesk9-mz		
S28NIPB	64	256
Cisco 2800 IOS IP BASE WITHOUT CRYPTO		
c2800nm-ipbase-mz		
S28NIPBK9	64	256
Cisco 2800 IOS IP BASE		
c2800nm-ipbasek9-mz		
S28NIPV	64	256
Cisco 2800 IOS IP VOICE WITHOUT CRYPTO	-	
c2800nm-ipvoice-mz		
S28NIVS	64	256
Cisco 2800 IOS IP VOICE WITH INTEGRATED VOICE/VIDEO GATEKEEPER, IP-IP GATEWAY, TDM-IP GATEWAY		_55
c2800nm-ipvoice_ivs-mz		
S28NIPVK9	64	256
Cisco 2800 IOS IP VOICE		
c2800nm-ipvoicek9-mz		
S28NSPSK9	64	256
Cisco 2800 IOS SP SERVICES		
c2800nm-spservicesk9-mz		

### Feature Area Map for Cisco IOS Software Release 12.4 Cross-Platform Feature Sets

The cross-platform feature sets are tailored to ease the choice of feature sets in a multiplatform environment. They were initially available for Cisco 1700 Series and Cisco 2600XM, 2691, 3725, and 3745 routers and are now also available for the Cisco 1800, 2800, and 3800 series routers. The cross-platform feature sets simplify the image selection process by providing similar functions across platform boundaries.

Table 7. Feature Area Map

	Basic IP Connectivity for Data	Voice over IP, Voice over Frame Relay	ATM, Voice over ATM, MPLS	AppleTalk, IPX, IBM protocols	Firewall Intrusion Detection Sensor, VPN	SSH, HTTPS SNMPv3
IP Base	X					X
IP Base without Crypto	X					
Enterprise Base	X			X		X
Enterprise Base without Crypto	X			Х		
IP Voice	X	Х				X
IP Voice without Crypto	Х	Х				
Advanced Security	X				X	X
SP Services	X	Х	Х			X
Advanced IP Services	X	Х	Х		X	Х
Enterprise Services without Crypto	X	Х	Х	Х		
Enterprise Services	X	X	X	X		X
Advanced Enterprise Services	Х	Х	Х	Х	Х	Х



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