

# Printer and MFP security features



The table below shows a list of embedded device security features and availability of those features across HP Enterprise-class<sup>1</sup> printers and MFPs and competitor devices. This data is provided to support the relative claim of “most secure” printers.

## A4 class devices

	HP <sup>3</sup>	Canon <sup>4</sup>	Konica Minolta <sup>5</sup>	Kyocera <sup>6</sup>	Lexmark <sup>7</sup>	Oki Data <sup>8</sup>	Ricoh <sup>9</sup>	Xerox <sup>10</sup>
BIOS security validation at boot <sup>2</sup>	✓	✓	✓	?	✓	?	✓	?
with self-healing	✓	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Firmware/software code validation at boot <sup>2</sup>	✓	✓	✓	✓	✓	?	✓	✓
Run-time memory inspection <sup>2</sup>	✓	⊘	⊘	⊘	⊘	⊘	⊘	⊘
with self-healing	✓	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Network behavior anomaly detection	✓	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Protect system files/directories	✓	✓	?	?	✓	?	✓	⊘
SIEM integration	✓	✓	⊘	⊘	✓	⊘	⊘	⊘
802.1x network authentication	✓	✓	✓	✓	✓	✓	✓	✓
Access Control lists (ACL)	✓	✓	✓	✓	✓	✓	✓	✓
Active Directory integration	✓	✓	✓	✓	✓	✓	✓	✓
Bluetooth Low Energy	✓	✓	✓	⊘	⊘	⊘	⊘	⊘
Configurable CA certificate	✓	✓	✓	✓	✓	✓	✓	✓
Configurable device identity certificate	✓	✓	✓	✓	✓	✓	✓	✓
Digitally signed firmware/software	✓	✓	✓	✓	✓	✓	✓	✓
Disable network ports and protocols	✓	✓	✓	✓	✓	✓	✓	✓
Disable physical ports (USB, parallel, etc.)	✓	✓	✓	✓	✓	✓	✓	✓
Embedded encrypted HDD by default	✓	⊘	✓	⊘	⊘	⊘	⊘	✓
Embedded FIPS 140	✓	⊘	⊘	⊘	⊘	⊘	⊘	✓
Embedded NFC hardware	✓	⊘	✓	⊘	⊘	⊘	⊘	✓
Embedded secure file erase	✓	✓	✓	⊘	⊘	⊘	⊘	✓
Embedded secure storage erase	✓	✓	✓	⊘	⊘	⊘	✓	✓
Embedded Wi-Fi Direct	✓	✓	✓	⊘	✓	✓	⊘	⊘
Encrypted and hashed PINS and passwords	✓	✓	✓	✓	✓	✓	✓	✓
Encrypted email	✓	✓	✓	✓	✓	✓	✓	✓
Encrypted print	✓	✓	✓	✓	✓	✓	✓	✓
Fax lock PIN	✓	✓	✓	✓	✓	✓	✓	✓
Hardware Integration Pocket for security solutions	✓	✓	⊘	✓	✓	✓	✓	✓
IPP encrypted printing	✓	✓	✓	✓	✓	✓	✓	✓
IPsec	✓	✓	✓	✓	✓	✓	✓	✓
LDAP integration	✓	✓	✓	✓	✓	✓	✓	✓
Multiple user PINs (on the device)	✓	✓	✓	✓	✓	✓	✓	✓
Novell integration	✓	✓	✓	✓	✓	✓	✓	✓
Password complexity as default	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Role-based access to control panel features	✓	✓	✓	✓	✓	⊘	✓	✓
Secure SMTP server (HTTPS)	✓	✓	✓	✓	✓	⊘	✓	✓
Security event logging	✓	✓	✓	✓	✓	✓	✓	✓
Single sign-on (on device)	✓	✓	✓	⊘	✓	⊘	✓	✓
SNMPv3	✓	✓	✓	✓	✓	✓	✓	✓
TLS 1.1/1.2	✓	⊘	✓	✓	✓	✓	✓	✓
Trusted Platform Module (TPM)	✓	✓	✓	⊘	⊘	⊘	✓	✓
Turn on/off Remote Firmware Upgrade (RFU) on device	✓	⊘	⊘	⊘	⊘	✓	⊘	✓
<b>TOTALS</b>	<b>41</b>	<b>32</b>	<b>32</b>	<b>24</b>	<b>29</b>	<b>23</b>	<b>29</b>	<b>32</b>

## A3 class devices

	HP <sup>3</sup>	Canon <sup>11</sup>	Konica Minolta <sup>12</sup>	Kyocera <sup>13</sup>	Lexmark <sup>14</sup>	Ricoh <sup>15</sup>	Sharp <sup>16</sup>	Toshiba <sup>17</sup>	Xerox <sup>18</sup>
BIOS security validation at boot <sup>2</sup>	✓	✓	✓	?	✓	✓	?	?	?
with self-healing	✓	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Firmware/software code validation at boot <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	?	✓
Run-time memory inspection <sup>2</sup>	✓	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
with self-healing	✓	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Network behavior anomaly detection	✓	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Protect system files/directory	✓	✓	?	?	✓	✓	?	?	✓
SIEM integration	✓	✓	⊘	⊘	✓	⊘	⊘	⊘	⊘
802.1x network authentication	✓	✓	✓	✓	✓	✓	✓	✓	✓
Access Control lists (ACL)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Active Directory integration	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bluetooth® Low Energy	✓	✓	✓	⊘	⊘	⊘	⊘	⊘	⊘
Configurable CA certificate	✓	✓	✓	✓	✓	✓	⊘	⊘	✓
Configurable device identity certificate	✓	✓	✓	✓	✓	✓	✓	✓	✓
Digitally signed firmware/software	✓	✓	✓	✓	✓	✓	✓	✓	✓
Disable network ports and protocols	✓	✓	✓	✓	✓	✓	✓	✓	✓
Disable physical ports (USB, parallel, etc.)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Embedded encrypted HDD standard	✓	✓	✓	⊘	✓	⊘	⊘	✓	✓
Embedded FIPS 140	✓	✓	⊘	⊘	⊘	⊘	⊘	✓	✓
Embedded NFC hardware	✓	✓	✓	⊘	⊘	⊘	⊘	⊘	✓
Embedded secure file erase	✓	✓	✓	⊘	✓	✓	✓	✓	✓
Embedded secure storage erase	✓	✓	✓	⊘	✓	✓	✓	✓	✓
Embedded Wi-Fi Direct®	✓	✓	✓	⊘	✓	⊘	✓	✓	⊘
Encrypted and hashed PINS and passwords	✓	✓	✓	✓	✓	✓	✓	✓	✓
Encrypted email	✓	✓	✓	✓	✓	✓	✓	✓	✓
Encrypted print	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fax lock PIN	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hardware Integration Pocket for security solutions	✓	✓	⊘	✓	✓	✓	⊘	⊘	✓
IPP encrypted printing	✓	✓	✓	✓	✓	✓	✓	✓	✓
IPsec	✓	✓	✓	✓	✓	✓	✓	✓	✓
LDAP integration	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multiple user PINs (on the device)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Novell integration	✓	✓	✓	✓	✓	✓	✓	✓	✓
Password complexity as default	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
Role-based access to control panel features	✓	✓	✓	✓	✓	✓	✓	✓	✓
Secure SMTP server (HTTPS)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Security event logging	✓	✓	✓	✓	✓	✓	✓	✓	✓
Single sign-on (on device)	✓	✓	✓	⊘	✓	✓	⊘	⊘	✓
SNMPv3	✓	✓	✓	✓	✓	✓	✓	✓	✓
TLS 1.1/1.2	✓	⊘	✓	✓	✓	✓	✓	✓	✓
Trusted Platform Module (TPM)	✓	✓	✓	⊘	⊘	✓	⊘	⊘	⊘
Turn on/off Remote Firmware Upgrade (RFU) on device	✓	⊘	⊘	⊘	⊘	⊘	⊘	⊘	✓
<b>TOTALS</b>	<b>41</b>	<b>34</b>	<b>32</b>	<b>24</b>	<b>31</b>	<b>29</b>	<b>25</b>	<b>25</b>	<b>32</b>

## Methodology

Analysis done by HP and is based on published information from websites, data sheets, and brochures of leading competitive brands and representative in-class devices. Information provided is to the best of our knowledge.

## Notes

- <sup>1</sup> HP Enterprise-class printers and MFPs use HP FutureSmart firmware and HP claims of “most” secure are specific to FutureSmart devices.
- <sup>2</sup> A FutureSmart service pack update may be required to activate security features. Some features will be made available as an HP FutureSmart service pack update on select existing Enterprise printer models. For a list of compatible products, please see our “Embedded security features compatibility matrix” at <http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=4AA6-1178ENW>.
- <sup>3</sup> HP Enterprise and HP Managed devices with HP FutureSmart firmware 4.5 or above.

## A4 source data

Competitors listed below websites, data sheet, spec sheets, brochures, white papers, catalogues, and other public information as of February 2020.

<p>4</p> <p><u>Canon</u></p> <p><u>IR ADV 525iF III</u></p> <p><u>IR ADV 715iZ III</u></p> <p><u>IR ADV C356iF III</u></p> <p><u>IR ADV C475i III</u></p>	<p>5</p> <p><u>Konica Minolta</u></p> <p><u>bizhub 4020i</u></p> <p><u>bizhub 5020i</u></p> <p><u>bizhub C3300i</u></p> <p><u>bizhub C4050i</u></p>	<p>6</p> <p><u>Kyocera</u></p> <p><u>ECOSYS M3860</u></p> <p><u>ECOSYS P3155</u></p> <p><u>ECOSYS P3260</u></p> <p><u>TASKalfa 351ci</u></p>	<p>7</p> <p><u>Lexmark</u></p> <p><u>CX625</u></p> <p><u>CX860</u></p> <p><u>MX822</u></p> <p><u>XM7365</u></p>
<p>8</p> <p><u>Oki Data</u></p> <p><u>C823</u></p> <p><u>C824</u></p> <p><u>MC780</u></p> <p><u>MC853</u></p> <p><u>MC873</u></p>	<p>9</p> <p><u>Ricoh</u></p> <p><u>IM 550F</u></p> <p><u>IM 600F</u></p> <p><u>MP C501SP</u></p> <p><u>P 801</u></p>	<p>10</p> <p><u>Xerox</u></p> <p><u>VersaLink B600</u></p> <p><u>VersaLink B615</u></p> <p><u>VersaLink C600</u></p> <p><u>VersaLink C605</u></p>	

## A3 source data

Competitors listed below websites, data sheet, spec sheets, brochures, white papers, catalogues, and other public information as of February 2020.

<p>11</p> <p><u>Canon</u></p> <p><u>IR ADV 4545i</u></p> <p><u>IR ADV 6565i</u></p> <p><u>IR ADV C3530i</u></p> <p><u>IR ADV C5535i</u></p> <p><u>IR ADV C5560i</u></p>	<p>12</p> <p><u>Konica Minolta</u></p> <p><u>bizhub 287</u></p> <p><u>bizhub 658e</u></p> <p><u>bizhub C287</u></p> <p><u>bizhub C360i</u></p> <p><u>bizhub C658</u></p>	<p>13</p> <p><u>Kyocera</u></p> <p><u>ECOSYS M4132idn</u></p> <p><u>ECOSYS M8130cidn</u></p> <p><u>TASKalfa 4012i</u></p> <p><u>TASKalfa 6003i</u></p> <p><u>TASKalfa 6053ci</u></p>	<p>14</p> <p><u>Lexmark</u></p> <p><u>XC9235</u></p> <p><u>XC9255</u></p> <p><u>XC9265</u></p> <p><u>XM9155</u></p> <p><u>XM9165</u></p>
<p>15</p> <p><u>Rioch</u></p> <p><u>IM C2500</u></p> <p><u>IM C6000</u></p> <p><u>MP 2555</u></p> <p><u>MP 305SPF</u></p> <p><u>MP 6055</u></p>	<p>16</p> <p><u>Sharp</u></p> <p><u>MX-2651</u></p> <p><u>MX-6051</u></p> <p><u>MX-6071</u></p> <p><u>MX-M2651</u></p> <p><u>MX-M6071</u></p>	<p>17</p> <p><u>Toshiba</u></p> <p><u>e-STUDIO2010AC</u></p> <p><u>e-STUDIO2018A</u></p> <p><u>e-STUDIO5015AC</u></p> <p><u>e-STUDIO5018A</u></p> <p><u>e-STUDIO5516AC</u></p>	<p>18</p> <p><u>Xerox</u></p> <p><u>AltaLink B8065</u></p> <p><u>AltaLink C8030</u></p> <p><u>AltaLink C8055</u></p> <p><u>B1025</u></p> <p><u>VersaLink B7035</u></p>



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