

# Stratix 8000 and Stratix 8300 Ethernet Managed Switches

## Technical Specifications - Stratix 8000 and Stratix 8300 Switches

| Attribute                      | 1783-MS06T                                                                                                                                                                                                                                     | 1783-MS10T                                                                                      | 1783-RMS06T                                                                                     | 1783-RMS10T                                                                                     | 1783-MX08T                                                                                                                                                              | 1783-MX08F                                                                        |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Description                    | Stratix 8000™ managed switch, Layer 2 <ul style="list-style-type: none"><li>• 6 ports</li></ul>                                                                                                                                                | Stratix 8000 managed switch, Layer 2 <ul style="list-style-type: none"><li>• 10 ports</li></ul> | Stratix 8300™ managed switch, Layer 3 <ul style="list-style-type: none"><li>• 6 ports</li></ul> | Stratix 8300 managed switch, Layer 3 <ul style="list-style-type: none"><li>• 10 ports</li></ul> | Expansion module <ul style="list-style-type: none"><li>• 8 ports, copper</li></ul>                                                                                      | Expansion module <ul style="list-style-type: none"><li>• 8 ports, fiber</li></ul> |
| Inrush current, max            | 2.0 A                                                                                                                                                                                                                                          |                                                                                                 |                                                                                                 |                                                                                                 |                                                                                                                                                                         |                                                                                   |
| Switch input rating, max       | 1A max @ 18...60V DC, CL 2/SELV                                                                                                                                                                                                                |                                                                                                 |                                                                                                 |                                                                                                 | 0.3A @ 12V DC                                                                                                                                                           | 1A @ 12V DC                                                                       |
| Alarm relay rating, max        | 1A max @ 30V DC, CL 2/SELV                                                                                                                                                                                                                     |                                                                                                 |                                                                                                 |                                                                                                 | —                                                                                                                                                                       |                                                                                   |
| Power dissipation              | 15.1 W                                                                                                                                                                                                                                         | 15.7 W                                                                                          | 15.1 W                                                                                          | 15.7 W                                                                                          | 2.8 W                                                                                                                                                                   | 10.1 W                                                                            |
| Isolation voltage              | 75 V (continuous), basic insulation type, power to ground, power to network channels, and power to alarm<br>No isolation between individual Ethernet ports<br>No isolation between console port and system<br>Type tested at 1000V AC for 60 s |                                                                                                 |                                                                                                 |                                                                                                 | 75 V (continuous), basic insulation type, expansion backplane to network channels<br>No isolation between individual Ethernet ports<br>Type tested at 1000V AC for 60 s | —                                                                                 |
| Ethernet connections           | RJ45 connector according to IEC 60603-7, 2- or 4-pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702                                                                                        |                                                                                                 |                                                                                                 |                                                                                                 |                                                                                                                                                                         | —                                                                                 |
| DC power and alarm connections | 0.5...0.8 mm <sup>2</sup> (20...18 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater, 1.2 mm (3/64 in.) insulation max                                                                                                     |                                                                                                 |                                                                                                 |                                                                                                 | —                                                                                                                                                                       |                                                                                   |
| Functional ground connection   | 3.3...5.3 mm <sup>2</sup> (12...10 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater                                                                                                                                       |                                                                                                 |                                                                                                 |                                                                                                 | —                                                                                                                                                                       |                                                                                   |
| SFP modules <sup>(1)</sup>     | <ul style="list-style-type: none"><li>• 1783-SFP100FX</li><li>• 1783-SFP1GSX</li><li>• 1783-SFP100LX</li><li>• 1783-SFP1GLX</li></ul>                                                                                                          |                                                                                                 |                                                                                                 |                                                                                                 |                                                                                                                                                                         |                                                                                   |
| Memory card                    | 1783-MCF                                                                                                                                                                                                                                       |                                                                                                 | 1783-RMCF                                                                                       |                                                                                                 | —                                                                                                                                                                       |                                                                                   |
| Torque                         | 0.23 N•m (2.0 lb•in) on power and alarm connectors                                                                                                                                                                                             |                                                                                                 |                                                                                                 |                                                                                                 |                                                                                                                                                                         |                                                                                   |
| Wiring category <sup>(2)</sup> | 2 - on alarm ports<br>2 - on power ports<br>2 - on Ethernet ports                                                                                                                                                                              |                                                                                                 |                                                                                                 |                                                                                                 | 2 - on Ethernet ports                                                                                                                                                   | —                                                                                 |
| Enclosure type rating          | None (open-style)<br>Meets IP20                                                                                                                                                                                                                |                                                                                                 |                                                                                                 |                                                                                                 |                                                                                                                                                                         |                                                                                   |
| North American temp code       | T4                                                                                                                                                                                                                                             |                                                                                                 |                                                                                                 |                                                                                                 |                                                                                                                                                                         |                                                                                   |
| IEC temp code                  | T4                                                                                                                                                                                                                                             |                                                                                                 |                                                                                                 |                                                                                                 |                                                                                                                                                                         |                                                                                   |

(1) SFP modules supported only on switches with combo ports or SFP slots.

(2) Use this Conductor Category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

**Technical Specifications - Stratix 8000 and Stratix 8300 Fiber Expansion Module**

| Attribute                 | 1783-MX08F                                                                             |
|---------------------------|----------------------------------------------------------------------------------------|
| Ethernet data rate        | 100 Mbps                                                                               |
| Connecting mode           | Full duplex                                                                            |
| Optical wavelength        | 1310 nm                                                                                |
| Optical cable length, max | Graded index multimode fiber; 2000 m                                                   |
| Optical link budget       | 8 db with 62.5/125 $\mu$ m multimode cable<br>4 db with 50/125 $\mu$ m multimode cable |
| Connector type            | IEC 61754-20 LC connector                                                              |

**Environmental Specifications - Stratix 8000 and Stratix 8300 Switches**

| Attribute                                                                                                                                                                                                            | 1783-MS06T, 1783-MS10T, 1783-RMS06T,<br>1783-RMS10T                                                                                                                                                                 | 1783-MX08T                                                      | 1783-MX08F |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------|
| Temperature, operating<br>IEC 60068-2-1 (Test Ad, Operating Cold),<br>IEC 60068-2-2 (Test Bd, Operating Dry Heat),<br>IEC 60068-2-14 (Test Nb, Operating Thermal Shock)                                              | -40...60 °C (-40...140 °F)                                                                                                                                                                                          |                                                                 |            |
| Temperature, surrounding air, max                                                                                                                                                                                    | 60 °C (140 °F)                                                                                                                                                                                                      |                                                                 |            |
| Temperature, nonoperating<br>IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold),<br>IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat),<br>IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock) | -40...85 °C (-40...185 °F)                                                                                                                                                                                          |                                                                 |            |
| Relative humidity<br>IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)                                                                                                                                                  | 5...95% noncondensing                                                                                                                                                                                               |                                                                 |            |
| Vibration<br>IEC 60068-2-6 (Test Fc, Operating)                                                                                                                                                                      | 2 g @ 10...500 Hz                                                                                                                                                                                                   |                                                                 |            |
| Shock, operating<br>IEC 60068-2-27 (Test Ea, Unpackaged Shock)                                                                                                                                                       | 20 g                                                                                                                                                                                                                |                                                                 |            |
| Shock, nonoperating<br>IEC 60068-2-27 (Test Ea, Unpackaged Shock)                                                                                                                                                    | 30 g                                                                                                                                                                                                                |                                                                 |            |
| Emissions<br>CISPR 11                                                                                                                                                                                                | Group 1, Class A                                                                                                                                                                                                    |                                                                 |            |
| ESD immunity<br>IEC 61000-4-2                                                                                                                                                                                        | 8 kV contact discharges<br>15 kV air discharges                                                                                                                                                                     |                                                                 |            |
| Radiated RF immunity<br>IEC 61000-4-3                                                                                                                                                                                | 20V/m with 1 kHz sine-wave 80% AM from 80...1000 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz<br>10V/m with 1 kHz sine-wave 80% AM from 1000...2700 MHz |                                                                 |            |
| EFT/B immunity<br>IEC 61000-4-4                                                                                                                                                                                      | $\pm 4$ kV at 2.5 kHz and $\pm 2$ kV at 5 kHz on power ports<br>$\pm 4$ kV at 2.5 kHz and $\pm 2$ kV at 5 kHz on alarm ports<br>$\pm 4$ kV at 2.5 kHz and $\pm 2$ kV at 5 kHz on Ethernet ports                     | $\pm 4$ kV at 2.5 kHz and $\pm 2$ kV at 5 kHz on Ethernet ports | —          |

**Environmental Specifications - Stratix 8000 and Stratix 8300 Switches**

| Attribute                                    | 1783-MS06T, 1783-MS10T, 1783-RMS06T, 1783-RMS10T                                                                                                                          | 1783-MX08T                              | 1783-MX08F |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------|
| Surge transient immunity<br>IEC 61000-4-5    | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports<br>±1 kV line-line (DM) and ±2 kV line-earth (CM) on alarm ports<br>±2 kV line-earth (CM) on Ethernet ports | ±2 kV line-earth (CM) on Ethernet ports | —          |
| Conducted RF immunity<br>IEC 61000-4-6       | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz . . . 80 MHz                                                                                                             |                                         | —          |
| Magnetic field immunity<br>IEC 61000-4-8     | 30 A/m long duration and 300 A/m short duration at 50 and 60 Hz                                                                                                           |                                         |            |
| Oscillatory surge withstand<br>IEEE C37.90.1 | 2.5 kV                                                                                                                                                                    |                                         | —          |
| Voltage variation<br>IEC 61000-4-29          | 10 ms interruption on DC supply ports                                                                                                                                     | —                                       |            |

**Certifications - Stratix 8000 and Stratix 8300 Switches**

| Certifications (when product is marked) <sup>(1)</sup> | 1783-MS06T, 1783-MS10T, 1783-RMS06T, 1783-RMS10T                                                                                                                                                                                                                       | 1783-MX08T, 1783-MX08F |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| c-UL-us                                                | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584.<br>UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.                                                   |                        |
| CE                                                     | European Union 2004/108/EC EMC Directive, compliant with:<br>• EN 61326-1; Meas./Control/Lab., Industrial Requirements<br>• EN 61000-6-2; Industrial Immunity<br>• EN 61000-6-4; Industrial Emissions<br>• EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) |                        |
| C-Tick                                                 | Australian Radiocommunications Act, compliant with:<br>• AS/NZS CISPR 11; Industrial Emissions                                                                                                                                                                         |                        |
| Ex                                                     | European Union 94/9/EC ATEX Directive, compliant with:<br>• EN 60079-15; Potentially Explosive Atmospheres, Protection "n"<br>• EN 60079-0; General Requirements (Zone 2)                                                                                              |                        |
| KC                                                     | Korean Certification of Broadcasting and Communications Equipment, compliant with:<br>• Framework Act on Telecommunications and Radio Waves Act                                                                                                                        |                        |
| EtherNet/IP                                            | ODVA conformance tested to EtherNet/IP specifications                                                                                                                                                                                                                  |                        |

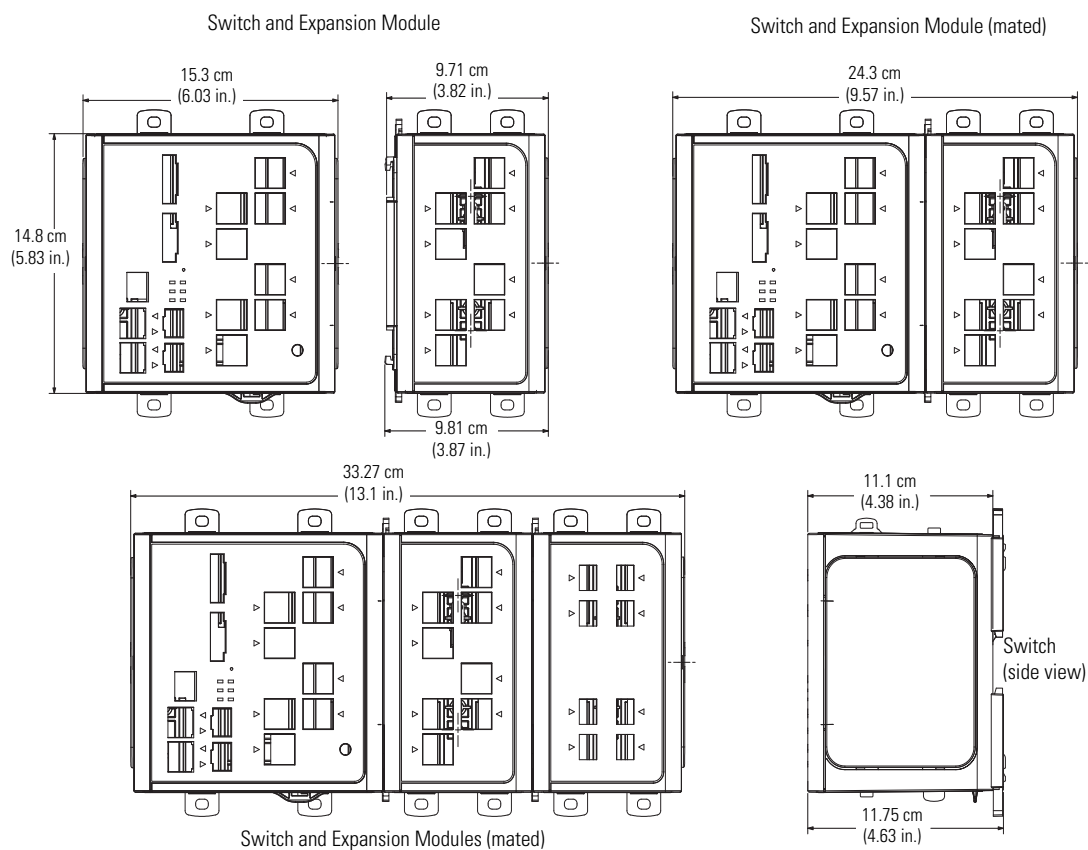
(1) See the Product Certification link at <http://www.ab.com> for declarations of conformity, certificates, and other certification details.

**Optional Expansion Modules - Stratix 8000 and Stratix 8300 Switches**

| Cat. No.   | Description                                                   |
|------------|---------------------------------------------------------------|
| 1783-MX08T | Expansion module with 8 10/100 Base-T copper Ethernet ports   |
| 1783-MX08F | Expansion module with 8 100 Base-F fiber-optic Ethernet ports |

## Dimensions - Stratix 8000 and Stratix 8300 Switches

This illustration shows dimensions for the 1783-MS10T switch and the 1783-MX08T expansion module. Dimensions for the other switches are the same as the 1783-MS10T switch. Dimensions for the 1783-MX08F expansion module are the same as the 1783-MX08T expansion module.



For panel-mounting, the height of the center of the mounting holes on both the top and bottom latches measures 8.73 mm (0.34 in.) above the top surface (or below the bottom surface) of the switch.

On the switch base unit, the tab hole center-to-center spacing is 6.83 cm (2.69 in.).

For expansion modules, the tab hole center-to-center spacing is 4.36 cm (1.72 in.).

Airflow around the switch and through the vents is unrestricted. To prevent the switch from overheating, these minimum clearances must be met:

- Top and bottom: 105 mm (4.13 in.)
- Left and right: 90 mm (3.54 in.)
- Front: 65 mm (2.56 in.)