

# Update on Cisco 1 Gbps Bidirectional Industrial Temperature Transceivers

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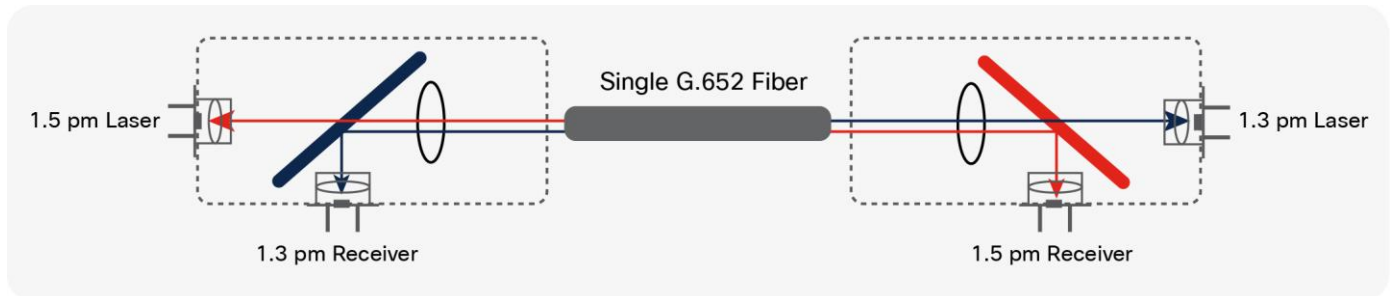
## PB743309

Cisco is introducing new industrial temperature-rated, 1 Gbps, bidirectional transceivers for network connectivity up to 10 km. The PIDs are GLC-BX-D-I and GLC-BX-U-I. These transceivers enable 1G connectivity over a single fiber in environments that are not temperature controlled. The Cisco® GLC-BX-D-I and U-I transceivers enable connectivity in Industrial Ethernet (IE series) switches and routers for Internet of Things (IoT) applications such as factory floor automation, utility substation automation, and transportation. Additionally, these transceivers are deployed by service providers to enable connectivity in applications such as mobile backhaul (4G, LTE, 5G), residential, and enterprise broadband access.



**Figure 1.**  
Cisco PIDs: GLC-BX-D-I and GLC-BX-U-I

## New features



**Figure 2.**  
Operation of GLC-BX-D-I and GLC-BX-U-I transceivers over single strand of fiber

The GLC-BX-D-I and GLC-BX-U-I bidirectional transceivers offer the following benefits:

- Supports industrial temperature range (IND): -40 to 85° C (-40 to 185° F).
- Doubles the utilization of existing single-mode fibers by separating the transmission wavelengths.
- The communication over a single strand of fiber is achieved by separating the transmission wavelength of the two devices as depicted above: the GLC-BX-D-I SFP transmits a 1490-nm channel and receives a 1310-nm signal, whereas the GLC-BX-U-I SFP transmits at a 1310-nm wavelength and receives a 1490-nm signal.
- The GLC-BX-D-I and GLC-BX-U-I SFP allow connectivity for up to 10 km over single-strand, single-mode fiber (G.652).

## Ordering information

The two new transceivers complete the family of existing 1G Bidi Transceivers.

Status	Cisco part #	Connector type	Reach	Temperature range	Media type
<b>New</b>	GLC-BX-D-I GLC-BX-U-I	Simplex LC	10 km	-40 to 85° C	Single-Mode Fiber
<b>Existing</b>	GLC-BX40-D-I GLC-BX40-U-I	Simplex LC	40 km	-40 to 85° C	Single-Mode Fiber
<b>Existing</b>	GLC-BX80-D-I GLC-BX80-U-I	Simplex LC	80 km	-40 to 85° C	Single-Mode Fiber

In addition to the bidirectional transceivers, the following table shows the portfolio of (duplex) 1 Gbps industrial temperature transceivers that enable connectivity for IoT and service provider applications.

Status	Cisco part #	Connector type	Reach	Temperature range	Media type
<b>Existing</b>	GLC-SX-MM-RGD	Duplex LC	1 km	-40 to 85° C	Multimode Fiber
<b>Existing</b>	GLC-LX-SM-RGD	Duplex LC	10 km	-40 to 85° C	Single-Mode Fiber
<b>Existing</b>	GLC-ZX-SM-RGD	Duplex LC	80 km	-40 to 85° C	Single-Mode Fiber

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## Call to action

The GLC-BX-D-I and GLC-BX-U-I bidirectional transceivers have been qualified on Cisco Industrial Ethernet (IE) IoT switches and Cisco Service Provider Switches and Routers. Please visit <https://tmgmatrix.cisco.com/> to retrieve the list of switches and routers that are compatible with 1G bidirectional transceivers. Please contact your Cisco sales representative to place an order.

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